District I 1625'N. French Dr., Hobbs, NM 88240

State of New Mexico Energy, Minerals & Natural Resources

Form C-104 Revised August 1, 2011

District II 811 S. First St., Artesia, NM 88210

District III	D.J. Amto	- NTN# Q*	7410		1 Conservation			Suoi	mit on	е сору п	) appi	opriate District Office	
1000 Rio Brazos District IV					20 South St.		r.					AMENDED REPORT	
1220 S. St. Fran		anta Fe, N	IM 87505		Santa Fe, N	M. 83505						_ <b></b>	
	<u>I.</u>			OR AL	OMBBLE	AND AU	ГНО	RIZATI	ON 'I	O TR	ANS	PORT	
Operator n			š	-	OCT 1 9 20	118		<sup>2</sup> OGRID	Numb		0127		
2208 W Mai		,	1		OCTION	) 10	229137  3 Reason for Filing Code/ Effective Date						
Artesia, NM					=!	/FD		Reason .	or rm N	_	Line	tilve Date	
<sup>4</sup> API Numb	er	- 5	Pool Name		RECEN					<sup>6</sup> Pool C	Code	<u>.</u>	
30 - 025-4		V	Vildcat; Bone	Spring							9708		
<sup>7</sup> Property C		8	Property Nan	ne		- ~				<sup>9</sup> Well l			
319					Square Bill Fe	deral Com					1H		
II. 10 Su	rface Le			Lot Idn	Feet from the	North/South	T ina	Foot from	4hal E	ast/West	· lino	County	
P OI or lot no	Section 31	25S	•	Lot iui	210	South	rme	957	the L	ast/ west East		Lea	
	ttom H			]	210			,,,				1300	
UL or lot no				Lot Idn	Feet from the	North/South	line	Feet from	the F	ast/West	line	County	
I	30	25	-		2420	South		665		East		Lea	
12 Lse Code		cing Metho	1	onnection	<sup>15</sup> C-129 Pern		16 (	C-129 Effect	irra Da		17 C-12	 29 Expiration Date	
Lse Code F		Code	Da	ate	" C-127 Ferm	nit Number		-129 Elicu	IVE Da	te	· C-12	29 Expiration Date	
		F		7/18									
III. Oil a		s Trans	sporters		10 m	· ** **						20 0 10 177	
18 Transpor OGRID			!		<sup>19</sup> Transpor and Ad							<sup>20</sup> O/G/W	
				Al	lpha Crude Con	mector Pipeli	ne					0	
				7	3/13-4	C	-						
24650					arga Midstrear 1000 Louisia		P					G	
					Houston, T	X 77002					V. 1		
										<del></del>		W. S.	
								-					
IV. Well	l Comp	letion I	Data :										
<sup>21</sup> Spud Da	ite	<sup>22</sup> Res	ady Date		<sup>23</sup> TD	<sup>24</sup> PBTD	)	<sup>25</sup> Perf				<sup>26</sup> DHC, MC	
11/30/17		8/	17/18		19780/24/2	19680		12560	<b>)-1960</b> 1	l			
<sup>27</sup> <b>H</b> o	ole Size		<sup>28</sup> Casing	g & Tubir		<sup>29</sup> De	pth Se	et		3	<sup>0</sup> Sack	s Cement	
	3 1/2			10 3/4		11	170'					850	
9	7/8			7 5/8		11,	,803				2	2150	
6	3/4			5			)-1129				1	1800	
				5 1/2 2 7/8			99 - 0 456		+				
				2 1/6			450						
V. Well				1 22 -		34	<u> </u>	<u> </u>	5 000			% G . D	
<sup>31</sup> Date New 8/17/18	Oil ·		elivery Date /17/18	1	Fest Date 8/17/18	<sup>34</sup> Test 24 I	-	h		Pressure 800	`	<sup>36</sup> Csg. Pressure 1900	
<sup>37</sup> Choke Si 15/64	ize		<sup>8</sup> Oil 724	39	Water 1682	<sup>40</sup> (41						41 Test Method	
42 I hereby cer	tify that t	he rules	of the Oil Cor	servation	Division have			OIL CONS	FRVA	TION DI	VISIO	N	
been complied								OIL CONS	LICVI	TION DI	V 1510		
complete to th	e best of	my know	ledge and bel	ief.			1.			$\circ$			
Signature:	Am a	nda.	Anera	1-	4	Approved by:	-X	Mana 1	$\triangle$		زم		
Printed name:	prov	ma.	510000	<i>f</i>		Title:	<u>///</u>	<del>yours</del>		wy			
Amanda Avery	y		i			1 100.		taff 1	Y an	e)			
Title:	<u> </u>		1		1	Approval Date	:	1001	.,,,,				
Regulatory Te	ch II							0-24-	<u> 18</u>				

Documents pending BLM approvals will

subsequently be reviewed and scanned

Phone: 575-748-6962

E-mail Address: aavery@concho.com

10/15/18

Date:

Form 3160-5 (June 2015)

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

FORM APPROVED OMB NO. 1004-0137 Expires: January 31, 2018 Expires:
5. Lease Serial No.

	NOTICES AND REPO				NMNM119280	
Do not use thi abandoned wel	s form for proposals to ii. Use form 3160-3 (API	ariii or to re-ent D) for such prop	er an osals.()(∏	1 9 2018	6. If Indian, Allottee or	Tribe Name
SUBMIT IN	RIPLICATE - Other inst	ructions on pag	e2 REC	JE	7. If Unit or CA/Agree	ment, Name and/or No.
1. Type of Well  ☑ Oil Well ☐ Gas Well ☐ Oth	er				8. Well Name and No. SQUARE BILL FE	DERAL COM 1H
Name of Operator     COG OPERATING LLC		AMANDA AVER	Ý	i	9. API Well No. 30-025-44046	
3a. Address 2208 W MAIN STREET ARTESIA, NM 88210		10. Field and Pool or Exploratory Area WILDCAT; BONE SPRING				
4. Location of Well (Footage, Sec., T		11. County or Parish, S	tate			
Sec 31 T25S R35E SESE 210 32.080803 N Lat, 103.401136		LEA COUNTY, N	NM			
12. CHECK THE AR	PPROPRIATE BOX(ES)	TO INDICATE	NATURE OI	F NOTICE,	REPORT, OR OTH	ER DATA
TYPE OF SUBMISSION			TYPE OF	ACTION		
☐ Notice of Intent	☐ Acidize	□ Deepen		☐ Product	ion (Start/Resume)	☐ Water Shut-Off
_ ,	☐ Alter Casing	<del>-</del> -	ic Fracturing	☐ Reclam	ation	☐ Well Integrity
Subsequent Report	☐ Casing Repair	☐ New Co		☐ Recomp		Other
☐ Final Abandonment Notice	☐ Change Plans	☐ Plug and			arily Abandon	
13. Describe Proposed or Completed Ope	☐ Convert to Injection	Plug Ba		☐ Water I		
Attach the Bond under which the worfollowing completion of the involved testing has been completed. Final At determined that the site is ready for fi 05/17/18 Test annulus to 150 19,645-19,655' (60). Injection 06/15/18 to 07/15/18 Perf 12, sand & 11,789,694 gal fluid. 07/24/18 to 07/25/18 Drilled of	operations. If the operation re- vandonment Notices must be fil- inal inspection.  O# Set CBP @ 19,680' ar test.  560-19,601' (1600). Acda out CFP's. Clean down to	sults in a multiple cond only after all required test csg to 12,02 w/59,262 gal 7	npletion or reco rements, includi 000#. Good 1/2%; frac w/	mpletion in a raing reclamation test. Perf	new interval, a Form 3160 n, have been completed an	-4 must be filed once
08/04/18 Set 2 7/8" 6.5# L-80		r @ 11,441. Inst	alled gas lift s	system.		
08/17/18 Began flowing back 08/17/18 Date of first product						
14. I hereby certify that the foregoing is	Electronic Submission #	439836 verified by OPERATING LLC,	the BLM Wel sent to the H	l Informatior lobbs	n System	
Name (Printed/Typed) AMANDA	AVERY	Tit	le AUTHO	RIZED REF	PRESENTATIVE	
Signature (Electronic S	Submission)	Da	te 10/16/20	018		
	THIS SPACE FO	R FEDERAL (	OR STATE	OFFICE U	SE	
Approved By		<u></u>	tle			Date
Conditions of approval, if any, are attache certify that the applicant holds legal or equivalent would entitle the applicant to conductive the conductive the applicant to conduct the applicant the applicant to conduct the applicant to conduct the applicant the applicant the applicant to conduct the applicant to conduct the applicant the appli	iitable title to those rights in the	subject lease	ffice			oprovals will
Title 18 U.S.C. Section 1001 and Title 43 States any false, fictitious or fraudulent			knowingly an its jurisdiction	Documen	its pending BLM at	and scanned

