District I 1 1625 N. French Dr., Hobbs, NM 88240

811 S. First St., Artesia, NM 88210

District III

1000 Rio Brazos Rd., Aztec, NM 87410

District IV 1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico BBS OCD Minerals & No. Energy, Minerals & Natural Resources 2018

Form C-104 Revised August 1, 2011

0 KEU

Dil Conservation Division	Submit o	one copy	to app	propriate	District	Office
Oil Conservation Division 220 South St. Francis DREC				AMENI	ED RE	PORT

1220 Souti	ı oı.	rianci	שנו
Santa F	e, N	M 875	05

	I.	REQUEST FOR	ALLOWABLE AND	AUTHORIZATION TO	TRANSPORT
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¹ Operator name and Add	ress	² OGRID Number		
COG Operating LLC	•	229137		
2208 W Main Street		³ Reason for Filing Code/ Effective Date		
Artesia, NM 88210		NW		
⁴ API Number	⁵ Pool Name	⁶ Pool Code		
30 - 025-44535	Bradley; Bone Spring	7280		
⁷ Property Code	8 Property Name	⁹ Well Number		
320525	Tigercat Federal Com	3H 4H		

II. 10 Surface Location

Ul or lot no	Section	Township	Range	Lot Idn	Feet from the	North/SouthLine	Feet from the	East/West line	County
С	8	26S	33E		360	North	1620	West	Lea

11 Bottom Hole Location

UL or lot no M	Section 8	Township 26S	Range 33E	Lot Idn	Feet from the 215	North/South lin South	e Feet from the 967	East/West line West	County Lea
12 Lse Code F		cing Method Code F	¹⁴ Gas Co Da 9/13	ıte	¹⁵ C-129 Pern	nit Number 16	C-129 Effective	Date 17 C-12	29 Expiration Date

III. Oil and Gas Transporters

18 Transporter OGRID	¹⁹ Transporter Name and Address	²⁰ O/G/W
	Alpha Crude Connector Pipeline	0
298751	Energy Transfer 2001 Bryan Street Ste., 3700	G
	Dallas, TX 75201	

IV. Well Completion Data

²¹ Spud Date 4/26/18		eady Date /13/18	²³ TD 15066 M 10 303	²⁴ PBTD 14940	²⁵ Perfor 10,380-1	²⁶ DHC, MC
²⁷ Hole Siz	e	²⁸ Casing	& Tubing Size	²⁹ Depth Set	1	30 Sacks Cement
17 1/2		. 1	13 3/8	936'		750
12 1/4			9 5/8 4922'			1600
8 3/4	8 3/4		5 1/2	15056		2300
			2 7/8	9419		

V. Well Test Data

³¹ Date New Oil 9/13/18	32 Gas Delivery Date 09/13/18	33 Test Date 9/13/18	Test Length 24 Hrs	33 Tbg. Pressure 1000	³⁶ Csg. Pressure 1950	
³⁷ Choke Size 34/64	³⁸ Oil 110	³⁹ Water 3495	⁴⁰ Gas 62		41 Test Method	
been complied with complete to the best	nat the rules of the Oil Consand that the information gist of my knowledge and believed and Avery	ven above is true and ef.	Approved by:	ONSERVATION DIVI	SION	
Amanda Avery			Title:	Mgr		
Title: Regulatory Tech II			Approval Date: 11-9-18			
E-mail Address: aavery@concho.con	1		Documents no	nding DIMA		
Date:	Phone:			nding BLM approva		

Form 3160-5 (June 2015)

UNITED STATES DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT

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

5. Lease Serial No. NMNM0160973

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an

6 If Indian, Allottee or Tribe Name

abandoned we	ell. Use form 3160-3 (API	D) for such prop	osale 6	ود	ii maan, Anottee o	7 THOU MAINE	172
	TRIPLICATE - Other inst	- 4	e 2	9 7010 7.	If Unit or CA/Agree	ement, Name and	i/or No.
1. Type of Well			MO	CENES.	Well Name and No. TIGERCAT FEDE	PAL COM ALL	
☑ Oil Well ☐ Gas Well ☐ O						RAL CON 4H	
2. Name of Operator COG OPERATING LLC	Contact: E-Mail: aavery@co	AMANDA AVERY	N.	9.	API Well No. 30-025-44535		✓
3a. Address 2208 W MAIN STREET ARTESIA, NM 88210		3b. Phone No. (inc Ph: 575-748-69		10	Field and Pool or I BRADLEY; BON	Exploratory Area NE SPRING	ı
4. Location of Well (Footage, Sec.,	T., R., M., or Survey Description,			11.	. County or Parish,	State	
Sec 8 T26S R33E NENW 36 32.064305 N Lat, 103.59762					LEA COUNTY,	NM	
12. CHECK THE A	PPROPRIATE BOX(ES)	TO INDICATE	NATURE O	F NOTICE, RE	PORT, OR OTH	IER DATA	
TYPE OF SUBMISSION			TYPE OI	F ACTION	, ,		
Notice of Intent ■	☐ Acidize	□ Deepen		☐ Production ((Start/Resume)	☐ Water Sh	ut-Off
_	☐ Alter Casing	☐ Hydrauli	c Fracturing	☐ Reclamation	ı	■ Well Inte	grity
☐ Subsequent Report	☐ Casing Repair	■ New Cor	nstruction	□ Recomplete		Other	
☐ Final Abandonment Notice	☐ Change Plans	Plug and	Abandon	□ Temporarily	/ Abandon		
	☐ Convert to Injection	Plug Bac	k	■ Water Disper	osal		
07/04/18 Test annulus to 15 14,905-14,915' (60). Injectio 07/31/18 to 08/09/18 Perf 10 9,310,206 gal fluid. 08/16/18 to 08/17/18 Drilled 08/20/18 to 8/21/18 Set 2 7/ 09/12/18 Began flowing bac 09/13/18 Date of first produc	n test. 0,380-14,786' (750). Acdz out CFP's. Clean down to '8" 6.5# L-80 tbg @ 9419 ' k & testing.	76,637 gal 7 1/29 CBP @ 14,940'.	6; frac w/8,9				
14. I hereby certify that the foregoing	Electronic Submission #				stem		
		OPERATING LLC,					
Name (Printed/Typed) AMANDA	AAVERY	Tit	e AUTHC	RIZED REPRE	SENTATIVE		
Signature (Electronic	Submission)	Da	e 11/08/2	018			
	THIS SPACE FO	R FEDERAL C	R STATE	OFFICE USE		,,	
Approved By		Ti	tle			als wil	"
Conditions of approval, if any, are attach ertify that the applicant holds legal or ea	quitable title to those rights in the	not warrant or subject lease			-ding BLM 3	and scanne	,d
which would entitle the applicant to cond Fitle 18 U.S.C. Section 1001 and Title 4. States any false, fictitious or fraudulen	3 U.S.C. Section 1212, make it a	crime for any person		Documents	ty be reviewed	.	ted
Instructions on page 2)	satements of representations as	wany maner within	no jurisulcuoli.	= subsequer			

