subsequently be reviewed and scanned

12/13/18

575-748-6962

' Form 3160-5 (June 2015)

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

HOBBS OCD

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

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-ented at 1 7 2018

5. Lease Serial No. NMNM120365

Do not use the	is form for proposals to drill or to I	re-enterlah, 1 k (	7010 F						
abandoned we		6. If Indian, Allottee o	r Tribe Name						
SUBMIT IN	VLD	7. If Unit or CA/Agreement, Name and/or No.							
1. Type of Well				8. Well Name and No.					
☑ Oil Well ☐ Gas Well ☐ Oth				HENNIN FEDERAL 12H					
2. Name of Operator COG OPERATING LLC	Contact: AMANDA A E-Mail: aavery@concho.com	AVERY	9. API Well No. 30-025-44640						
3a. Address 2208 W MAIN STREET ARTESIA, NM 88210	3b. Phone N Ph: 575-7	No. (include area code) 748-6940		10. Field and Pool or I WILDCAT; BON					
4. Location of Well (Footage, Sec., T	., R., M., or Survey Description)	•		11. County or Parish,	State				
Sec 3 T26S R35E Mer NMP N	WNE 210FNL 2132FEL			LEA COUNTY,	NM				
12. CHECK THE AI	PPROPRIATE BOX(ES) TO INDIC	ATE NATURE OF	F NOTICE, I	REPORT, OR OTH	IER DATA				
TYPE OF SUBMISSION		TYPE OF	ACTION						
☐ Notice of Intent	☐ Acidize ☐ De	eepen	☐ Production	on (Start/Resume)	☐ Water Shut-Off				
_	☐ Alter Casing ☐ H	ydraulic Fracturing	☐ Reclamat	tion	■ Well Integrity				
Subsequent Report	☐ Casing Repair ☐ No	ew Construction	□ Recompl	ete	Other				
☐ Final Abandonment Notice	☐ Change Plans ☐ Pl	ug and Abandon	☐ Tempora	rily Abandon	Hydraulic Fracture				
	☐ Convert to Injection ☐ Pl	ug Back	■ Water Di	sposal					
7/29/18 to 8/7/18 Perf and pl w/9,004,665# sand & 7,846,39 8/10/18 to 8/10/18 Drilled out 8/14/18 Set 2 7/8" 6.5# J-55 t	plug @ 17065' and test csg to 8540aug ug 12,496-16,949' (750). Acdz w/74,	,088 gal 7 1/2%; fra to PBTD 16,962'.	ac						
14. I hereby certify that the foregoing is	true and correct. Electronic Submission #447675 verifi For COG OPERATING	ied by the BLM Well LLC, sent to the H	Information obbs	System					
Name (Printed/Typed) AMANDA	AVERY	Title AUTHO	RIZED REPE	RESENTATIVE					
Signature (Electronic S	Submission)	Date 12/13/20	)18		,				
	THIS SPACE FOR FEDER	AL OR STATE (	OFFICE US	E	Is will				
certify that the applicant holds legal or equivalent would entitle the applicant to condu Title 18 U.S.C. Section 1001 and Title 43	U.S.C. Section 1212, make it a crime for any	Title  Office  person knowing within its jurisdic OO	cuments per	E Ading BLM approved and some or and	agency of the United				
	statements or representations as to any matter	within its jurisdic	"psedner.	ent or a	agency of the Office				

## **Hennin Federal #12H**

<u>Perfs</u>	7 1/2% Acid (Gal)	<u>Sand (#)</u>	Fluid (Gal)
1	3024	360000	350826
2	3024	360000	310422
3	3024	359997	304206
4	3024	360012	450954
5	3024	360030	329784
6	3024	360089	324660
7	3024	360354	306516
8	3024	359869	311598
9	1512	360241	294336
10	3024	360028	308406
11	3024	360784	309750
12	3024	362199	310758
13	3024	360163	304164
14	3024	360320	301140
15	3024	359763	308658
16	3024	359993	310044
17	3024	359521	322560
18	3024	360081	298998
19	3024	360047	296604
20	3024	360140	293664
21	3024	360893	302316
22	3024	360040	303072
23	3024	360132	296394
24	3024	360072	298956
25	3024	359897	297612
Totals	74,088	9,004,665	7,846,398

	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
	16,949	14	5	16,809	23	5	16,632	20	5 .	16,453	_ 18	5	16,261	30	5
_	16,935	15	5	16,790	26	5	16,606	21	5	16,426	29	5 .	16,239	23	5
From Bottom to	16,920	15	4	16,764	27	4	16,585	24	4	16,397	16	4	16,216	21	. 4
Top	16,905	15 .	. 4	16,737	18	. 4	16,561	22	4	16,381	23	4	16,195	20	4
тор	16,890	13	3	16,719	22	3	16,539		3	16,358	22	3	16,175	22	٠3
	16,877	22	3	16,697	23	3 :	16,516	22	3	16,336	23	3	16,153	20	3
i .	16,855	23	3 .	.16,674	22	3	16,494	23	3	16,313	22	3	:16,133	. 22	3
. ,	16,832		. 3	16,652		3	16,471		3	16,291		. 3	16,111		3.