Form 3160-4 (August 2007)

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

## **HOBBS OCD**

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

WELL COMPLETION OR RECOMPLETION REPORT AND LOCALIST

	WELL (	COMPL	E HON C	OR RECO	OMPLE	TION	REPORT	UANIDIL	-ଉଝା ।ନ			ease Seriai N IMNM11928			
la. Type of	Well  Completion	Oil Well	Gas 'ew Well	Well □ □ Work (	•	Other Deepen		ECE			6. If	Indian, Allo	ttee or	Tribe Name	=
o. Type of	Completion	Othe		□ work (		J Deepen	L rau	g-Back -		BEOSVI.	7. U	nit or CA Ag	greeme	ent Name and No.	_
2. Name of COG O	Operator PERATING	LLC	E	-Mail: aav			DA AVER	1				ase Name as		II No. DERAL COM 1H	_
3. Address	2208 W M ARTESIA					3 F	a. Phone N Ph: 575-74	o. (includ 8-6940	e area code	e)	9. A	PI Well No.		30-025-44046	_
4. Location	of Well (Re		on clearly ar 35E Mer NI		ance with	Federal r	equirement	s)*				rield and Poo			_
At surface				31 T25S F	R35E Mei	NMP			1011001		11. 8	Sec., T., R., N	M., or 1	Block and Survey 25S R35E Mer NM	– Р
At top p	rod interval r Sec	: 30 T25S	R35E Mer SL 665FEL	NMP				Lat, 103.	.401136 V	/V Lon	12. (	County or Pa		13. State	_
14. Date Sp 11/30/2	udded		15. D	ate T.D. Re /16/2018			16. Dat	Complet A 🔀	ed Ready to	Prod.		Elevations (D	OF, KB 4 GL		_
18. Total D	epth:	MD TVD	19780 12412		. Plug Ba	ck T.D.:	MD TVD		680 412	20. De	oth Bri	dge Plug Set		MD 19680 IVD 12412	_
21. Type El	lectric & Oth				copy of e	ach)			22. Was	well core		⊠ No [	Yes	(Submit analysis) (Submit analysis)	-
22 G	ir'	. 1 (1)								ctional Su	rvey?	No 5	Yes	(Submit analysis)	_
23. Casing an	T			Top	Botto	om Stag	ge Cemente	No. c	of Sks. &	Slurry	Vol.	C T		A 470 H 4	-
Hole Size	Size/G	750 N80	Wt. (#/ft.) 45.5	(MD)	(MI	) 170	Depth	Туре	of Cement 85	(BE	L)	Cement T	ор*	Amount Pulled	_
6.750		00 P110	18.0			299			00	101			-		_
9.875	<del>}</del>	25 P110	29.7			803	5367	·	215	0			0		_
6.750	5.0	00 P110	23.0	1129	9 19	780			180	0	/		0		_
				ļ	-	_		ļ		<del>-</del>					_
24. Tubing	Record			<u>i</u>			····			<u> </u>					-
Size	Depth Set (M		acker Depth		Size	Depth Set	(MD)	Packer De	pth (MD)	Size	De	pth Set (MD	) 1	Packer Depth (MD)	_
2.875 25. Producir		145 <u>6</u>	_/	11441		26. Perf	oration Rec	ord		<u> </u>					-
	ormation		Top	l I	Bottom		Perforated	Interval		Size	T <sub>1</sub>	No. Holes		Perf. Status	_
A)	BONE SP	RING	1	2560	19601			12560 TC	19601			1600			_
B)											+				_
C) -											+				_
	acture, Treat		nent Squeeze												_
I	Depth Interva	al					A	mount an	d Type of	Material					_
														<u> </u>	_
			+											<u> </u>	_
															_
	ion - Interval		T	la	1	T	1			_					_
Date First Produced 08/17/2018	Test Date 08/17/2018	Hours Tested 24	Test Production	Oil BBL 724.0	Gas MCF 413.0	Water BBL 168	Oil C Corr.	ravity API	Gas Grav	ity	Producti	on Method	GAS LI	FT	
Choke Size	Tbg. Press. Flwg. 4800	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:0		Well	Status					-
15/64	SI	1900.0		724	413		82			POW					_
28a. Produc			I <sub>T1</sub>	loa	Ic	327-4-	lone		I <sub>O</sub>		D 1	an Mark : 1			_
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Corr.	ravity API	Gas Gravi	ity	Froaucti	on Method		uals Will	
Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL			Well	Status	_	-nding P	SLM ?	approvais	
Choke Tog. Press. Csg. 24 Hr. Oil Gas Water Gas:Oil Ratio  Well Status  (So Instructions and press for additional data as reserves side)									nocume	ments pending BLM approvals will					

201 B		1.0											
Date First	duction - Interv	Hours	Test	Oil	Gas	Water	Oil Gravity	T/	Gas	Production Method			
Produced	Date	Tested	Production	BBL	MCF	BBL	Corr. API		Gravity	Production Method			
Choke Size	Tbg. Press. Fiwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	ľ	Well Status				
28c. Prod	luction - Interv	al D	<b>.</b>	1			<u> </u>						
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	old, used f	for fuel, vent	ed, etc.)	•								
30. Sumr	nary of Porous	Zones (Inc	lude Aquife	rs):					31. For	mation (Log) Markers			
tests,	all important a including deptile coveries.							res					
	Formation		Тор	Bottom		Descriptions	s, Contents, e	tc.		Name	Top Meas. Depth		
RSLR TOS BOS LMAR BLCN CYCN BYCN FBSG	G 11100	include ph For	1083 1502 5061 5358 5396 6356 7930 10366	edure): ker 11100 12002					RS TO BO LM BLG CY BY FB:	S S AR CN CN CN	1083 1502 5061 5358 5396 6353 7930 10366		
1. El	e enclosed attac lectrical/Mecha undry Notice fo	nical Logs	•	- /		Geologic R     Core Analy			3. DST Rep 7 Other:	port 4. Directi	onal Survey		
34. I here	eby certify that	the foregoi	ing and attac	hed informa	ition is com	plete and corre	ect as determi	ned fron	n all available	records (see attached instruct	ons):		
			Electi	ronic Subm Fo	ission #439 or COG OI	837 Verified b PERATING L	by the BLM V LC, sent to	Well Inf the Hob	formation Sys obs	stem.			
Name	e (please print)	<u>AMANDA</u>	AVERY	<del>.</del>			Title	AUTHO	RIZED REP	PRESENTATIVE			
Signa	ature	(Electroni	c Submissi	on)			Date	10/16/2	018				
Title 18 V	U.S.C. Section nited States any	1001 and T	Title 43 U.S. tious or frad	C. Section 1 ulent statem	212, make i	it a crime for a	ny person kno to any matter	owingly within i	and willfully	to make to any department or	agency		