Tigercat Federal Com #4H

<u>Perfs</u>	7 1/2% Acid (Gal)	<u>Sand (#)</u>	Fluid (Gal)
1	5292	361059	405468
2	3024	361110	310212
3	3024	360908	310422
4	3024	360560	326508
5	3024	360608	310884
6	3024	341312	314496
7	3024	360382	398916
8	3024	354288	310884
9	3318	360869	321384
10	3024	344656	325710
11	3024	357137	318276
12	3024	360347	345954
13	3024	360757	351876
14	3024	300639	322518
15	3024	360519	429870
16	3024	360014	412818
17	3024	359772	390306
18	3024	360410	459534.474
19	3024	361282	435257.7096
20	3024	347474	337134
21	3024	359632	437304
22	3024	361886	430542
23	2262	361071	436331.7
24	2262	359873	435126.2496
25	3024	381763	432474
Totals	76,637	8,918,328	9,310,206

	::	Bisto	ก้						<u> </u>	*::: : : :	TRACE OF THE				
1	Stage 1	Distance Between Perfs	Shots	Stage 2	Distance Between Perfs	Shots	Stage 3	Distance Between Perfs	Shots	Stage 4	Distance Between Perfs	Shots	Stage 5	Distance Between Perfs	Shots
	14,786	16	5	14,684	23	5 .	14,503	23	5	- 14,323	22	5.	14,133	32	5
	14,770	16	5.	14,662	20	5	14,482	24	5	14,300	21	5	14,114	20	5
From	14,754	16	5	14,642	25	. 4	14,458	- 25	4	14,279	-24	4.	14,094	20	. 4
Bottom to	14,738	:14	5	14,617	23	. 4	14,433	20	4	14,255	26	: 4	14,074	22 : '	:::4
Тор	14,724	17	5	14,594	23	3	14,413		3	14,229	19	3.	14,052	23	3
l .	14,707		5	14,571	22	3	14,391	23	3.	14,210:	23	3	14,029	22	3
1 : .	14,707		-	. 14,549	23	3	14,368	23	3 :	14,187	: 22	3	14,007	: 21	3
	-				. 23	3		23			. 22			- 21	3
	L			14,526			14,345		3	14,165		3	13,986		
<u> </u>	Plug to Plu	56	30	Plug to Plu	79	30	Plug to Plu	78	30	Plug to Plug	. 79	30	Plug to Plug	67	30
* * *	Frac Plug	14,794	Total Shots	Frac Plug	14,696	Total Shots	Frac Plug	14,511	Total Shot	Frac Plug	14,334	Total Shots	Frac Plug	14,141	Total Shot
							11111111						·	• .	
::	1 : :	Distance			Distance			Distance	: .		Distance		:::	Distance	
	: Stage 6	Between	Shots	:Stage 7:	Between	Shots	Stage 8	Between	Shots	Stage 9	Between	Shots	Stage:10	Between	Shots
	L	Perfs			Perfs	·		Perfs			Perfs			Perfs	
	13,963	23	. 5	13,781	: 22	5	13,592	31 :	. 5	13,402	: 45	``5	13,293	-34	5
1	13,944	28 .	: 5	13,758	: 22: :	. :5	13,577	: 27	5	13,382	∷.21∷∷	:.: 5 :	13,219	26	. 5'
From	13,916	25	4	13,736 .	23	4.	13,550	18	4 .	13,361	. 20	4 .	13,193	. 24	4
Bottom to	13,891	20	4 :	13,713	23	4:	. 13,532 .	25	4	. 13,341 .	. 21	4 :	:13,169	. 21	4
Тор	13,871	23.	. 3	13,690	22	3	13,507	.20	. 3	13,320	20	3 .	13,148	· 22	3
1 .	13,848	22	3	13,668	23	`3	13,487	24	3	13,300	20	3	13,126	23	3
1	13,826	23 ·	3	13,645	22	3	13,463	16	- 3	13,280	21	· 3	13,103	22	3
	13,803		3	13,623		3	13,447		3	13,259		3	13,081		3
	Plug to Plug	80	30	Plug to Plu	76	30	Plug to Plu	78	30	Plug to Plug	71	30	Plug to Plug	78	30
L	Frac Plug		Total Shots	_			Frac Plug			Frac Plug		Total Shots			Total Shots
	Frac Flug	13,3/1	potar snot	rrac Plug	13,709	otal Shot	Frac Flug	13,010	Otal Shot	Frac Flug	13,412	i otali Shot	Frac Plug	13,241	rotal Shot
											.				-
1	Stone 44	Distance	Shots	Ctomo 42	Distance Between	Shots	Store 42	Distance	Shots	Stoma 44	Distance Between	Shots	Sta = 0 4 5	Distance Between	Shots
	Stage 11	Between Perfs	Shots	Stage 12	Perfs	: Shots	Stage 13	Between Perfs	Shora	Stage 14	Perfs	Shore	Stage 15		30100
	13,058				Pelis										
1 11 1.		23	1 5	12 868	32	5	12 603		5	. 12 516			12 335	Perfs 27	5
		23	5.	12,868	32	5.	12,693	26	5	12,516	22	5	12,335	27	5 :
From	13,035	22	5	12,850	18	5.	12,674	26 23	5	12,493	22 22	5 ;	12,313	27 23	5 ;
From Bottom to	13,035 13,013	22 23	5 . 4	: 12,850 12,832	18 23	5. 4	12,674 12,651	26 23 20	5 4	12,493 12,471	22 22 23	5	12,313 12,290	27 23 23	5 .4
Bottom to	13,035 13,013 12,990	22 23 19	5 4 4	: 12,850 12,832 12,809	18 23 22	5 4 4	12,674 12,651 12,631	26 23 20 25	5 4 4	12,493 12,471 12,448	22 22 23 20	5 - 4 - 4	12,313 12,290 12,267	27 23 23 22	5 4 4
	13,035 13,013 12,990 12,971	22 23 19 26	5 4 4 3	: 12,850 12,832 12,809 12,787	18 23 22 23	5 4 4 3	12,674 12,651 12,631 12,606	26 23 20 25 18	5 4 4 3	12,493 12,471 12,448 12,428	22 22 23 20 25	5 4 4 3	12,313 12,290 12,267 12,245	27 23 23 22 22	5 4 4 3
Bottom to	13,035 13,013 12,990 12,971 12,945	22 23 19 26 27	5 4 4 3 3	12,850 12,832 12,809 12,787 12,764	18 23 22 23 23 22	5. 4 4 3	12,674 12,651 12,631 12,606 12,588	26 23 20 25 18 27	5 4 4 3 3	12,493 12,471 12,448 12,428 12,403	22 22 23 20 25 26	5 4. 4. 3	12,313 12,290 12,267 12,245 12,222	27 23 23 22 22 23 22	5 . 4 . 4 . 3 . 3 . 3
Bottom to	13,035 13,013 12,990 12,971	22 23 19 26	5 4 4 3 3	12,850 12,832 12,809 12,787 12,764	18 23 22 23	5. 4 4 . 3 3 .	12,674 12,651 12,631 12,606	26 23 20 25 18	5 4 4 3 3	12,493 12,471 12,448 12,428 12,403 12,377	22 22 23 20 25	5 4 4 3 3 3	12,313 12,290 12,267 12,245 12,222 :12,200	27 23 23 22 22	5 4 4 3 3 3
Bottom to	13,035 13,013 12,990 12,971 12,945	22 23 19 26 27	5 4 4 3 3	12,850 12,832 12,809 12,787 12,764	18 23 22 23 23 22	5. 4 4 3	12,674 12,651 12,631 12,606 12,588	26 23 20 25 18 27	5 4 4 3 3	12,493 12,471 12,448 12,428 12,403	22 22 23 20 25 26	5 4. 4. 3	12,313 12,290 12,267 12,245 12,222	27 23 23 22 22 23 22	5 . 4 . 4 . 3 . 3 . 3