	Plug to Plu	52	30	lug to Plu	- 80	30	lug to Plu	79	30	Plug to Plu	80	30	Plug to Plu	74	30
	Frac Plug	16,957	Total Shot	Frac Plug	16,817	Total Shot	Frac Plug	16,640	Total Shots	Frac Plug	16,461	Total Shots	Frac Plug	16,269	Total Shots
	Stage 6	Distance Between Perfs	Shots	Stage 7	Distance Between Perfs	Shots	Stage 8	Distance Between Perfs	Shots	Stage 9	Distance Between Perfs	Shots	Stage 10	Distance Between Perfs	Shots
	16,088	23	5	15,910	20	5	15,714	35	5	15,546	23	5	15,365	23	. 5
	16,065	23	. 5	15,884	22	. 5	15,695	14	. 5	15,527	26	. 5.	15,343	23	5
From	16,042	25	4,	15,862 .	23	4	15,681	22	4	15,501.	27	4	15,320	22	4
Bottom to	16,017	20	4	15,839	22	4	:15,659	23	4.	15,474	18	4 :	15,298	18	4 .
Тор	15,997	22 .	. 3	15,817	23	.3	15,636	22	3	15,456	24	3	15,280	27	3
· ·	15,975	28	3	15,794	19	. 3	15,614	23	3	15,432	21	3	15,253	26	3
	15,947	17	3	15,775	26	3	15,591	22	3	15,411	23	3	15,227	19	3)
	15,930		3	15,749		3	15,569		3	15,388		3	15,208		3
	Plug to Plu	79	30	lug to Plu	79	30	lug to Plu	63	30	lug to Plu	80	30	Plug to Plu	75	30
	Frac Plug	16,096	Total Shot		15,918		Frac Plug	15,722		Frac Plug			Frac Plug		Total Shots
				<u> </u>											
, i		Distance		T	Distance			Distance			Distance		T	Distance	
	Stage 11	Between	Shots	Stage 12	Between	Shots	Stage 13	Between	Shots	Stage 14	Between	Shots	Stage 15	Between	Shots
		Perfs			Perfs			Perfs			Perfs		7	Perfs	
	15,172	36	. 5	. 15,004	23	5	14,824	23	5	14,630	36	5	14,463	24	5 .
	15,162	22	5	14,985	26	5	14,801	22	5 .	14,621	23	5	14,445	27	5
From	15,140	23	4	14,959	28	- 4	14,779	23	4	14,598	22	4	14,418	19	4
Bottom to	15,117	22	4	14,931	17	4	14,756	19	4	14,576	23	4	14,399	26	. 4
Тор	15,095	23	. 3	44044	20	^	44 707	^-		11.	22		44.070	-	3
		23	3. 3	14,914	23	3	14,737	27	3	14,553	22	3	14,373	23	3 1
	15,072	22	3	14,914	22	3	14,737	24	3	14,553	23	3	14,373	23	3
			<del></del>											$\overline{}$	
	15,072	22	3 ·	14,891	22	3 ·	14,710	24	3	14,531	23	3	14,350	22	3
	15,072 15,050	22	3	14,891 14,869	22	3 · 3	14,710 14,686	24	3 3	14,531 14,508	23	3 3	14,350 -14,328	22	3 :
	15,072 15,050 15,027	22 23 <b>63</b>	3 3 3 30	14,891 14,869 14,847	22 22 81	3 · 3	14,710 14,686 14,666	24 20 <b>76</b>	3 3 3	14,531 14,508 14,487 Plug to Plu	23 21 <b>62</b>	3 3 3	14,350 14,328 14,305 Plug to Plus	22 23 72	3 3 3
	15,072 15,050 15,027 Plug to Plu	22 23 63 15,180	3 3 3 30	14,891 14,869 14,847 Plug to Plu	22 22 81 15,012	3 · 3 · 30	14,710 14,686 14,666 Plug to Plu	24 20 <b>76</b> 14,832	3 3 3 30	14,531 14,508 14,487 Plug to Plu	23 21 62 14,638	3 3 3 30	14,350 14,328 14,305 Plug to Plus	22 23 72 14,471	3 3 3 30
	15,072 15,050 15,027 Plug to Plu	22 23 <b>63</b>	3 3 3 30	14,891 14,869 14,847 Plug to Plu	22 22 81	3 · 3 · 30	14,710 14,686 14,666 Plug to Plu	24 20 <b>76</b>	3 3 3 30	14,531 14,508 14,487 Plug to Plu	23 21 <b>62</b>	3 3 3 30	14,350 14,328 14,305 Plug to Plus	22 23 72	3 3 3 30