	r Ang	Distance Between Perfs	Shots	Stage 2	Distance Between Perfs	Shots	A 1	Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots	
	19,601	18	5	19,428	19	5	19,252	22	5	19,075	22	5	18,898	22	5	1
From	19,583 19,561	22 22	5	19,406 19,384	22	5	19,230	23	5	19,053	22	5	18,876	22	5	ł
Bottom to		22	5	19,362	22	5	19,207 19,185	22	5	19,031 19,009	22	5	18,854 18,832	22	5	1
Тор	19,517	25	5	19,340	22	5	19,163		5 .	18,987	22	5	18,810	22	5	ł
ľ	19,492	22	5.	19,318	22	5	19,141	22	5	18,965	23	5	18,788	22	5	1
	19,470	23	5	19,296	22	5	19,119	22	5	18,942	. 22	5 .	18,766	22	5	1
1	19,447		. 5	19,274		5	19,097		*.5	18,920		. 5	18,744		5	1
	Plug to Plu	71	40	lug to Plu	. 75	40	lug to Plu	. 76	. 40	Plug to Plu	75	40	lug to Plu	75	40	1
	Frac Plug	,		Frac Plug			Frac Plug		Total Shot				Frac Plug	William State of the Control of the Control	Total Shots	j S
								E 18 7 . 11 A		·				L D FRENCH AS	<b>1</b>	-
	· · · · ·	Distance Between Perfs	Shots		Distance Between Perfs	Shots	e e e e e e e e e e e e e e e e e e e	Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots	_
İ	18,722	22	5	18,545	22	5	18,368	27	5	18,192	24	5	18,009	28	. 5	
From	18,700	23	5	18,520	19	5	18,349	25	5	18,170	23	5	17,990	19	5	<b>F</b>
Bottom to	18,677	22	5	18,501	19	5	18,324	20	5	18,147	22	5	17,971	22	5 .	
Тор	10,000	22	5 5	18,482	25	5	18,304	24	5	18,125	22	5	17,949	22	5	
į .	18,633 18,611	22	5	18,457	27 18	5 5	18,280	21	5 .	18,103	22 22	5.	17,927	23	5	-
]	. 18,589	22	5	18,430 18,412	17	5	18,259 18,236	20	. 5 . 5	18,081 . 18,059	22	5	17,904 17,882	22	5	
1	18,567	- 22	5	18,395	- ''-	5	18,216	20	5	18.037		5	17,860	- 22	5	$\mathbf{m}$
l	Plug to Plu	76	40	Plug to Plug	72	40	Plug to Plu	73	40	Plug to Plus	76	40	lug to Plu	69	40	m
	Frac Plug			Frac Plug			Frac Plug		Total Shot			Total Shots			Total Shot	5
	11001108	10,101	1 0001 01100	41.1001.108	10,004	p otas onot	11.1001.109	10,011	i otal olive	i iac i iag	10,201	i otal ollot	q i rac i iug	10,010	i otal ollog	$\underline{\boldsymbol{\omega}}$
٠.		Distance Between Perfs	Shots	- 1 / 1°	Distance Between Perfs	Shots	general (fig.	Distance Between Perfs	Shots		Distance Between Perfs	Shots	ğ ÖJ	Distance Between Perfs	Shots	
	17,831	29	5	17,662	26	5	17,483	25	5	. 17,313	- 19	5 .	17,133	21	.5	4
From	17,813	19	5	17,639	22	5	17,463	24	5	17,291	23	5	17,109	18	5	1
Bottom to	17,794	22	5	17,617	22	5	17,439	20	. 5	17,268	26	5	17,091	26	5	1
Тор	17,772	22 22	5 5	17,595 17,573	22	5 5	17,419	27 18	5 5	17,242 17,223	19 25	5 5	17,065	22	5 5	1
	17,728	20	5	17,573	24	5	17,392 17,374	18	5	17,198	19	5	17,043	· 22	5	ł ·
İ	17,708	20	5	17,527	19	5	17,374	24	5	17,196	25	5	17,021	22	5	1
	17,708	20	5	17,508	19	5	17,330	24	5	17,179		5	16,999 16,977	. 22	5	ł
1	Plug to Plug	68	40	Plug to Plug	83	40	Plug to Plu	79	40	Plug to Plug	80	40	Plug to Plu	77	40	1
<u> </u>	Frac Plug			Frac Plug		Total Shot								, ,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,		1
					11,010	potai Snot	erac Plug	17,498	Total Shot	Frac Plug	17,322	ji otal Snot	Frac Plug	17,142	Total Shots	5
:	Segrit.		Shots		Distance Between	Shots	Prac Plug	Distance Between	Shots	Frac Plug	Distance Between	Shots	Frac Plug	Distance Between	Fotal Shots Shots	<u>.</u>
:		Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots	<u>s</u>
	16,955	Between Perfs 22	Shots 5	16,778	Distance Between Perfs 22		16,603	Distance Between Perfs 21	Shots 5	16,427	Distance Between Perfs 20	Shots 5	16,243	Distance Between Perfs 24	Shots 5	
From	16,955 16,933	Between Perfs 22 22	Shots 5	16,778 16,756	Distance Between Perfs 22 22	Shots 5	16,603 16,579	Distance Between Perfs 21 22	Shots	16,427 16,402	Distance Between Perfs 20 21	Shots 5	16,243 16,220	Distance Between Perfs 24 16	Shots	5
Bottom to	16,955 16,933 16,911	Between Perfs 22	Shots 5 5 5	16,778 16,756 16,734	Distance Between Perfs 22	Shots 5	16,603 16,579 16,557	Distance Between Perfs 21 22 22	Shots 5 5	16,427 16,402 16,381	Distance Between Perfs 20 21 24	Shots 5 5	16,243 16,220 16,204	Distance Between Perfs 24	Shots 5 5	
1_	16,955 16,933 16,911	Between Perfs 22 22 22	Shots 5	16,778 16,756	Distance Between Perfs 22 22 22	Shots - 5 - 5 - 5	16,603 16,579	Distance Between Perfs 21 22	Shots	16,427 16,402	Distance Between Perfs 20 21	Shots 5	16,243 16,220	Distance Between Perfs 24 16	Shots	5
Bottom to	16,955 16,933 16,911 16,889	Between Perfs 22 22 22 22 23	\$hots  5 5 5 5 5	16,778 16,756 16,734 16,712	Distance Between Perfs 22 22 22 22	\$hots 5 5 5	16,603 16,579 16,557 16,535	Distance Between Perfs 21 22 22 22	Shots 5 5	16,427 16,402 16,381 16,357	Distance Between Perfs 20 21 24 21	5 5 5 5 5	16.243 16,220 16,204 16,185	Distance Between Perfs 24 16 19 25	Shots 5 5 5	5
Bottom to	16,955 16,933 16,911 18,889 16,866	Between Perfs 22 22 22 22 23 22 22	Shots 5 5 5 5 5 5 5	16,778 16,756 16,734 16,712 16,690	Distance Between Perfs 22 22 22 22 22 22	\$hots	16,603 16,579 16,557 16,535 16,513	Distance Between Perfs 21 22 22 22 22	Shots 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	16,427 16,492 16,381 16,357 16,336	Distance Between Perfs 20 21 24 21 25	Shots 5 5 5 5 5 5	16.243 16.220 16.204 16.185 16.160	Distance Between Perfs 24 16 19 25 29	Shots 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	8
Bottom to	16,955 16,933 16,911 18,889 16,866 16,844	Between Perfs 22 22 22 22 22 23 22 22 22	\$hots  5 5 5 5 5 5 5	16,778 16,756 16,734 16,712 16,690	Distance Between Perfs 22 22 22 22 22 22 22	\$hots	16,603 16,579 16,557 16,535 16,513 16,491	Distance Between Perfs 21 22 22 22 22 -5	Shots 5 5 5 5 5 5 5 5 5 5	16,427 16,402 16,381 16,357 16,336 16,311	Distance Between Perfs 20 21 24 21 25 19	Shots 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	16.243 16,220 16,204 16,185 16,160 16,131	Distance Between Perfs 24 16 19 25 29	Shots 5 5 5 5 5 5 5 5 5 5 5 7 5	8
Bottom to	16,955 16,933 16,911 18,889 16,866 16,844 16,822	Between Perfs 22 22 22 22 22 22 22 22 22 22	\$hots  5 5 5 5 5 5 5 5	16,778 16,756 16,734 16,712 16,690 16,668 16,646	Distance Between Perfs 22 22 22 22 22 22 22 22	\$hots  5 5 5 5 5 5 5 5	16,603 16,579 16,557 16,535 16,513 16,491 16,496	Distance Between Perfs 21 22 22 22 22 49	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	16,427 16,402 16,381 16,357 16,336 16,311 16,292	Distance Between Perfs 20 21 24 21 25 19	Shots 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	16.243 16.220 16.204 16.185 16.160 16.131 16,112	Distance Between Perfs 24 16 19 25 29	Shots 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	8
Bottom to	16,955 16,933 16,911 15,889 16,866 16,844 16,822 16,800 Plug to Plu	Between Perfs 22 22 22 22 22 22 22 22 22 25 75 16,964	5 5 5 5 5 5 5 5 5 5 6 40 Total Shots	16,778 16,756 16,734 16,690 16,668 16,646 16,624 Plug to Plu	Distance Between Perfs 22 22 22 22 22 22 22 75 16,787	5 5 5 5 5 5 5 40 Total Shots	16,603 16,579 16,557 16,553 16,543 16,491 16,496 16,447 Plug to Plug	Distance Between Perfs 21 22 22 22 22 -5 49 77 16,612	5 5 5 5 5 5 5 5 5 5 6 40 Total Shots	16,427 16,402 16,381 16,357 16,336 16,311 16,292 16,267	Distance Between Perfs 20 21 24 21 25 19 25 19 16,436	5 5 5 5 5 5 5 5 5 5 5 7 5 7 5 7 5 7 5 7	16.243 16.220 16.204 16.185. 16.160 16.131 16,112 16,095 Plug to Plu	Distance Between Perfs 24 16 19 25 29 19 17 72 16,257	Shots	
Bottom to	16,955 16,933 16,911 15,889 16,866 16,844 16,822 16,800 Plug to Plug Frac Plug	Between Perfs 22 22 22 23 22 22 22 75 16,964 Distance Between	Shots	16,778 16,756 16,734 16,690 16,668 16,646 16,624 Plug to Plu	Distance Between Perfs 22 22 22 22 22 22 22 22 Distance Between Distance Between	\$hots  5 5 5 5 5 5 40	16,603 16,579 16,557 16,535 16,513 16,491 16,496 16,447 Plug to Plug	Distance Between Perfs 21 22 22 22 25 5 49 77 16,612 Distance Between	Shots 5 5 5 5 5 5 40	16,427 16,402 16,381 16,357 16,336 16,311 16,292 16,267 Plug to Plu	Distance Between 20 21 24 21 25 19 25 79 16,436  Distance Between	Shots 5 5 5 5 5 5 40	16.243 16.220 16.204 16.185. 16.160 16.131 16,112 16,095 Plug to Plu	Distance Between Perfs 24 16 19 25 29 17 72 16,257  Distance Between	Shots 5 5 5 5 5 5 40	