Bottom to	13,035 13,013 12,990 12,971 12,945 12,918	22 23 19 26 27	5 4 4 3 3	12,850 12,832 12,809 12,787 12,764	18 23 22 23 23 22	5. 4 4 . 3 3 .	12,674 12,651 12,631 12,606 12,588 12,561	26 23 20 25 18 27 23	5 4 4 3 3	12,493 12,471 12,448 12,428 12,403 12,377	22 22 23 20 25 26	5 4 4 3 3 3	12,313 12,290 12,267 12,245 12,222 :12,200	27 23 23 22 22 23 22	5 4 4 3 3 3
Bottom to	13,035 13,013 12,990 12,971 12,945 12,918 12,900	22 23 19 26 27 18	5 4 4 3 3 3	12,850 12,832 12,809 12,787 12,764 12,742 12,719 Plug to Plu	18 23 22 23 22 23 22 23	5	12,674 12,651 12,631 12,606 12,588 12,561 12,538 Plug to Plu	26 23 20 25 18 27 23	5 4 4 3 3 3 3	12,493 12,471 12,448 12,428 12,403 12,377 12,362 Plug to Plu	22 22 23 20 25 26 15	5 4 4 3 3 3 3 3	12,313 12,290 12,267 12,245 12,222 12,200 12,178	27 23 23 22 23 22 23 22 22	5 4 4 3 3 3 3
Bottom to	13,035 13,013 12,990 12,971 12,945 12,918 12,900 Plug to Plu	22 23 19 26 27 18	5 4 4 3 3 3 3 3	12,850 12,832 12,809 12,787 12,764 12,742 12,719 Plug to Plu	18 23 22 23 22 23 22 23	5. 4 4 3 3 3	12,674 12,651 12,631 12,606 12,588 12,561 12,538	26 23 20 25 18 27 23	5 4 4 3 3 3 3 3	12,493 12,471 12,448 12,428 12,403 12,377 12,362 Plug to Plu	22 22 23 20 25 26 15	5 4 4 3 3 3 30	12,313 12,290 12,267 12,245 12,222 12,200 12,178 Plug to Plue	27 23 23 22 23 22 23 22 22	5 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
Bottom to	13,035 13,013 12,990 12,971 12,945 12,918 12,900 Plug to Plu	22 23 19 26 27 18 79 13,069	5 4 4 3 3 3 3 3	12,850 12,832 12,809 12,787 12,764 12,742 12,719 Plug to Plu	18 23 22 23 22 23 67 12,876	5	12,674 12,651 12,631 12,606 12,588 12,561 12,538 Plug to Plu	26 23 20 25 18 27 23 70	5 4 4 3 3 3 3 3	12,493 12,471 12,448 12,428 12,403 12,377 12,362 Plug to Plu	22 22 23 20 25 26 15 79 12,527	5 4 4 3 3 3 30	12,313 12,290 12,267 12,245 12,222 12,200 12,178 Plug to Plue	27 23 23 22 23 22 22 22 22 85 12,352	5 4 4 3 3 3 3 3 3 3 30
Bottom to	13,035 13,013 12,990 12,971 12,945 12,918 12,900 Plug to Plu	22 23 19 26 27 18	5 4 4 3 3 3 3 3	12,850 12,832 12,809 12,787 12,764 12,742 12,719 Plug to Plu	18 23 22 23 22 23 22 23	5	12,674 12,651 12,631 12,606 12,588 12,561 12,538 Plug to Plu	26 23 20 25 18 27 23	5 4 4 3 3 3 3 3	12,493 12,471 12,448 12,428 12,403 12,377 12,362 Plug to Plu	22 22 23 20 25 26 15	5 4 4 3 3 3 30	12,313 12,290 12,267 12,245 12,222 12,200 12,178 Plug to Plug	27 23 23 22 23 22 23 22 22	5 4 4 3 3 3 3 3 3 3 30
Bottom to	13,035 13,013 12,990 12,971 12,945 12,918 12,900 Plug to Plug	22 23 19 26 27 18 79 13,069	5. 4 4 3 3 3 3 3 3 3 3 Total Shots	12,850 12,832 12,809 12,787 12,764 12,742 12,719 Plug to Plug Frac Plug	18 23 22 23 22 23 22 23 67 12,876	5 4 4 4 3 3 3 3 3 3 3 Total Shots	12,674 12,651 12,631 12,606 12,588 12,561 12,538 Plug to Plug	26 23 20 25 18 27 23 70 112,701	5 4 4 3 3 3 3 3 7 Total Shots	12,493 12,471 12,448 12,428 12,403 12,377 12,362 Plug to Plug	22 22 23 20 25 26 15 79 12,527	5 4 3 3 3 30 Total Shots	12,313 12,290 12,267 12,245 12,222 12,200 12,178 Plug to Plue	27 23 23 22 23 22 22 22 22 85 12,352	5 4 4 3 3 3 3 3 3 3 Total Shots
Bottom to	13,035 13,013 12,990 12,971 12,945 12,918 12,900 Plug to Plug	22 23 19 26 27 18 79 13,069	5. 4 4 3 3 3 3 3 3 3 3 Total Shots	12,850 12,832 12,809 12,787 12,764 12,742 12,719 Plug to Plug Frac Plug	18 23 22 23 22 23 22 23 67 12,876	5 4 4 4 3 3 3 3 3 3 3 Total Shots	12,674 12,651 12,631 12,606 12,588 12,561 12,538 Plug to Plug	26 23 20 25 18 27 23 70 12,701	5 4 4 3 3 3 3 3 7 Total Shots	12,493 12,471 12,448 12,428 12,403 12,377 12,362 Plug to Plug	22 22 23 20 25 26 15 79 12,527	5 4 3 3 3 30 Total Shots	12,313 12,290 12,267 12,245 12,222 12,200 12,178 Plug to Plug	27 23 23 22 23 22 22 22 22 22 Distance Between	5 4 4 3 3 3 3 3 3 3 Total Shots
Bottom to	13,035 13,013 12,990 12,971 12,945 12,918 12,900 Plug to Plug Frac Plug Stage 16 12,154	22 23 19 26 27 18 79 13,069	5 4 4 3 3 3 3 3 3 3 5 Total Shots	12,850 12,832 12,809 12,787 12,764 12,742 12,719 Plug to Plug Frac Plug Stage 17	18 23 22 23 22 23 67 12,876	5 4 4 3 3 3 3 3 3 3 Total Shots	12,674 12,651 12,631 12,606 12,588 12,561 12,538 Plug to Plug Frac Plug	26 23 20 25 18 27 23 70 12,701	5 4 4 3 3 3 3 3 7 Total Shots	12,493 12,471 12,448 12,428 12,403 12,377 12,362 Plug to Plug Frac Plug Stage 19	22 22 23 20 25 26 15 79 12,527	5 4 4 3 3 3 3 3 3 3 3 Total Shots	12,313 12,290 12,267 12,245 12,222 12,200 12,178 Flug to Plug Frac Plug	27 23 23 22 23 22 22 22 22 85 12,352	5 4 4 3 3 3 3 3 3 3 0 Total Shots
Bottom to	13,035 13,013 12,990 12,971 12,945 12,918 12,900 Plug to Plug Frac Plug Stage 16 12,154 12,135	22 23 19 26 27 18 79 13,069 Distance Between Perfs 24 26	5	12,850 12,832 12,809 12,767 12,764 12,742 12,719 Plug to Plug Frac Plug Stage 17 11,974 11,951	18 23 22 23 22 23 67 12,876 Distance Between Perfs 22 21	5 4 4 3 3 3 3 3 3 Total Shots Shots	12,674 12,651 12,631 12,606 12,588 12,561 12,553 Plug to Plug Frac Plug Stage 18 11,793 11,770	26 23 20 25 18 27 23 70 12,701 Distance Between Perfs 28	5 4 4 3 3 3 3 3 3 Total Shots 5 5 5	12,493 12,471 12,448 12,428, 12,403 12,403 12,377 12,362 Plug to Plug Frac Plug Stage 19 11,610 11,590	22 22 23 20 25 26 15 79 12,527 Distance Between Perfs 25 23	5 4 4 3 3 3 3 3 3 3 3 3 5 5 5 5 5	12,313 12,290 12,267 12,245 12,222 12,200 12,178 Plug to Plug Frac Plug Stage 20 11,432 11,409	27 23 23 22 22 23 22 21 25 85 12,352 Distance Between Perfs 22 23	5 4 4 3 3 3 3 3 3 3 3 Total Shots Shots 5 5 5