	15,072 15,050 15,027 Plug to Plug Frac Plug	22 23 63 15,180 Distance Between Perfs 23	3 3 30 Total Shots Shots 5	14,891 14,869 14,847 Plug to Plug Frac Plug	22 22 81 15,012 Distance Between	3 : 3 : 3 : 30 : Total Shots	14,710 14,686 14,666 Plug to Plug Frac Plug	24 20 76 14,832 Distance Between	3 3 3 30 Total Shots	14,531 14,508 14,487 Plug to Plug Frac Plug	23 21 62 14,638 Distance Between	3 3 3 30 Total Shots	14,350 14,328 14,305 Plug to Plug Frac Plug	22 23 72 14,471 Distance Between	3 3 3 30 Total Shots
	15,072 15,050 15,027 Plug to Plug Frac Plug Stage 16	22 23 63 15,180 Distance Between Perfs	3 3 30 Total Shots	14,891 14,869 14,847 Plug to Plug Frac Plug Stage 17	22 22 81 15,012 Distance Between Perfs	3 3 30 Total Shots	14,710 14,686 14,666 Plug to Plug Frac Plug Stage 18	24 20 76 14,832 Distance Between Perfs	3 3 3 7 30 Total Shots	14,531 14,508 14,487 Plug to Plug Frac Plug Stage 19	23 21 62 14,638 Distance Between Perfs	3 3 3 30 Total Shots	14,350 14,328 14,305 Plug to Plug Frac Plug Stage 20	22 23 72 14,471 Distance Between Perfs	3 3 3 30 Total Shots
From	15,072 15,050 15,027 Plug to Plug Frac Plug Stage 16	22 23 63 15,180 Distance Between Perfs 23	3 3 30 Total Shots Shots 5	14,891 14,869 14,847 Plug to Plug Frac Plug Stage 17	22 22 81 15,012 Distance Between Perfs	3 3 3 Total Shots Shots 5	14,710 14,686 14,666 Plug to Plug Frac Plug Stage 18	24 20 76 14,832 Distance Between Perfs 32	3 3 3 Total Shots Shots 5	14,531 14,508 14,487 Plug to Plug Frac Plug Stage 19	23 21 62 14,638 Distance Between Perfs 23	3 3 3 Total Shots Shots	14,350 :14,328 14,305 Plug to Plug Frac Plug Stage 20 13,560	22 23 72 14,471 Distance Between Perfs 23	3 3 3 30 Fotal Shots Shots
Bottom to	15,072 15,050 15,027 Plug to Plug Frac Plug Stage 16 14,282 14,260	22 23 63 15,180 Distance Between Perfs 23 23	3 3 30 Total Shots Shots 5 5	14,891 14,869 14,847 Plug to Plug Frac Plug Stage 17 14,105 14,079	22 22 81 15,012 Distance Between Perfs 19 29	3 3 3 Total Shots Shots 5 5	14,710 14,686 14,666 Plug to Plug Frac Plug Stage 18 13,912 13,899	24 20 76 14,832 Distance Between Perfs 32 23	3 3 3 30 Total Shots Shots 5 5	14,531 14,508 14,487 Plug to Plug Frac Plug Stage 19 13,732 13,715	23 21 62 14,638 Distance Between Perfs 23 19	3 3 3 Total Shots Shots 5 5	14,350 :14,328 14,305 Plug to Plug Frac Plug Stage 20 13,560 13,538	22 23 72 14,471 Distance Between Perfs 23 23	3 3 3 30 Fotal Shots Shots
	15,072 15,050 15,027 Plug to Plug Frac Plug Stage 16 14,282 14,260 14,237	22 23 63 15,180 Distance Between Perfs 23 23 22	3 3 30 Total Shots Shots 5 5	14,891 14,869 14,847 Plug to Plug Frac Plug Stage 17 14,105 14,079	22 22 81 15,012 Distance Between Perfs 19 29 16	3 3 3 30 Total Shots Shots 5 5	14,710 14,686 14,666 Plug to Plug Frac Plug Stage 18 13,912 13,899 13,876	24 20 76 14,832 Distance Between Perfs 32 23 22	3 3 3 30 Total Shots Shots 5 5	14,531 14,508 14,487 Plug to Plug Frac Plug Stage 19 13,732 13,715 13,696	23 21 62 14,638 Distance Between Perfs 23 19 23	3 3 3 30 Total Shots Shots 5 5	14,350 14,328 14,305 Plug to Plug Frac Plug Stage 20 13,560 13,538 13,515	22 23 72 14,471 Distance Between Perfs 23 23 22	3 3 3 30 Total Shots Shots 5 5