Bottom to	16,955 16,933 16,931 15,889 16,866 16,844 16,822 16,800 Plug to Plu Frac Plug	Between Perfs 22 22 22 22 22 22 22 Distance Between Perfs	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	16,778 16,756 16,732 16,689 16,646 16,624 Plug to Plug Frac Plug	Distance Between Perfs 22 22 22 22 22 22 22 21 Distance Between Perfs	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	16,603 16,579 16,557 16,535 16,513 16,491 16,496 16,447 Plug to Plug	Distance Between Perfs 21 22 22 22 25 49 77 16,612 Distance Between Perfs	5 5 5 5 5 40 Total Shots	16,427 16,402 16,381 16,357 16,336 16,311 16,292 16,267 Plug to Plug	Distance Between Perfs 20 21 24 21 25 19 25 79 16,436  Distance Between Perfs	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	16,243 16,220 16,204 16,185 16,181 16,112 16,095 Plug to Plug	Distance Between Perfs 24 16 19 25 29 17 72 16,257  Distance Between Perfs	\$ 5 5 5 5 5 5 5 5 5 40 Fotal Shots	
Bottom to	16,955 16,933 16,911 18,869 16,865 16,844 16,822 16,800 Plug to Plug Frac Plug	Between Perfs 22 22 22 22 22 22 22 D16,964 Distance Between Perfs 22	5 5 5 5 5 5 40 Total Shots 5 5	16,778 16,756 16,732 16,732 16,689 16,646 16,624 Plug to Plug 15,893	Distance Between Perfs 22 22 22 22 22 22 25 46,787 Distance Between Perfs 24	5 5 5 5 5 5 5 40 Total Shots 5 5	16,603 16,579 16,557 16,553 16,533 16,491 16,496 16,447 Plug to Plug Frac Plug	Distance Between Perfs 21 22 22 22 25 49 77 16,612  Distance Between Perfs 27	5 5 5 5 5 5 40 Fotal Shots 5 5	16,427 16,402 16,381 16,357 16,356 16,311 16,292 16,267 Plug to Plug Frac Plug	Distance Between Perfs 20 21 24 25 19 25 79 16,436  Distance Between Perfs 31	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	16,243 16,220 16,220 16,165 16,185 16,131 16,112 16,095 Plug to Plug 15,365	Distance Between Perfs 24 16 19 29 19 17 72 16,257  Distance Between Perfs 25	5 5 5 5 5 40 Fotal Shots 5 5	
Bottom to	16,955 16,933 16,911 18,869 16,865 16,844 16,822 16,800 Plug to Plu Frac Plug	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	16,778 16,758 16,734 16,712 16,689 16,646 16,624 Plug to Plug Frac Plug	Distance Between Perfs 22 22 22 22 22 22 22 22 Distance Between Perfs 24 22	5 5 5 5 5 5 40 Total Shots  Shots  5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	16,603 16,579 16,557 16,555 16,543 16,491 16,496 16,447 Plug to Plug Frac Plug	Distance Between Perfs 21 22 22 22 25 49 77 16,612 Distance Between Perfs 27 20	5 5 5 5 5 40 Total Shots 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	16,427 16,402 16,381 16,357 16,357 16,311 16,292 16,267 Plug to Plug Frac Plug	Distance Between Perfs 20 21 24 21 25 19 25 T6,436 Distance Between Perfs 31 18	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	16,243 16,220 16,204 16,185 16,131 16,112 16,095 Plug to Plug Frac Plug	Distance Between Perfs 24 16 19 25 29 19 17 72 16,257  Distance Between Perfs 25 22	Shots	
From Bottom to	16,955 16,933 16,911 16,869 16,868 16,864 16,822 16,800 Plug to Plug Frac Plug \$16,073 16,073 16,052 16,027	Between   Perfs   22   22   22   23   22   22   22   2	\$\frac{5}{5}\$ \$\frac{5}{5}\$ \$\frac{5}{5}\$ \$\frac{5}{5}\$ \$\frac{5}{5}\$ \$\frac{5}{40}\$    Total Shots  \$\frac{5}{5}\$ \$\frac{5}{5}\$ \$\frac{5}{5}\$ \$\frac{5}{5}\$ \$\frac{5}{5}\$ \$\frac{5}{5}\$ \$\frac{5}{5}\$ \$\frac{5}{5}\$ \$\frac{5}{5}\$ \$\frac{5}{5}\$ \$\frac{5}{5}\$ \$\frac{5}{5}\$ \$\frac{5}{5}\$ \$\frac{5}{5}\$ \$\frac{5}{5}\$	16,778 16,756 16,734 16,732 16,668 16,646 16,624 Plug to Plug Frac Plug 15,893 15,873 15,851	Distance Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	\$ 5 5 5 5 40 Fotal Shots 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	16,603 16,579 16,557 16,535 16,633 16,491 16,496 16,447 Plug to Plug Frac Plug 15,713 15,694 15,674	Distance Between Perfs 21 22 22 22 25 49 77 16,612 Distance Between Perfs 27 20 22	5 5 5 5 40 Total Shots 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	16,427 16,402 16,381 16,357 16,357 16,331 16,292 16,267 Plug to Plug Frac Plug	Distance Between Perfs 20 21 24 21 25 19 25 79 16,436  Distance Between Perfs 31 18 22	\$\frac{5}{5}\$ \$\frac{5}{5}\$	16,243 16,220 16,204 16,185 16,185 16,131 16,112 16,095 Plug to Plu Frac Plug 15,365 15,343 15,321	Distance Between Perfs 24 16 19 25 17 72 16,257 Distance Between Perfs 25 22 23	\$hots  5  5  5  5  6  40  Fotal Shots  5  5  5  5  6  6  6  7  8  8  8  8  8  8  8  8  8  8  8  8	
Bottom to Top	16,955 16,933 16,911 18,889 16,868 16,844 16,822 16,800 Plug to Plu Frac Plug Stage,21 16,073 16,052 16,027	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	16,778 16,758 16,734 16,712 16,689 16,646 16,624 Plug to Plug Frac Plug	Distance Between Perfs 22 22 22 22 22 22 22 22 Distance Between Perfs 24 22	5 5 5 5 5 5 40 Total Shots  Shots  5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	16,603 16,579 16,557 16,555 16,543 16,491 16,496 16,447 Plug to Plug Frac Plug	Distance Between Perfs 21 22 22 22 25 49 77 16,612 Distance Between Perfs 27 20	5 5 5 5 5 40 Total Shots 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	16,427 16,402 16,381 16,357 16,357 16,311 16,292 16,267 Plug to Plug Frac Plug	Distance Between Perfs 20 21 24 21 25 19 25 T6,436 Distance Between Perfs 31 18	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	16,243 16,220 16,204 16,185 16,161 16,131 16,112 16,095 Plug to Plu Frac Plug 15,365 15,343 15,321 15,298	Distance Between Perfs 24 16 19 25 29 19 17 72 16,257  Distance Between Perfs 25 22	Shots	
From Bottom to	16,955 16,933 16,911 18,889 16,868 16,844 16,822 16,800 Plug to Plu Frac Plug 16,073 16,052 16,027 16,027	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	\$hots  5 5 5 5 5 5 40  Total Shots  \$5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	16,778 16,756 16,734 16,732 16,692 16,646 16,646 16,624 Plug to Plug Frac Plug 15,893 15,873 15,873 15,828	Distance Between 22 22 22 22 22 22 22 22 22 22 22 22 22	\$\frac{5}{5} \\ 5 \\ 5 \\ 5 \\ 5 \\ 5 \\ 5 \\ 5 \\	16,603 16,579 16,557 16,535 16,535 16,491 16,496 16,447 Plug to Plug Frac Plug 15,713 15,694 15,674 15,652	Distance Between Perfs 21 22 22 22 25 5 49 77 16,612 Distance Between Perfs 27 20 22 22 22 22 22 22 22	\$\frac{5}{5} \\ \frac{5}{5} \\ \frac	16,427 16,402 16,381 16,357 16,336 16,311 16,292 16,267 Plug to Plut Frac Plug 15,515 15,497 15,475	Distance Between 20 21 24 21 25 19 25 79 16,436  Distance Between Perfs 31 18 22 22	\$\frac{5}{5}\$ \$\frac{5}{5}\$	16,243 16,220 16,204 16,185 16,185 16,131 16,112 16,095 Plug to Plu Frac Plug 15,365 15,343 15,321	Distance Between Perfs 24 16 19 25 29 17 72 16,257  Distance Between Perfs 25 22 23 23	\$ 5 5 5 6 40 Fotal Shots 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	
From Bottom to	16,955 16,933 16,911 18,869 16,865 16,844 16,822 16,800 Plug to Plu Frac Plug 16,073 16,052 16,027 15,997 15,976 15,963	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	\$\frac{5}{5}\$ \$\	16,778 16,756 16,754 16,742 16,689 16,646 16,624 Plug to Plug 15,893 15,873 15,873 15,828 15,806 15,784	Distance Between Perfs 22 22 22 22 22 22 21 22 22 22 22 22 22	5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	16,603 16,579 16,557 16,553 16,491 16,496 16,447 Plug to Plug 15,713 15,694 15,675 15,675 15,608	Distance Between Perfs 21 22 22 22 25 49 77 16,612  Distance Between 27 20 22 22 22 22 22 22 22	Shots  5 5 5 5 5 40 Total Shots  5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	16,427 16,402 16,381 16,357 16,311 16,292 16,267 Plug to Plug Frac Plug 15,532 15,515 15,497 15,475 15,453 45,431	Distance Between Perfs 20 21 24 21 25 19 25 79 16,436  Distance Between Perfs 31 18 22 22 22	\$\frac{5}{5}\$ \$\	16,243 16,220 16,220 16,131 16,142 16,195 Plug to Plu Frac Plug 15,365 15,343 15,228 15,275 15,254	Distance Between Perfs 24 16 19 25 29 17 72 16,257 Distance Between Perfs 25 22 23 23 21	\$ Shots 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	