Bottom to	13,035 13,013 12,990 12,971 12,945 12,918 12,900 Plug to Plug Frac Plug Stage 16 12,154 12,135 12,109	22 23 19 26 27 18 79 13,069 Distance Between Perfs 24 26 23	5	12,850 12,832 12,809 12,784 12,784 12,742 12,719 Plug to Plug Frac Plug Stage 17 11,974 11,951 11,930	18 23 22 23 22 23 67 12,876 Distance Between Perfs 22 21 24	5 4 4 4 3 3 3 3 3 3 Total Shots Shots 5 5 4	12,674 12,651 12,631 12,606 12,588 12,581 12,538 Plug to Plu Frac Plug Stage 18 11,793 11,770 11,748	26 23 20 25 18 27 23 70 12,701 Distance Between Perfs 28 22 23	5 4 4 3 3 3 3 3 3 Total Shots 5 5 4 4	12,493 12,471 12,448 12,428 12,403 12,377 12,362 Plug to Plug Frac Plug Stage 19 11,610 11,590 11,567	22 22 23 20 25 26 15 79 12,527 Distance Between Perfs 25 23 20	5 4 4 3 3 3 3 3 3 3 3 3 5 5 5 4	12,313 12,290 12,267 12,225 12,222 12,200 12,178 Plug to Plug Frac Plug Stage 20 11,432 11,409 11,386	27 23 23 22 23 22 22 25 85 12,352 Distance Between Perfs 22 23 22	5 : 4 4 4 3 3 3 3 3 3 3 Total Shots Shots 5 5 4 4
Bottom to Top	13,035 13,013 12,990 12,971 12,945 12,918 12,900 Plug to Plug Frac Plug Stage 16 12,154 12,135 12,109 12,086	22 23 19 26 27 18 79 13,069 Distance Between Perfs 24 26 23 22	5	12,850 12,832 12,809 12,764 12,764 12,742 12,719 Plug to Plug Frac Plug Stage 17 11,974 11,951 11,930 11,906	18 23 22 23 22 23 67 12,876 Distance Between Perfs 22 21 24 20	5	12,674 12,651 12,631 12,606 12,588 12,581 12,538 Plug to Plug Frac Plug Stage 18 11,793 11,770 11,748 41,725	26 23 20 25 18 27 23 70 12,701 Distance Between Perfs 28 22 23 22	5 4 4 3 3 3 3 3 3 3 3 Total Shots 5 5 4 4 4	12,493 12,471 12,448 12,428 12,403 12,377 12,362 Plug to Plug Frac Plug Stage 19 11,610 11,590 11,567	22 22 23 20 25 26 15 79 12,527 Distance Between Perfs 25 23 20 25	5	12,313- 12,290 12,267 -12,245 12,222 12,200 12,178 Plug to Plug Frac Plug Stage 20 11,432 11,409 11,386 11,384	27 23 23 22 23 22 25 25 27 28 85 12,352 Distance Between Perfs 22 23 22 23 22 23	5 4 4 3 3 3 3 3 3 3 3 Total Shots Shots 5 4 4 4
Bottom to Top	13,035 13,013 12,990 12,971 12,945 12,918 12,900 Plug to Plug Frac Plug Stage 16 12,154 12,135 12,109 12,086 12,064	22 23 19 26 27 18 79 13,069 Distance Between Perfs 24 26 23 22 22	5	12,850 12,832 12,809 12,764 12,764 12,742 12,719 Plug to Plug Frac Plug Stage 17 11,974 11,951 11,930 11,906	18 23 22 23 22 23 3 57 12,876 Distance Between Perfs 22 21 24 20 20	5 4 4 3 3 3 3 3 3 3 3 3 5 5 5 5 5 4 4 4 3 3 3 3	12,674 12,651 12,631 12,606 12,586 12,586 12,588 Plug to Plug Frac Plug Stage 18 11,779 11,748 41,725 11,703	26 23 20 25 18 27 23 70 12,701 Distance Between Perfs 28 22 23 22 23	5 4 4 3 3 3 5 5 5 4 4 4 3 3 5 5 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	12,493 12,471 12,448 12,428 12,403 12,377 12,362 Plug to Plug Frac Plug Stage 19 11,610 11,590 11,567 11,547 11,547	22 22 23 20 25 26 15 79 12,527 Distance Between Perfs 25 23 20 25 26	5	12,313 12,290 12,267 12,227 12,222 12,200 12,178 Plug to Plug Frac Plug Stage 20 11,432 11,409 11,384 11,384	27 23 23 22 23 22 25 25 27 26 27 28 27 28 28 29 20 20 20 20 20 20 20 20 20 20 20 20 20	5 4 4 3 3 3 3 3 3 3 0 Total Shots Shots 5 5 5 4 4 4 3 3 5
Bottom to Top	13,035 13,013 12,990 12,971 12,945 12,945 12,918 12,900 Plug to Plug Frac Plug Stage 16 12,154 12,135 12,109 12,086 12,064 12,042	22 23 19 26 27 18 79 13,069 Distance Between Perfs 24 26 23 22 22 22	5	12,850 12,832 12,809 12,764 12,764 12,742 12,779 Plug to Plug Frac Plug Stage 17 11,974 11,951 11,930 11,886 11,866	18 23 22 23 22 23 467 12,876 Distance Between Perfs 22 21 24 20 20 20 28	5 4 4 3 3 3 3 3 3 5 5 5 5 4 4 3 3 3 3 3	.12.674 12.651 12.631 12.606 12.588 12.586 12.588 Plug to Plug Frac Plug Stage 18 11.779 11.779 11.779 11.783 11.770 11.783	26 23 20 25 18 27 23 70 12,701 Distance Between Perfs 28 22 23 22 23 22	5 4 4 3 3 3 3 5 5 5 5 5 4 4 4 3 3 3 3 3	12,493 12,471 12,448 12,428 12,403 12,377 12,362 Plug to Plug Frac Plug Stage 19 11,610 11,580 11,567 11,547 11,547 11,522 11,496	22 22 23 20 25 26 15 79 12,527 Distance Between Perfs 25 23 20 20 25 26 26 26 27 27 28 29 20 20 20 20 20 20 20 20 20 20 20 20 20	5 4 3 3 3 3 3 3 3 5 5 5 5 4 4 3 4 3 3 3 3	12,313 12,290 12,267 12,245 12,222 12,220: 12,178 Plug to Plug Frac Plug Stage 20 11,432 11,409 11,386 11,384 11,341 11,341	27 23 23 22 23 22 22 25 85 12,352 Distance Between Perfs 22 23 22 23 22 22 23 22 22 23 22 22 23	5 4 4 3 3 3 3 3 3 5 5 5 5 4 4 4 3 3 3 3