Bottom to	15,072 15,050 15,027 Plug to Plug Frac Plug Stage 16 14,282 14,260 14,237 14,215	22 23 63 15,180 Distance Between Perfs 23 23 22 23	3 3 30 Fotal Shots Shots 5 5 4 4	14,891 14,869 14,847 Plug to Plug Frac Plug Stage 17 14,105 14,079 14,050	22 22 81 15,012 Distance Between Perfs 19 29 16 24	3 3 30 Total Shots Shots 5 5 4	14,710 14,686 14,666 Plug to Plug Frac Plug Stage 18 13,912 13,899 13,876 13,854	24 20 76 14,832 Distance Between Perfs 32 23 22 23	3 3 3 30 Total Shots Shots 5 5 4	14,531 14,508 14,487 Plug to Plug Frac Plug Stage 19 13,732 13,715 13,696 13,673	23 21 62 14,638 Distance Between Perfs 23 19 23 22	3 3 30 Total Shots Shots 5 5 4	14,350 14,328 14,305 Plug to Plug Frac Plug Stage 20 13,560 13,538 13,515 13,493	22 23 72 14,471 Distance Between Perfs 23 23 22 21	3 3 3 30 Total Shots Shots 5 5 4 4
Bottom to	15,072 15,050 15,027 Plug to Plug Frac Plug Stage 16 14,282 14,260 14,237 14,215 14,192	22 23 15,180 / Distance Between Perfs 23 23 22 23 22	3 3 30 Total Shots Shots 5 5 4 4 3	14,891 14,869 14,847 Plug to Plug Frac Plug Stage 17 14,105 14,079 14,050 14,034 14,010	22 22 81 15,012 Distance Between Perfs 19 29 16 24 21	3 3 3 3 3 5 5 5 4 4 4 3 3 5 5 5 5 5 5 5	14,710 14,686 14,666 Plug to Plug Frac Plug Stage 18 13,912 13,899 13,876 13,854 13,831	24 20 76 14,832 Distance Between Perfs 32 23 22 23 31	3 3 3 30 Total Shots Shots 5 5 4 4 3	14,531 14,508 14,487 Plug to Plug Frac Plug Stage 19 13,732 13,715 13,696 13,673 13,651	23 21 62 14,638 Distance Between Perfs 23 19 23 22 23	3 3 30 Total Shots Shots 5 5 4 4 4	14,350 14,328 14,305 Plug to Plug Frac Plug Stage 20 13,560 13,538 13,515 13,493 13,472	22 23 72 14,471 Distance Between Perfs 23 23 22 21 24	3 3 3 30 Total Shots Shots 5 5 4 4 3
Bottom to	15,072 15,050 15,027 Plug to Plug Frac Plug Stage 16 14,282 14,260 14,237 14,215 14,192 14,170	22 23 45,180 / Distance Between Perfs 23 23 22 22 22 22	3 3 3 30 Total Shots  Shots  5 5 4 4 4 3 3 3 3	14,891 14,869 14,847 Plug to Plug Frac Plug Stage 17 14,105 14,079 14,050 14,034 14,010 13,989	22 22 81 15,012 Distance Between Perfs 19 29 16 24 21 22	3 3 3 3 3 5 5 5 5 4 4 4 3 3 3 3	14,710 14,686 14,666 Plug to Plug Frac Plug Stage 18 13,912 13,899 13,876 13,854 13,831 13,800	24 20 76 14,832 Distance Between Perfs 32 23 22 23 31 20	3 3 3 30 Total Shots Shots 5 5 4 4 3 3	14,531 14,508 14,487 Plug to Plug Frac Plug Stage 19 13,732 13,715 13,696 13,673 13,651 13,628	23 21 62 14,638 Distance Between Perfs 23 19 23 22 23 22	3 3 3 30 Total Shots Shots 5 5 4 4 4 3 3	14,350 14,328 14,305 Plug to Plug Frac Plug Stage 20 13,560 13,538 13,515 13,493 13,472 13,448	22 23 72 14,471 Distance Between Perfs 23 23 23 22 21 24 28	3 3 3 30 Total Shots Shots 5 5 4 4 4 3 3