From Bottom to	16,955 16,933 16,911 15,869 16,868 16,844 16,822 16,800 Plug to Plug Frac Plug 16,073 16,052 16,052 16,052 15,997 15,976	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	\$\frac{5}{5}\$ \$\frac{5}{5}\$ \$\frac{5}{5}\$ \$\frac{5}{5}\$ \$\frac{5}{40}\$  Shots  \$\frac{5}{5}\$ \$	16,778 16,756 16,756 16,732 16,689 16,646 16,624 Plug to Plug Frac Plug 15,893 15,873 15,873 15,823 15,828 15,828	Distance Between Perfs 22 22 22 22 22 22 25 25 25 26 27 27 20 20 20 20 20 20 20 20 20 20 20 20 20	\$\frac{5}{5}\$ \$\	16,603 16,579 16,557 16,535 16,513 16,491 16,496 16,447 Plug to Plug Frac Plug 15,713 15,694 15,652 15,652	Distance Between Perfs 21 22 22 22 25 49 77 16,612  Distance Perfs 27 20 22 22 22 22 22 22 22 22	\$\frac{5}{5}\$ \$\	16,427 16,402 16,381 16,336 16,311 16,292 16,267 Plug to Plug Frac Plug 15,532 15,515 15,497 15,475 15,453	Distance Between 20 21 24 21 25 19 25 79 16,436  Distance Between 31 18 22 22 22	\$\frac{5}{5} \\ \frac{5}{5} \\ \frac	16,243 16,220 16,204 16,185,160 16,160 16,112 16,095 Plug to Plug Frac Plug 15,365 15,343 15,321 15,228 15,275	Distance Between Perfs 24 16 19 25 19 17 72 16,257 Distance Between Perfs 22 23 23 21 23	Shots	
From Bottom to	16,955 16,933 16,911 18,889 16,865 16,844 16,822 16,800 Plug to Plug Frac Plug 16,073 16,052 16,027 15,997 15,963 15,939	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	\$hots  5 5 5 5 5 5 40  Total Shots  5 5 5 5 5 40  Shots  5 5 5 5 40  40  Shots 40  Shots 40	16,778 16,756 16,734 16,732 16,668 16,646 16,624 Plug to Plug Frac Plug 15,873 15,873 15,851 15,828 15,806 15,782 15,740 Plug to Plu	Distance Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	\$\frac{5}{5}\$ \$\	16,603 16,579 16,557 16,535 16,491 16,496 16,447 Plug to Plug Frac Plug 15,713 15,694 15,674 15,652 15,630 15,686 15,568	Distance Between Perfs 21 22 22 22 25 49 77 16,612 Distance Between Perfs 27 20 22 22 22 22 22 22 23	Shots  -5 -5 -5 -5 -5 -5 -5 -5 -5 -5 -5 -5 -5	16,427 16,402 16,381 16,357 16,336 19,311 16,292 16,267 Plug to Plug Frac Plug 15,532 15,515 15,497 15,475 15,453 15,431 16,409	Distance Between 20 21 24 21 25 19 25 79 16,436  Distance Between 31 18 22 22 22	\$\frac{5}{5}\$ \$\	16,243 16,220 16,204 16,180 16,131 16,112 16,095 Plug to Plug 15,365 15,343 15,221 15,298 15,254 16,231	Distance Between Perfs 24 16 19 25 19 17 72 16,257 Distance Between Perfs 22 23 23 21 23	Shots	
From Bottom to	16,955 16,933 16,911 18,889 16,865 16,844 16,822 16,800 Plug to Plu Frac Plug Stage 21 16,073 16,052 16,027 15,997 15,978 15,939 15,917	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	\$hots  5 5 5 5 5 5 40  Total Shots  5 5 5 5 5 40  Shots  5 5 5 5 40  40  Shots 40  Shots 40	16,778 16,756 16,732 16,689 16,646 16,624 Plug to Plug Frac Plug 15,893 15,873 15,873 15,873 15,864 15,762 15,762	Distance Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	\$\frac{5}{5}\$ \$\	16,603 16,579 16,557 16,533 16,491 16,496 16,447 Plug to Plug Frac Plug 15,674 15,662 15,630 15,566 15,566	Distance Between Perfs 21 22 22 22 25 49 70 22 22 22 22 22 22 22 22 22 22 22 22 22	Shots	16,427 16,402 16,381 16,357 46,336 16,311 16,292 16,267 Plug to Plug Frac Plug 15,532 15,515 15,497 15,475 15,453 15,499 15,390	Distance Between Perfs 20 21 24 21 25 19 25 79 16,436  Distance Between Perfs 31 18 22 22 22 21 19 66	\$hots  5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	16,243 16,220 16,204 16,185 16,185 16,131 16,112 16,095 Plug to Plug Frac Plug 15,365 15,343 15,321 15,298 15,275 15,234 15,224 15,244 Plug to Plu	Distance Between Perfs 24 16 19 25 17 72 16,257 Distance Between Perfs 22 23 23 21 23 20 20 82	Shots	5.
From Bottom to	16,955 16,933 16,911 18,889 16,868 16,844 16,822 16,802 16,007 16,073 16,052 16,052 15,997 15,976 15,963 15,939 15,917 Plug to Plug	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	Shots	16,778 16,756 16,756 16,756 16,690 16,668 16,646 16,624 Plug to Plug 15,893 15,873 15,873 15,852 15,806 15,764 15,762 15,762 15,762 15,764 15,762 15,764 15,762 15,764	Distance Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	Shots	16,603 16,579 16,557 16,535 16,491 16,496 16,447 Plug to Plug Frac Plug 15,713 15,694 15,674 15,652 15,630 15,686 15,568	Distance Between Perfs 21 22 22 22 25 49 To Distance Between Perfs 27 20 22 22 22 22 22 22 22 22 23 70	Shots	16,427 16,402 16,381 16,357 16,357 16,311 16,292 16,267 Plug to Plug 15,532 15,515 15,497 15,475 15,434 15,439 15,499 15,499 115,499 115,499 115,499 115,499	Distance Between Perfs 20 21 24 21 25 19 25 79 16,436  Distance Between Perfs 31 18 22 22 22 21 19 66	\$hots  5 5 5 5 5 5 5 7 40  Total Shots  5 5 5 5 5 5 40  Total Shots  5 5 5 5 5 6 7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	16,243 16,220 16,204 16,185 16,185 16,181 16,112 16,095 Plug to Plug Frac Plug 15,365 15,343 15,321 15,298 15,275 15,234 15,244 Plug to Plu	Distance Between Perfs 24 16 19 25 17 72 16,257 Distance Between Perfs 22 23 23 21 23 20 20 82	Shots	5.
From Bottom to	16,955 16,933 16,911 18,889 16,868 16,844 16,822 16,800 Plug to Plu Frac Plug 16,073 16,052 16,027 15,976 15,963 15,917 Plug to Plu	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	\$\frac{5}{5}\$ \$\frac{5}{5}\$ \$\frac{5}{5}\$ \$\frac{5}{5}\$ \$\frac{5}{40}\$  Total Shots  \$\frac{5}{5}\$ \$	16,778 16,756 16,732 16,680 16,646 16,624 Plug to Plug 15,893 15,873 15,873 15,851 15,806 15,784 45,762 15,740 Plug to Plug	Distance Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	\$\frac{5}{5}\$ \$\	16,603 16,579 16,557 16,553 16,491 16,496 16,447 Plug to Plug 15,713 15,694 15,674 15,653 15,608 15,563 Plug to Plug Frac Plug	Distance Between Perfs 21 22 22 22 25 49 77 16,612 Distance Between Perfs 27 20 22 22 22 22 22 22 22 22 22 22 22 22	Shots	16,427 16,402 16,381 16,357 16,357 16,331 16,292 16,267 Plug to Plug Frac Plug 15,532 15,515 15,497 15,475 15,433 15,499 15,390 Plug to Plug	Distance Between Perfs 10 21 24 21 25 19 25 79 16,436  Distance Between Perfs 31 18 22 22 21 19 66 15,541	Shots	16,243 16,220 16,204 16,180 16,131 16,112 16,095 Plug to Plug 15,365 15,343 15,321 15,288 15,254 16,231 15,214 Plug to Plug	Distance Between Perfs 24 16 19 25 16,257 Distance Between Perfs 25 22 23 23 21 23 20 Distance Between Distance Between Perfs 25 25 25 25 20 20 20 20 20 20 20 20 20 20 20 20 20	Shots	5.
From Bottom to Top	16,955 16,933 16,911 18,889 16,868 16,844 16,822 16,802 16,007 16,073 16,052 16,052 15,997 15,976 15,963 15,939 15,917 Plug to Plug	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	Shots	16,778 16,756 16,756 16,756 16,690 16,668 16,646 16,624 Plug to Plug 15,893 15,873 15,873 15,852 15,806 15,764 15,762 15,762 15,762 15,764 15,762 15,764 15,762 15,764	Distance Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 24 25 26 27 27 28 29 29 20 20 20 20 20 20 20 20 20 20 20 20 20	Shots	16,603 16,579 16,557 16,535 16,543 16,491 16,496 16,447 Plug to Plug 15,713 15,694 15,669 15,560 15,560 15,560 15,560 15,560 Plug to Plug	Distance Between Perfs 21 22 22 22 23 49 77 16,612  Distance Between Perfs 27 20 22 22 22 23 70 15,722  Distance Between Perfs	Shots  -5 -5 -5 -5 -5 -5 -5 -5 -5 -5 -5 -5 -5	16,427 16,402 16,381 16,357 16,357 16,311 16,292 16,267 Plug to Plug 15,532 15,515 15,497 15,475 15,434 15,439 15,499 15,499 115,499 115,499 115,499 115,499	Distance Between Perfs 20 21 24 25 19 25 79 16,436  Distance Perfs 31 18 22 22 19 66 15,541  Distance Petfs	\$\frac{5}{5}\$ \$\	16,243 16,220 16,220 16,231 16,115 16,112 16,095 Plug to Plug 15,365 15,343 15,298 15,275 15,254 15,231 15,212 19 to Plug 17,221 17,231 18,231 19 to Plug 18,231 19,241 19 to Plug 19,241	Distance Between 24 16 19 25 19 17 72 16,257  Bistance Perfs 25 22 23 21 23 20 82 15,380  Distance Perfs	Shots	5.