From Bottom to	13,035 13,013 12,990 12,971 12,945 12,918 12,900 Plug to Plug Frac Plug Stage 16 12,154 12,135 12,109 12,086 12,064 12,042 12,019	22 23 19 26 27 18 79 13,069 Distance Between Perfs 24 26 23 22 22	5	12,850 12,832 12,899 12,764 12,764 12,742 12,719 Plug to Plug Frac Plug Stage 17 11,974 11,951 11,986 11,886 11,886 11,886	18 23 22 23 22 23 3 57 12,876 Distance Between Perfs 22 21 24 20 20	5 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	12,674 12,651 12,631 12,606 12,588 12,561 12,538 Plug to Plug Frac Plug Stage 18 11,793 11,770 11,748 11,703 11,703 11,680 11,686	26 23 20 25 18 27 23 70 12,701 Distance Between Perfs 28 22 23 22 23	5 4 4 3 3 3 30 Total Shots 5 5 4 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3	12,493 12,471 12,448 12,428 12,403 12,377 12,362 Plug to Plug Frac Plug Stage 19 11,610 11,590 11,567 11,547 11,547 11,496 11,477	22 22 23 20 25 26 15 79 12,527 Distance Between Perfs 25 23 20 25 26	5 4 4 3 3 3 3 3 3 5 5 5 4 4 4 4 3 3 3 5 3 5	12,313 12,290 12,267 12,225 12,220 12,178 Plug to Plug Frac Plug Stage 20 11,432 11,409 11,386 11,384 11,341 11,349 11,349	27 23 23 22 23 22 25 25 27 26 27 28 27 28 28 29 20 20 20 20 20 20 20 20 20 20 20 20 20	5 4 4 4 3 3 3 3 3 3 3 5 5 5 5 4 4 4 4 3 3 3 3
From Bottom to	13,035 13,013 12,990 12,971 12,945 12,918 12,900 Plug to Plug Frac Plug Stage 16 12,154 12,135 12,009 12,086 12,042 12,042 12,019 11,996	22 23 19 26 27 18 79 13,069 Distance Between Perfs 24 26 23 22 22 22 23 23	5	12,850 12,832 12,809 12,764 12,764 12,742 12,719 Plug to Plug Frac Plug Stage 17 11,974 11,951 11,930 11,886 11,886 11,838 11,821	18 23 22 23 22 23 67 12,876 Distance Between Perfs 21 24 20 20 20 28 17	5 4 4 3 3 3 3 3 3 3 5 5 5 4 4 4 3 3 3 3	12,674 12,651 12,631 12,606 12,588 12,581 12,538 Plug to Plu Frac Plug Stage 18 11,793 11,770 11,748 41,725 11,703 11,688 41,635	26 23 20 25 18 27 23 70 12,701 Distance Between Perfs 28 22 23 22 23 22 23 22 23	5 4 4 3 3 3 3 3 3 5 5 5 4 4 4 4 3 3 3 3	12,493 12,471 12,448 12,428 12,403 12,377 12,362 Plug to Plug Frac Plug Stage 19 11,610 11,580 11,567 11,547 11,542 11,477 11,454	22 22 23 20 25 26 15 79 12,527 Distance Between Peris 25 23 20 25 26 19 23	5	12,313 12,290 12,267 12,226 12,222 12,200 12,178 Plug to Plug Frac Plug Stage 20 11,432 11,409 11,386 11,364 11,314 11,319 11,297	27 23 23 22 22 22 25 85 12,352 Distance Between Perfs 22 23 22 23 22 23 22 23 22 23	5 : 4 4 3 3 3 3 3 3 5 5 5 5 4 4 4 3 3 3 3 3
Bottom to Top	13,035 13,013 12,990 12,971 12,945 12,918 12,900 Plug to Plug Frac Plug Stage 16 12,154 12,135 12,109 12,086 12,064 12,042 12,019 11,996 Plug to Plug	22 23 19 26 27 18 79 13,069 Distance Between Perfs 24 26 23 22 22 22 23 23	5	12,850 12,832 12,809 12,784 12,742 12,719 Plug to Plu Frac Plug Stage 17 11,974 11,951 11,930 11,886 11,886 11,838 11,838 11,838	18 23 22 23 22 23 67 12,876 Distance Between Perfs 22 21 24 20 20 28 17	5 4 4 3 3 3 5 5 4 4 4 3 3 3 3 3 3 3 3 3	12,674 12,651 12,631 12,606 12,588 12,561 12,538 Plug to Plu Frac Plug Stage 18 11,793 11,770 11,748 41,725 11,703 11,680 11,686 11,685 Plug to Plu	26 23 20 25 18 27 23 70 12,701 Distance Between Perfs 28 22 23 22 23 22 23 22 23	5 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	12,493 12,471 12,448 12,428 12,403 12,377 12,362 Plug to Plug Frac Plug Stage 19 11,610 11,590 11,567 11,547 11,492 11,494 11,494 11,494 11,494 11,494	22 22 23 20 25 26 15 79 12,527 Distance Between Perfs 25 23 20 25 26 19 23 72	5 4 4 3 3 3 3 3 3 5 5 4 4 3 4 4 3 4 4 3 4 4 3 4 4 3 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	12,313 12,290 12,267 12,225 12,222 12,200 12,178 Plug to Plug Frac Plug Stage 20 11,432 11,409 11,386 11,364 11,319 11,297 11,297	27 23 23 22 23 22 22 85 12,352 Distance Between Perfs 22 23 22 23 22 23 79	5 4 4 4 3 3 5 5 4 4 4 4 3 3 3 3 3 3 3 3
Bottom to Top	13,035 13,013 12,990 12,971 12,945 12,918 12,900 Plug to Plug Frac Plug Stage 16 12,154 12,135 12,009 12,086 12,042 12,042 12,019 11,996	22 23 19 26 27 18 79 13,069 Distance Between Perfs 24 26 23 22 22 22 23 23	5	12,850 12,832 12,809 12,764 12,764 12,742 12,719 Plug to Plug Frac Plug Stage 17 11,974 11,951 11,930 11,886 11,886 11,838 11,821	18 23 22 23 22 23 67 12,876 Distance Between Perfs 21 24 20 20 20 28 17	5 4 4 3 3 3 3 3 3 3 5 5 5 4 4 4 3 3 3 3	12,674 12,651 12,631 12,606 12,588 12,561 12,538 Plug to Plu Frac Plug Stage 18 11,793 11,770 11,748 41,725 11,703 11,680 11,686 11,685 Plug to Plu	26 23 20 25 18 27 23 70 12,701 Distance Between Perfs 28 22 23 22 23 22 23 22 23	5 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	12,493 12,471 12,448 12,428 12,403 12,377 12,362 Plug to Plug Frac Plug Stage 19 11,610 11,580 11,567 11,547 11,542 11,477 11,454	22 22 23 20 25 26 15 79 12,527 Distance Between Perfs 25 23 20 25 26 19 23 72	5 4 4 3 3 3 3 3 3 5 5 4 4 3 4 4 3 4 4 3 4 4 3 4 4 3 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	12,313 12,290 12,267 12,226 12,222 12,200 12,178 Plug to Plug Frac Plug Stage 20 11,432 11,409 11,386 11,364 11,314 11,319 11,297	27 23 23 22 23 22 22 85 12,352 Distance Between Perfs 22 23 22 23 22 23 79	5 : 4 4 3 3 3 3 3 3 5 5 5 5 4 4 4 3 3 3 3 3