Bottom to Top	15,072 15,080 15,027 Plug to Plui Frac Plug Stage 16 14,282 14,260 14,237 14,215 14,192 14,170 14,148	22 23 63 15,180 // Distance Between Perfs 23 23 22 23 22 24	3 3 3 3 3 3 5 5 5 4 4 4 3 3 3 3 3 3 3 3	14,891 14,869 14,847 Plug to Plug Frac Plug Stage 17 14,105 14,079 14,050 14,034 14,010 13,989 13,967	22 22 81 15,012 Distance Between Perfs 19 29 16 24 21 22 23	3 3 3 3 30 Total Shots  Shots  5 5 4 4 4 3 3 3 3 3 3 3 3 3 3	14,710 14,686 14,666 Plug to Plug Frac Plug Stage 18 13,912 13,899 13,876 13,854 13,830 13,780	24 20 76 14,832 Distance Between Perfs 32 23 22 23 21 20 25	3 3 3 30 Total Shots Shots 5 5 4 4 4 3 3 3	14,531 14,508 14,467 Plug to Plug Frac Plug Stage 19 13,732 13,715 13,696 13,673 13,651 13,628 13,606	23 21 62 14,638 Distance Between Pers 19 23 22 23 22 23 22 23	3 3 3 30 Total Shots Shots 5 5 4 4 4 3 3 3 3	14,350 14,328 14,305 Plug to Plug Frac Plug Stage 20 13,560 13,538 13,515 13,432 13,448 13,420	22 23 72 14,471 Distance Between Perfs 23 23 22 21 24 28 18	3 3 3 30 Total Shots Shots 5 5 4 4 4 3 3 3
Bottom to Top	15,072 15,050 15,027 Plug to Plug Frac Plug Stage 16 14,282 14,260 14,237 14,215 14,117 14,148 14,124	22 23 63 15,180 Distance Between Pers 23 23 22 23 22 24	3 3 3 3 3 3 5 5 4 4 4 3 3 3 3 3 3 3 3 3	14,891 14,869 14,847 Plug to Plug Frac Plug Stage 17 14,105 14,079 14,050 14,034 14,010 13,989 13,967 13,944	22 22 81 15,012 Distance Between Perfs 19 29 16 24 21 22 23	3 3 3 3 3 5 5 5 4 4 4 3 3 3 3 3 3 3 3 3	14,710 14,686 14,666 Plug to Plug Frac Plug Stage 18 13,912 13,899 13,876 13,854 13,831 13,800 13,780 13,755	24 20 76 14,832 Distance Between Perfs 32 23 22 23 31 20 25	3 3 3 30 Total Shots Shots 5 5 4 4 4 3 3 3 3 3	14,531 14,508 14,467 Plug to Plug Frac Plug Stage 19 13,732 13,715 13,696 13,673 13,651 13,628 13,606 13,583	23 21 62 14,638 Distance Between Perfs 23 19 23 22 23 22 23 25	3 3 3 30 Total Shots Shots 5 5 4 4 4 3 3 3 3 3	14,350 14,328 14,305 Plug to Plug Frac Plug Stage 20 13,560 13,538 13,515 13,493 13,472 13,442 13,440	22 23 72 14,471 Distance Between Perfs 23 23 22 21 24 28 18	3 3 3 30 Total Shots Shots 5 5 4 4 4 3 3 3
Bottom to Top	15,072 15,080 15,027 Plug to Plug Frac Plug Stage 16 14,282 14,260 14,237 14,215 14,192 14,170 14,148 14,124 Plug to Plug	22 23 63 15,180 Distance Between Pers 23 23 22 23 22 24	3 3 3 3 3 3 5 5 4 4 4 3 3 3 3 3 3 3 3 3	14,891 14,869 14,847 Plug to Plug Frac Plug Stage 17 14,105 14,079 14,050 14,034 14,010 13,989 13,967 13,944 Plug to Plu	22 22 81 15,012 Distance Between Perfs 19 29 16 24 21 22 23	3 3 3 3 3 5 5 5 4 4 4 3 3 3 3 3 3 3 3 3	14,710 14,686 14,666 1ug to Plug Frac Plug Stage 18 13,912 13,899 13,876 13,854 13,831 13,800 13,780 13,755 Plug to Plug	24 20 76 14,832 Distance Between Perfs 32 23 22 23 31 20 25	3 3 3 30 Total Shots Shots 5 5 4 4 4 3 3 3 3 3	14,531 14,508 14,467 Plug to Plug Frac Plug Stage 19 13,732 13,715 13,696 13,673 13,651 13,628 13,606 13,563 Plug to Plug	23 21 62 14,638 Distance Between Perfs 23 19 23 22 23 22 23 25	3 3 3 30 Total Shots Shots 5 5 4 4 4 3 3 3 3 3	14,350 14,328 14,305 Plug to Plug Frac Plug Stage 20 13,560 13,538 13,515 13,493 13,472 13,448 13,420 13,402 Plug to Plug	22 23 72 14,471 Distance Between Perfs 23 23 22 21 24 28 18	3 3 3 30 Total Shots Shots 5 5 4 4 4 3 3 3 3