From Bottom to Top	16,955 16,933 16,911 18,889 16,865 16,844 16,822 16,800 Plug to Plug Frac Plug 16,073 16,052 16,027 15,976 15,963 15,939 15,917 Plug to Plug Frac Plug 15,166 15,166 15,140	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	Shots   5   5   5   5   5   5   5   5   5	16,778 16,756 16,756 16,732 16,680 16,646 16,624 Plug to Plug 15,893 15,873 15,851 15,828 15,740 Plug to Plug 15,762 15,740 Plug to Plug 15,762 15,740 Plug to Plug 15,794	Distance Between Perfs 22 22 22 22 22 22 25 26 27 16,787  Distance Between Perfs 24 22 23 22 22 24 24 25 25 20 20 20 21 21 21 22 22 22 22 22 22 22 22 22 22	\$\frac{5}{5}\$ \$\	16,603 16,579 16,557 16,553 16,491 16,496 16,447 Plug to Plug 15,674 15,652 15,662 15,563 Plug to Plug 15,563 14,836 14,836 14,813 14,791	Distance Between Perfs 27 20 22 22 22 22 22 22 22 22 22 22 22 22	Shots	16,427 16,402 16,381 16,357 16,336 19,311 16,292 16,267 Plug to Plug Frac Plug 15,532 15,515 15,497 15,475 15,453 15,431 16,409 15,380 Plug to Plug 15,380 15,380 Plug to Plug 14,658 14,636 14,636 14,614	Distance Between Perfs 20 21 24 21 25 19 25 79 16,436  Distance Between Perfs 31 18 22 22 22 19 66 15,541  Distance Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	\$\frac{5}{5}\$ \$\	16,243 16,220 16,220 16,231 16,142 16,185 16,131 16,112 16,095 Plug to Plu Frac Plug 15,365 15,343 15,228 15,225 15,231 15,214 1	Distance Between Perfs 22 22 22 24 16 16 19 25 17 17 16,257 16,257 17 16,257	Shots	5.
From Bottom to Top	16,955 16,933 16,911 18,889 16,868 16,844 16,822 16,800 Plug to Plu Frac Plug 16,073 16,073 16,073 15,976 15,963 15,978 15,978 15,978 15,917 Plug to Plu Frac Plug 15,166 15,166 15,140 15,122	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	Shots   5   5   5   5   5   5   5   5   5	16,778 16,756 16,732 16,668 16,646 16,624 Plug to Plug 15,893 15,873 15,851 15,828 15,762 15,762 15,740 Plug to Plug Frac Plug 14,945	Distance Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	\$\frac{5}{5}\$ \$\	16,603 16,579 16,557 16,553 16,491 16,496 16,447 Plug to Plug 15,713 15,694 15,674 15,652 15,563 Plug to Plug Frac Plug 15,563 15,563 14,813 14,791 14,768	Distance Between Perfs 27 20 22 22 22 22 22 22 22 22 22 22 22 22	Shots	16,427 16,402 16,381 16,357 16,357 16,331 16,292 16,267 Plug to Plug Frac Plug 15,532 15,515 15,497 15,475 15,453 15,499 15,390 Plug to Plug Frac Plug 15,493 15,390 Plug to Plug 14,658 14,636 14,614 14,592	Distance Between Perfs 31 18 22 22 19 Distance Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	\$\frac{5}{5}\$ \$\	16,243 16,220 16,204 16,150 16,150 16,151 16,112 16,095 Plug to Plug 15,365 15,343 15,321 15,288 15,274 15,281 15,214 Plug to Plug Frac Plug 14,481 14,481 14,485 14,437 14,415	Distance Between Perfs 23 23 23 21 23 20 Distance Between Perfs 25 22 23 23 22 22 22 22 22 22	Shots	5.
From Bottom to Top	16,955 16,933 16,911 18,889 16,868 16,844 16,822 16,800 Plug to Plu Frac Plug 16,073 16,052 16,027 15,976 15,963 15,933 15,937 15,976 15,963 15,917 Plug to Plu Frac Plug 15,166 15,166 15,166 15,140 15,122 15,105	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	Shots	16,778 16,756 16,734 16,732 16,668 16,646 16,624 Plug to Plug Frac Plug 15,851 15,828 15,806 15,740 Plug to Plug Frac Plug 15,740 Plug to Plug 14,945 14,945 14,945	Distance Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	\$\frac{5}{5} \\ \frac{5}{5} \\ \frac	16,603 16,579 16,557 16,535 16,491 16,496 16,447 Plug to Plug Frac Plug 15,674 15,662 15,630 15,566 15,566 15,563 Plug to Plug Frac Plug 14,836 14,813 14,791 14,768	Distance Between Perfs 21 22 22 22 24 25 49 77 16,612  Distance Between Perfs 27 20 22 22 22 23 70 15,722  Distance Between Perfs 27 20 22 22 23 20 22 22 23 20 22 22 23 20 22 22 23 20 22 22 22 22 22 22 22 22 22 22 22 22	Shots	16,427 16,402 16,381 16,357 16,357 16,331 16,292 16,267 Plug to Plug Frac Plug 15,545 15,497 15,475 15,453 15,499 15,390 Plug to Plug Frac Plug 14,658 14,658 14,658 14,614 14,592 14,570	Distance Between Perfs 31 18 22 22 22 29 Distance Between Perfs 31 18 22 22 22 22 22 22 22 22 22 22 22 22 22	\$\frac{5}{5}\$ \$\	16,243 16,220 16,204 16,185 16,163 16,161 16,112 16,095 Plug to Plu Frac Plug 15,343 15,321 15,298 15,275 15,231 15,243 Plug to Plu Frac Plug 14,481 14,459 14,437 14,415 14,439	Distance Between Perfs 24 16 19 25 16,257 Distance Between Perfs 25 22 23 23 21 23 20 Distance Between Perfs 25 22 22 22 22 22 22 22 22 22 22 22 22	Shots	5
From Bottom to Top	16,955 16,933 16,911 18,889 16,868 16,844 16,822 16,827 16,973 16,073 16,052 16,073 16,052 16,052 15,976 15,963 15,939 15,917 Plug to Plu Frac Plug 15,166 15,166 15,166 15,166 15,140 15,178	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	Shots	16,778 16,756 16,732 16,689 16,646 16,624 Plug to Plug Frac Plug 15,893 15,873 15,873 15,873 15,873 15,762 15,762 15,764 15,762 15,764 15,762 15,764 15,762 15,764 11,969 14,971 14,945 14,945 14,925 14,901	Distance Between Perfs 22 22 22 22 22 22 25 25 26 27 26 27 27 28 28 29 29 20 20 20 20 20 20 20 20 20 20 20 20 20	\$\frac{5}{5}\$ \$\	16,603 16,579 16,557 16,535 16,491 16,496 16,447 Plug to Plug 15,713 15,694 15,672 15,630 15,660 15,566 15,566 15,566 15,567 14,836 14,836 14,836 14,798 14,798	Distance Between Perfs 21 22 22 22 25 49 77 16,612  Distance Perfs 27 20 22 22 23 70 15,722  Distance Between Perfs 21 22 22 23 22 22 23 22 22 22 23 22 22 22	Shots	16,427 16,402 16,381 16,357 16,351 16,311 16,292 16,267 Ply fac Plug 15,515 15,497 15,475 15,453 45,431 15,499 15,499 15,499 15,499 15,499 15,499 14,658 14,658 14,614 14,590 14,590 14,590	Distance Between 20 21 24 25 19 25 79 16,436  Distance Between 31 18 22 22 22 19 66 15,541  Distance Between 22 22 22 22 22 22 22 22 22 22 22 22 22	\$\frac{5}{5}\$ \$\	16,243 16,220 16,200 16,185 16,185 16,185 16,181 16,112 16,095 Plug to Plug 15,365 15,343 15,298 15,275 15,254 16,231 15,218 15,219 14,481 14,459 14,475 14,433 14,371	Distance Retween Perfs 24 16 19 25 29 19 17 72 16,257  Distance Retween Perfs 23 20  Distance Retween Perfs 22 22 22 22 22 22 22	Shots	5.
From Bottom to Top	16,955 16,933 16,911 18,889 16,868 16,844 16,822 16,800 Plug to Plu Frac Plug 16,073 16,052 16,027 15,976 15,963 15,933 15,937 15,976 15,963 15,917 Plug to Plu Frac Plug 15,166 15,166 15,166 15,140 15,122 15,105	Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	Shots	16,778 16,756 16,734 16,732 16,668 16,646 16,624 Plug to Plug Frac Plug 15,851 15,828 15,806 15,740 Plug to Plug Frac Plug 15,740 Plug to Plug 14,945 14,945 14,945	Distance Between Perfs 22 22 22 22 22 22 22 22 22 22 22 22 22	\$\frac{5}{5} \\ \frac{5}{5} \\ \frac	16,603 16,579 16,557 16,535 16,491 16,496 16,447 Plug to Plug Frac Plug 15,674 15,662 15,630 15,566 15,566 15,563 Plug to Plug Frac Plug 14,836 14,813 14,791 14,768	Distance Between Perfs 21 22 22 22 24 25 49 77 16,612  Distance Between Perfs 27 20 22 22 22 23 70 15,722  Distance Between Perfs 27 20 22 22 23 20 22 22 23 20 22 22 23 20 22 22 23 20 22 22 22 22 22 22 22 22 22 22 22 22	Shots	16,427 16,402 16,381 16,357 16,357 16,331 16,292 16,267 Plug to Plug Frac Plug 15,545 15,497 15,475 15,453 15,499 15,390 Plug to Plug Frac Plug 14,658 14,658 14,658 14,614 14,592 14,570	Distance Between Perfs 31 18 22 22 22 29 Distance Between Perfs 31 18 22 22 22 22 22 22 22 22 22 22 22 22 22	\$\frac{5}{5}\$ \$\	16,243 16,220 16,204 16,185 16,163 16,161 16,112 16,095 Plug to Plu Frac Plug 15,343 15,321 15,298 15,275 15,231 15,243 Plug to Plu Frac Plug 14,481 14,459 14,437 14,415 14,439	Distance Between Perfs 24 16 19 25 16,257 Distance Between Perfs 25 22 23 23 21 23 20 Distance Between Perfs 25 22 22 22 22 22 22 22 22 22 22 22 22	Shots	5