Bottom to Top	13,035 13,013 12,990 12,971 12,945 12,918 12,900 Plug to Plug Frac Plug Stage 16 12,154 12,135 12,109 12,086 12,064 12,042 12,019 11,996 Plug to Plug	22 23 19 26 27 18 79 13,069 Distance Between Perfs 24 26 23 22 22 22 23 23	5	12,850 12,832 12,809 12,784 12,742 12,719 Plug to Plu Frac Plug Stage 17 11,974 11,951 11,930 11,886 11,886 11,838 11,838 11,838	18 23 22 23 22 23 67 12,876 Distance Between Perfs 22 21 24 20 20 28 17	5 4 4 3 3 3 5 5 4 4 4 3 3 3 3 3 3 3 3 3	12,674 12,651 12,631 12,606 12,588 12,561 12,538 Plug to Plu Frac Plug Stage 18 11,793 11,770 11,748 41,725 11,703 11,680 11,686 11,685 Plug to Plu	26 23 20 25 18 27 23 70 12,701 Distance Between Perfs 28 22 23 22 23 22 23 22 23	5 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	12,493 12,471 12,448 12,428 12,403 12,377 12,362 Plug to Plug Frac Plug Stage 19 11,610 11,590 11,567 11,547 11,492 11,494 11,494 11,494 11,494 11,494	22 22 23 20 25 26 15 79 12,527 Distance Between Perfs 25 23 20 25 26 19 23 72	5 4 4 3 3 3 3 3 3 5 5 4 4 3 4 4 3 4 4 3 4 4 3 4 4 3 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	12,313 12,290 12,267 12,225 12,222 12,200 12,178 Plug to Plug Frac Plug Stage 20 11,432 11,409 11,386 11,364 11,319 11,297 11,297	27 23 23 22 23 22 22 85 12,352 Distance Between Perfs 22 23 22 23 22 23 79	5 4 4 4 3 3 5 5 4 4 4 4 3 3 3 3 3 3 3 3
Bottom to Top	13,035 13,013 12,990 12,971 12,945 12,918 12,900 Plug to Plug Frac Plug Stage 16 12,154 12,135 12,109 12,086 12,064 12,042 12,019 11,996 Plug to Plug	22 23 19 26 27 18 79 13,069 Distance Between Perfs 24 26 23 22 22 22 23 23	5	12,850 12,832 12,809 12,784 12,742 12,719 Plug to Plu Frac Plug Stage 17 11,974 11,951 11,930 11,886 11,886 11,838 11,838 11,838	18 23 22 23 22 23 67 12,876 Distance Between Perfs 22 21 24 20 20 28 17	5 4 4 3 3 3 3 3 3 3 5 5 4 4 4 4 3 3 3 3	12,674 12,651 12,631 12,606 12,588 12,581 12,538 Plug to Plug Frac Plug Stage 18 11,793 11,770 11,748 41,725 11,735 11,686 11,688 11,688 11,688 11,688	26 23 20 25 18 27 23	5 4 4 3 3 5 5 4 4 4 3 3 3 3 3 3 3 3 3 3	12,493 12,471 12,448 12,428 12,403 12,377 12,362 Plug to Plug Frac Plug Stage 19 11,610 11,590 11,567 11,547 11,454 Plug to Plug 11,496 11,477 11,454 Plug to Plug	22 22 23 20 25 26 15 79 12,527 Distance Between Perfs 25 23 20 25 26 19 23 72 11,619	5 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	12,313 12,290 12,267 12,226 12,222 12,200 12,178 Plug to Plug Frac Plug Stage 20 11,432 11,409 11,386 11,384 11,314 11,319 11,297 11,274 Plug to Plug	27 23 23 22 22 22 25 85 12,352 Distance Between Perfs 22 23 22 23 22 23 21 20 20 20 20 20 20 20 20 20 20 20 20 20	5 4 4 4 3 3 5 5 5 5 4 4 4 3 3 3 3 3 3 3
Bottom to Top	13,035 13,013 12,990 12,971 12,945 12,918 12,900 Plug to Plug Frac Plug Stage 16 12,154 12,135 12,109 12,086 12,064 12,042 12,019 11,996 Plug to Plug	22 23 19 26 27 18 79 13,069 Distance Between Perfs 24 26 23 22 22 23 3 77 12,163	5	12,850 12,832 12,809 12,784 12,742 12,719 Plug to Plu Frac Plug Stage 17 11,974 11,951 11,930 11,886 11,886 11,838 11,838 11,838	18 23 22 23 23 27 22 23 27 28 67 12,876 Distance Between Perfs 22 20 20 20 28 17 79 11,985 Distance Between Perfs 22 20 20 28 20 20 20 28 20 20 20 20 20 20 20 20 20 20 20 20 20	5 4 4 3 3 3 5 5 4 4 4 3 3 3 3 3 3 3 3 3	12,674 12,651 12,631 12,606 12,588 12,561 12,538 Plug to Plu Frac Plug Stage 18 11,793 11,770 11,748 41,725 11,703 11,680 11,686 11,685 Plug to Plu	26 23 20 25 18 27 23 70 112,701 Distance Between Perfs 28 22 23 22 23 22 23 21 Distance Between Perfs 28 28 29 20 20 20 20 20 20 20 20 20 20 20 20 20	5 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	12,493 12,471 12,448 12,428 12,403 12,377 12,362 Plug to Plug Frac Plug Stage 19 11,610 11,590 11,567 11,547 11,492 11,494 11,494 11,494 11,494 11,494	22 22 23 20 25 26 15 79 12,527 Distance Between Perfs 25 23 20 25 26 19 23 72 11,619	5 4 4 3 3 3 3 3 3 5 5 4 4 3 4 4 3 4 4 3 4 4 3 4 4 3 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	12,313 12,290 12,267 12,225 12,222 12,200 12,178 Plug to Plug Frac Plug Stage 20 11,432 11,409 11,386 11,364 11,319 11,297 11,297	27 23 23 22 23 22 22 25 85 12,352 Distance Between Perfs 22 23 22 23 21 21 22 23 21 20 21 21 21 21 22 22 23 20 20 20 20 20 20 20 20 20 20 20 20 20	5 4 4 4 3 3 5 5 4 4 4 4 3 3 3 3 3 3 3 3
Bottom to Top	13,035 13,013 12,990 12,971 12,945 12,918 12,900 Plug to Plug Frac Plug Stage 16 12,154 12,135 12,109 12,064 12,064 12,042 12,042 12,049 11,996 Plug to Plug Frac Plug	22 23 19 26 27 18 79 13,069 Distance Between Perfs 24 26 23 22 22 22 23 23 77 12,163	5	12,850 12,832 12,809 12,764 12,764 12,742 12,719 Plug to Plug Frac Plug Stage 17 11,974 11,951 11,986 11,886 11,886 11,821 Plug to Plug	18 23 22 23 22 23 67 12,876 Distance Between Perfs 22 21 24 20 28 17 79 11,985	5 4 4 3 3 3 3 3 3 3 5 5 4 4 4 4 3 3 3 3	12,674 12,651 12,631 12,606 12,588 12,581 12,538 Plug to Plug Frac Plug Stage 18 11,793 11,770 11,748 41,725 11,735 11,686 11,688 11,688 11,688 11,688	26 23 20 25 18 27 23	5 4 4 3 3 5 5 4 4 4 3 3 3 3 3 3 3 3 3 3	12,493 12,471 12,448 12,428 12,403 12,377 12,362 Plug to Plug Frac Plug Stage 19 11,610 11,590 11,567 11,547 11,454 Plug to Plug 11,496 11,477 11,454 Plug to Plug	22 22 23 20 25 26 15 79 12,527 Distance Between Perfs 25 23 20 25 26 19 23 72 11,619	5 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	12,313 12,290 12,267 12,226 12,222 12,200 12,178 Plug to Plug Frac Plug Stage 20 11,432 11,409 11,386 11,384 11,314 11,319 11,297 11,274 Plug to Plug	27 23 23 22 22 22 25 85 12,352 Distance Between Perfs 22 23 22 23 22 23 21 20 20 20 20 20 20 20 20 20 20 20 20 20	5 4 4 4 3 3 5 5 5 5 4 4 4 3 3 3 3 3 3 3