Bottom to Top	15,072 15,080 15,027 Plug to Plug Frac Plug Stage 16 14,282 14,260 14,237 14,215 14,192 14,170 14,148 14,124 Plug to Plug	22 23 63 15,180 Distance Between Pers 23 23 22 23 22 24	3 3 3 3 3 3 5 5 4 4 4 3 3 3 3 3 3 3 3 3	14,891 14,869 14,847 Plug to Plug Frac Plug Stage 17 14,105 14,079 14,050 14,034 14,010 13,989 13,967 13,944 Plug to Plug Frac Plug	22 22 81 15,012 Distance Between Perfs 19 29 16 24 21 22 23	3 3 3 3 3 5 5 5 4 4 4 3 3 3 3 3 3 3 3 3	14,710 14,686 14,666 1ug to Plug Frac Plug Stage 18 13,912 13,899 13,876 13,854 13,831 13,800 13,780 13,755 Plug to Plug	24 20 76 14,832 Distance Between Perfs 32 23 22 23 31 20 25	3 3 3 30 Total Shots Shots 5 5 4 4 4 3 3 3 3 3	14,531 14,508 14,467 Plug to Plug Frac Plug Stage 19 13,732 13,715 13,696 13,673 13,651 13,628 13,606 13,563 Plug to Plug	23 21 62 14,638 Distance Between Perfs 23 19 23 22 23 22 23 25	3 3 3 30 Total Shots Shots 5 5 4 4 4 3 3 3 3 3	14,350 14,328 14,305 Plug to Plug Frac Plug Stage 20 13,560 13,538 13,515 13,493 13,472 13,448 13,420 13,402 Plug to Plug	22 23 72 14,471 Distance Between Perfs 23 23 22 21 24 28 18	3 3 3 30 Total Shots Shots 5 5 4 4 4 3 3 3 3
Bottom to Top	15,072 15,080 15,027 Plug to Plug Frac Plug Stage 16 14,282 14,260 14,237 14,215 14,192 14,170 14,148 14,124 Plug to Plug	22 23 45,180 Distance Between Pers 23 23 22 24 75 14,290 Distance Between	3 3 3 3 3 3 5 5 4 4 4 3 3 3 3 3 3 3 3 3	14,891 14,869 14,847 Plug to Plug Frac Plug Stage 17 14,105 14,079 14,050 14,034 14,010 13,989 13,967 13,944 Plug to Plu	22 22 23 81 15,012 Distance Between Perfs 29 16 24 21 22 23 79 14,113	3 3 3 3 3 5 5 5 4 4 4 3 3 3 3 3 3 3 3 3	14,710 14,686 14,666 1ug to Plug Frac Plug Stage 18 13,912 13,899 13,876 13,854 13,831 13,800 13,780 13,755 Plug to Plug	24 20 76 14,832 Distance Between Perfs 23 22 23 21 20 25 66 13,920	3 3 3 30 Total Shots Shots 5 5 4 4 4 3 3 3 3 3	14,531 14,508 14,467 Plug to Plug Frac Plug Stage 19 13,732 13,715 13,696 13,673 13,651 13,628 13,606 13,563 Plug to Plug	23 21 62 14,638 Distance Between Pers 23 19 23 22 23 22 23 27 13,740 Distance Between	3 3 3 30 Total Shots Shots 5 5 4 4 4 3 3 3 3 3	14,350 14,328 14,305 Plug to Plug Frac Plug Stage 20 13,560 13,538 13,515 13,493 13,472 13,448 13,420 13,402 Plug to Plug	22 23 72 14,471 Distance Between Perfs 23 23 22 21 24 28 18 75 13,568 Distance Between	3 3 3 30 Total Shots Shots 5 5 4 4 4 3 3 3 3
Bottom to Top	15,072 15,050 15,027 Plug to Plug Frac Plug Stage 16 14,282 14,260 14,237 14,215 14,192 14,170 14,148 14,124 Plug to Plug Stage 21	22 23 63 15,180 Distance Between Perfs 23 22 23 22 24 75 14,290 Distance Between Perfs	3 3 3 3 3 5 5 4 4 3 3 3 3 3 3 3 3 3 5 Total Shots	14,891 14,869 14,869 14,847 Plug to Plug Frac Plug  Stage 17 14,105 14,079 14,050 14,034 14,010 13,989 13,967 13,944 Plug to Plug Frac Plug  Stage 22	22 22 81 15,012 Distance Between Perfs 19 29 16 24 21 22 3 79 14,113 Distance Between Perfs	3 3 3 3 3 5 5 4 4 4 3 3 3 3 3 3 3 3 3 5 Total Shots	14,710 14,686 14,666 Plug to Plug Frac Plug Stage 18 13,912 13,899 13,876 13,831 13,800 13,755 Plug to Plug Frac Plug	24 20 76 14,832 Distance Between Perfs 32 23 31 20 25 