	Stoati	Distance Between Perfs	Shots		Distance Between Perfs	Shots	Steen 88	Distance Between Perfs	Shots	S. dosti	Distance Between Perfs	Shots		Distance Between Perfs	Shots
	14,272	55	. 5	14,128	22	5 ·	13,950	19	5	13,775	24	5	13,595	· 25	. 5
i	14,255	17	5.	14,106	22	5	13,929	22	5	13,754	24	5	13,576	22	5
From	14,238	17	5	14,084	- 23	5	13,907	18	5	13,730	22	5	13,554	22	5
Bottom to	14,221	17	5	14,061	21	5	13,889	26	5	13,708	. 22	5	13.532	22	5
Тор	14,204	17	5	14,040	25	5	13,863	19	5	13,686	22	5	13,510	23	5
•	14,187.	19	5	14,015	20	5	13,844	25	5	13,664	22	5	13,487	22	5
	14,168	18	- 5	13,995	26	5	13,819	20	.5	13,642	22	5	13,465	22	5
	14,150		5	13,969		5	13,799	:	- 5	13,620	. :	5	13,443		5
	Plug to Plug	60	-40	Plug to Plu	76	: 40	Plug to Plu	70	40	Plug to Plug	76	40	lug to Plu	72	40
	Frac Plug	14,281	Total Shots	Frac Plug	14,137	Total Shots	Frac Plug	13,959	Total Shot	Frac Plug	13,784	Total Shot	Frac Plug	13,604	Total Shot
				- :-									::	· · · · · · · · · · · · · · · · · · ·	