	Stage 21	Distance Between Perfs	Shots	Stage 22	Distance Between Perfs	Shots	Stage 23	Distance Between Perfs	Shots		Distance Between Perfs	Shots	Stage 25	Distance Between Perfs	Shots
	11,245	29	5	11,066	27	5	10,890	21	5	10,709	22	5	10,528	26	5 .
	11,228	22	5	. 11,050 :	25	5.	10,867	23	5	10,686	. 21	5	10,506	∷ 23	5
From	11,206	23	4	11,025	28	',4	10,844	22 ·	. 4	10,665	25	'4'	10,483	23	4
Bottom to	11,183	22	- 4	10,997	17: :	. 4	10,822	23	. 4	10,640	: .19. ::	. 4	10,460	· 22	4
Тор	11,161	23	3	10,980	27	3	10,799	22	3	10,621	25	: 3:	10,438	23	:3
	11,136	23	3	10,953 .	18	3	10,777	23	3	10,596	24	3 ,	10,415	20	3
	11,115	22	3	10,935	24	3	10,754	23	3	10,572	18	3	10,395	15	3 :
· :	11,093		. 3	- 10,911		. 3	10,731		3	10,554		3	10,380		3
	Plug to Plug	79 :	30	Plug to Plug	77	30	tug to Plu	79	30	lug to Plu	80	30	lug to Plu	84	30
	Frac Plug	11.262	Total Shots	Frac Plug	11.074	Total Shots	Frac Plug	10.901	Total Shots	Frac Plug	10.720	Total Shot	Frac Plug	10.544	Total Shots