66 13,920 Distance Between Perfs	3 3 3 30 Total Shots Shots 5 5 4 4 3 3 3 3 3 3 7 Total Shots	14,531 14,508 14,467 Plug to Plug Frac Plug Stage 19 13,732 13,715 13,696 13,673 13,651 13,628 13,606 13,539 Plug to Plug Frac Plug	23 21 62 14,638 Distance Between Perfs 23 19 23 22 23 21 3 Distance Between Perfs 23 20 21 21 22 23 22 23 22 23 22 23 22 23 24 25 27 28 29 29 20 20 20 20 20 20 20 20 20 20 20 20 20	3 3 3 30 Total Shots Shots 5 5 4 4 3 3 3 3 3 3 3 3 5 Total Shots	14,350 14,328 14,305 Plug to Plug Frac Plug Stage 20 13,560 13,538 13,515 13,493 13,472 13,448 13,420 Plug to Plug Frac Plug	22 23 72 14,471 Distance Between Perfs 23 22 21 24 28 18 75 13,568 Distance Between Perfs	3 3 3 3 30 Fotal Shots  Shots 5 5 4 4 4 3 3 3 3 30 Fotal Shots  Shots Shots Shots
Bottom to Top	15,072 15,050 15,027 Plug to Plug Frac Plug Stage 16 14,282 14,260 14,237 14,215 14,192 14,170 14,148 14,124 Plug to Plug Frac Plug Stage 21 13,365	22 23 63 15,180 Distance Between Perfs 23 23 22 24 75 14,290 Distance Between Perfs 37	3 3 3 3 3 5 4 4 4 4 3 3 3 3 3 3 3 3 3 5 Total Shots  Shots  Shots  5 5 5 4 5 5 5 5 5 5 5 5 5 5 5 5 5 5 5	14,891 14,869 14,847 Plug to Plug Frac Plug Stage 17 14,105 14,079 14,050 14,030 13,989 13,967 13,944 Plug to Plug Frac Plug Stage 22 13,192	22 22 23 81 15,012 Distance Between Perfs 19 29 16 24 21 22 23 79 14,113 Distance Between Perfs 30	3 3 3 3 3 5 5 4 4 4 3 3 3 3 3 3 5 7 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1 5 1	14,710 14,686 14,666 Plug to Plug Frac Plug Stage 18 13,912 13,899 13,876 13,854 13,800 13,780 13,755 Plug to Plug Frac Plug Stage 23 13,015	24 20 76 14,832 Distance Between Perfs 32 23 22 23 31 20 25  66 13,920 Distance Between Perfs 23	3 3 3 3 3 3 7 Total Shots 5 5 4 4 4 4 3 3 3 3 3 3 3 7 Total Shots	14,531 14,508 14,467 Plug to Plug Frac Plug Stage 19 13,732 13,715 13,696 13,696 13,653 Plug to Plug Frac Plug Stage 24 12,832	23 21 62 14,638 Distance Between Perfs 23 19 23 22 23 67 13,740 Distance Between Perfs 29	3 3 3 3 3 0 Total Shots 5 5 4 4 3 3 3 3 3 7 Total Shots	14,350 14,328 14,305 Plug to Plug Frac Plug Stage 20 13,560 13,538 13,515 13,493 13,472 13,448 13,420 13,402 Plug to Plug Frac Plug Stage 25 12,633	22 23 72 14,471 Distance Between Perfs 23 23 22 21 24 28 18 75 13,568 Distance Between Perfs	3 3 3 3 3 3 0 Total Shots Shots 5 4 4 4 4 3 3 3 3 3 3 7 Total Shots
Bottom to Top	15,072 15,080 15,027 Plug to Plui Frac Plug Stage 16 14,282 14,260 14,237 14,215 14,192 14,170 14,148 14,124 Plug to Plui Frac Plug Stage 21 13,365 13,350	22 23 63 15,180 / Distance Between Perfs 23 23 22 23 22 24 75 14,290 Distance Between Perfs 37 16	3 3 3 3 3 3 5 5 4 4 4 3 3 3 3 3 3 3 5 5 5 5	14,891 14,869 14,869 14,847 Plug to Plug Frac Plug  Stage 17 14,105 14,079 14,050 14,034 14,010 13,989 13,967 13,944 Plug to Plug Frac Plug  Stage 22 13,192 13,177	22 22 28 81 15,012 Distance Between Perfs 19 29 16 24 21 22 23 79 14,113 Distance Between Perfs 30 23	3 3 3 3 3 5 5 4 4 4 4 3 3 3 3 3 3 3 5 5 5 5	14,710 14,686 14,666 Plug to Plug Frac Plug Stage 