		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots
	13,416	27	5	13,235	32	5	13,068	25	- 5	12,889	-24	5	12,716	21	5
	13,395	18	5	13,218	18	5	13,046	26	5	12,866	24	5	12,692	21	5
From	13,377	22	5	13,200	22	5	13,020	18	5	12,842	18	5	12,671	23	5
Bottom to	13;355	22	, 5	13,178	22	. 5	13,002	26	5	12,824	18	5.	12,648	22	5
Тор	13,333	22	5	13,156	22	5	12,976	19	. 5	12,806	22	- 5	12,626	- 22	, 5
	13,311	. 22	. 5	13,134	22	5	12,957	23 -	. 5	12,784	22	. 5	12,604	22	. :5
	13,289	22	5	13,112	19	5	12,934	21	5	12,762	25	5	12,582	22	5
	13,267		5 .	13,093		5	12,913		5	12,737		5	. 12,560		5
	Plug to Plug	70	40	Plug to Plu	66	40	Plug to Plu	81	40	lug to Plu	79	40	Plug to Plug	77	40
	Frac Plug	13,425	Total Shots	Frac Plug	13,244	Total Shots	Frac Plug	13,083	Total Shots	Frac Plug	12,903	Total Shot	Frac Plug	12,725	Total Shots

## Square Bill Federal Com #1H

<u>Perfs</u>	7 1/2% Acid (Gal)	<u>Sand (#)</u>	Fluid (Gal)
1	2562	361294	323022
2	1554	359611	293286
3	1512	358335	296352
4	1512	362587	296268
5	1512	360357	296604
6	1512	361830	288288
7	1512	362548	297822
8	1428	360859	325332
9	1596	360337	307146
10	1470	362555	302316
11	1512	363932	296856
12	1512	360861	297402
13	1512	361819	298032
14	1512	361743	297276
15	1470	361929	296898
16	1512	362262	295680
17	1512	362414	295722
18	1512	358985	294630
19	1344	361650	289170
20	1260	361815	290430
21	1260	362898	288456
22	1260	362120	298032
23	1260	361539	316008
24	1302	366436	284340
25	1260	362003	282324
26	1260	362702	290556
27	1512	360037	285096
28	1554	357881	298536
29	1596	364199	293580
30	1512	362389	285306
31	1512	364717	303954
32	1554	362548	287616
33	882	359506	294756
34	1512	363244	281316
35	1512	361471	272664
36	1470	362604	295134
37	1512	361099	284634
38	1512	363364	300762
39	1512	361322	275562
40	1680	364165	292530
Totals	59,262	12,309,953	11,789,694