Form 3160-4

UNITED STATES

HOBBSO

FORM APPROVED

(August 2007)			BUREAU	J OF L	AND	MAN	AGEME	NT		• •	JON (9 2	018		Expi	res: Jul	y 31, 2010
	WELL (COMPL	BUREAU LETION O	R RE	COM	IPLE	TION R	EPOF	RT	AND Ì	OG	الانشع		Dh	ase Serial I MNM0160	No. 1973	
la. Type of	Well 🛭		_			•					BE		W N	6. If	Indian, All	ottee o	r Tribe Name
b. Type of	Completion	⊠ N Othe		☐ Wor	k Ove] Deepen	□ I	Plug	Back	D if	f. Resvi	r.	7. U	nit or CA A	greem	ent Name and No.
2. Name of							t: AMANE	A AVE	RY				\dashv		ase Name		
	PÉRATING 2208 W M	IAIN STE	REET	-Mail: a	avery	@cond	cho.com 3a	. Phone	No	. (includ	e area co	ode)	\dashv		IGERCAT PI Well No.		ERAL COM 4H
4 Location	ARTESIA		210 ion clearly an	d in acc	ordano	e with		h: 575-					\dashv	10 F	ield and Po	ol or	30-025-44535 Exploratory
At surface		-	_ 1620FWL :					-		,			ļ	В	RADLEY;	BONE	SPRING
			elow NEN			•				103.59	7621 W	Lon	L	O	Area Se	c 8 T2	Block and Survey 6S R33E Mer NMP
At total	depth SW	- SW 215I	FSL 967FWI	L 35.05	1379	N Lat,	103.5997	18 W L	.on						County or P EA	arish	13. State NM
14. Date Sp 04/26/2				ate T.D. /16/201		ed			8.	Complet A 3/2018	ed Ready t	o Prod.		17. F	Elevations (332	DF, KI 23 GL	B, RT, GL)*
18. Total D	epth:	MD TVD	15066 10279	10303	19. P	lug Ba	ck T.D.:	MD TV			940 279	20	Dept	h Bri	ige Plug Se		MD 14940 TVD 10279
21. Type El	lectric & Oth	er Mecha	nical Logs R		nit cor	y of ea	ach)					as well		?			s (Submit analysis) s (Submit analysis)
22.6	17.	1 (P			221							rection		vey?	No No	Ye.	s (Submit analysis)
23. Casing an				set in w		Botto	om Stage	e Cemer	nter	No. c	of Sks. &	: S	lurry '	Vol.			
Hole Size			Wt. (#/ft.) (MD)		<u>)</u>	(MD)		Depth		Type of Cer				L) Cement 7			Amount Pulled
17.500 12.250	T .	375 J55 625 J55	54.5 40.0		0						750 1600		0				
8.750	5.5	00 P110	17.0		0	+ +				23	300				0		
			<u> </u>		\dashv		+										
24 57 11												1					
24. Tubing Size	Record Depth Set (M	(D) P	acker Depth	(MD)	Size	: T	Depth Set	(MD)	P	acker De	pth (MD) [Size	De	pth Set (M	D)	Packer Depth (MD)
2.875		9419		9403													
25. Producir	ormation		Тор	Т	Bott	om	26. Perfo			ra Interval		S	ize	\top	No. Holes	Π	Perf. Status
A)	BONE SP	RING		0380		4786				0380 TC	14786	1			750		
B) C)		-+		\dashv								 		┿		╆	
-D) · -						-								土			
	acture, Treat Depth Interva		ment Squeeze	e, Etc.					Ar	nount an	d Type o	of Mate	rial				
			786 SEE AT	TACHE)						и гуро с	71 1/1010					
								•									
28. Producti	ion - Interval Test	Hours	Test	Oil		as	Water		il Gr		Ga		Ţi	Product	ion Method		
Produced 09/13/2018	Date 09/13/2018	Tested 24	Production	BBL 110.6		CF 62.0	BBL 349		orr. A	API	Gt	ravity			ELECTRIC	PUMP	SUB-SURFACE
Choke Size	Tbg. Press. Flwg. 1000	Csg. Press.	24 Hr. Rate	Oil BBL		as CF	Water BBL		as:O	il	w	ell Status	•				
34/64	SI	1950.0		110		62	349	95				POW	'				
Date First	tion - Interva	Hours	Test	Oil		as	Water		il Gr		Ga	as	Ţ	Product	on Method		lli:
Produced	Date	Tested	Production	BBL	M	CF	BBL	C	orr. A	API	Gı	ravity					A approvals will
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	G. M	as CF	Water BBL	G R	ias:O atio	il	w	ell Status	.~	ent ^s	pending	^{snie} n ⁹ Bru	V abbronals will
(See Instructi	ions and space	ces for ad	ditional data	on rever	rse side	(F PI)	M WEIT	INEO	10.1	TION 9	VSTER	_ Do	.hce!	quer	itly be		
ELECTRU!	** (OPERA	TOR-SUI	BMIT1	ED	" OF	PERATO	DR-SU	JBI	MITTE	D ** C	PL SI	^{حو} بار	•			

28b. Proc	luction - Inter	val C										
Date First	Test	Hours	Test Production	Oil	Gas	Water	Oil Gravity	Gas		Production Method	·	
Produced	Date	Tested	Production	BBL	MCF	BBL	Соп. АРІ	Grav	nty			
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Wel	l Status			
28c. Proc	luction - Inter	val D			<u></u>		<u> </u>					
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Grav		Production Method		
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Wel	l Status			
29. Dispo	osition of Gas	(Sold, used	for fuel, veni	ed, etc.)	1		<u> </u>					
30. Sumr	nary of Porou	s Zones (In	clude Aquife	rs):					31. For	mation (Log) Markers	·	
tests,						intervals and n, flowing and	all drill-stem l shut-in pressure	es				
	Formation		Тор	Bottom	1	Description	ons, Contents, et	c.		Name	Top Meas. Depth	
RSLR TOS BOS LMAR BLCN CYCN FBSG	tional remarks	s (include p	843 1177 4620 4849 4877 5956 9981	edure):					RS TO BO LM BLG CY FB:	S S AR CN CN	843 1177 4620 4849 4877 5956 9981	
	-, -											
1. E	e enclosed att ectrical/Mech andry Notice	anical Log	•	• ′	1	: Report alysis	rt 3. DST Report 4. Directional Survey 7 Other:					
34. I here	eby certify that	t the forego	_	ronic Subn	nission #44	3200 Verifie	rrect as determined by the BLM V	Well Infor	mation Sy	records (see attached ins	tructions):	
Nam	e (please prin) AMAND	A AVERY				·			PRESENTATIVE		
Signa	ature	(Electror	nic Submiss	ion)			Date	11/08/201	8			
<u></u>		1001	Tido 42 II C	C Sostian	12121-	a it a swima f-	r anti navaan laa-	winale a-	d will6-11	to make to any departmen	at or agency	