18 13,912 13,899 13,876 13,854 13,831 13,800 13,780 13,755 Plug to Plug Stage 23 13,015 12,996	24 20 76 14,832 Distance Between Perfs 32 23 22 23 31 20 25 66 13,920 Distance Between Perfs 23 22	3 3 3 3 3 3 7 5 5 5 4 4 4 3 3 3 3 3 3 7 7 7 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9 9 9	14,531 14,508 14,467 Plug to Plug Frac Plug Stage 19 13,732 13,715 13,696 13,673 13,653 13,666 13,583 Plug to Plug Frac Plug Stage 24 12,832 12,816	23 21 62 14,638 Distance Between Perfs 23 19 23 22 23 67 13,740 Distance Between Perfs 25 25	3 3 3 3 Total Shots 5 5 4 4 4 3 3 3 3 3 Total Shots 5 5 5 5 4 5 5 5 5 5 5 7 8 8 8 8 8 8 8 8 8 8 8 8 8	14,350 14,328 14,305 Plug to Plug Frac Plug Stage 20 13,560 13,538 13,515 13,492 13,448 13,420 13,402 Plug to Plug Frac Plug Stage 25 12,633 12,620	22 23 72 14,471 Distance Between Perfs 23 23 22 21 24 28 18 75 13,568 Distance Between Perfs 47 20	3 3 3 3 3 Total Shots Shots 5 4 4 4 3 3 3 3 3 3 7 Total Shots
Bottom to Top	15,072 15,050 15,027 Plug to Plui Frac Plug Stage 16 14,282 14,260 14,237 14,215 14,124 Plug to Plui Frac Plug Stage 21 13,365 13,350 13,334	22 23 15,180 63 15,180 Distance Between Perfs 23 23 22 24 75 14,290 Distance Between Perfs 37 16 22	3 3 3 3 3 3 5 5 4 4 4 3 3 3 3 3 3 0 Total Shots  Shots  Shots  5 5 4 4 4 5 3 3 3 3 3 5 5 5 5 5 5 5 5 5	14,891 14,869 14,847 Plug to Plug Frac Plug Stage 17 14,105 14,079 14,050 14,034 14,010 13,989 13,967 13,944 Plug to Plug Frac Plug Stage 22 13,192 13,177 13,154	22 22 81 15,012 Distance Between Perfs 19 29 16 24 21 22 23 79 14,113 Distance Between Perfs 30 23 20	3 3 3 3 30 Total Shots 5 5 4 4 4 3 3 3 3 30 Total Shots Shots 5 5 4 4 4 4 4 4 5 5 5 5 4 4 6 6 6 6 6 6	14,710 14,686 14,666 14,666 14g to Plug Frac Plug  Stage 18 13,912 13,899 13,876 13,854 13,831 13,800 13,780 13,755 Plug to Plug Frac Plug  Stage 23 13,015 12,996 12,974	24 20 76 14,832 Distance Between Perfs 32 23 22 23 31 20 25 66 13,920 Distance Between Perfs 23 22 23	3 3 3 3 3 3 7 Total Shots 5 5 4 4 4 3 3 3 3 3 3 7 Total Shots	14,531 14,508 14,467 Plug to Plug Frac Plug Stage 19 13,732 13,715 13,696 13,673 13,651 13,628 13,606 13,583 Plug to Plug Frac Plug Stage 24 12,832 12,816 12,791	23 21 62 14,638 Distance Between Perfs 23 19 23 22 23 67 13,740 Distance Between Perfs 29 25 20 20 21 21 22 23 25 20 20 20 20 20 20 20 20 20 20 20 20 20	3 3 3 3 3 Total Shots 5 5 4 4 4 3 3 3 3 3 7 Total Shots 5 5 4 4 4 4 5 5 5 7 7 8 8 8 8 8 8 8 8 8 8 8 8 8 8 8	14,350 14,328 14,305 Plug to Plug Frac Plug Stage 20 13,560 13,538 13,515 13,493 13,472 13,448 13,420 13,402 Plug to Plug Frac Plug Stage 25 12,633 12,620 12,600	22 23 72 14,471  Distance Between Perfs 23 23 22 21 24 28 18 75 13,568  Distance Between Perfs 47 20 20	3 3 3 3 3 3 7 Total Shots 5 5 4 4 4 3 3 3 3 3 3 3 3 7 Total Shots
Bottom to Top  From Bottom to	15,072 15,050 15,027 Plug to Plug Frac Plug Stage 16 14,282 14,260 14,237 14,215 14,172 14,170 14,148 14,124 Plug to Plug Frac Plug Stage 21 13,365 13,334 13,312	22 23 63 15,180 Distance Between Perfs 23 23 22 24 75 14,290 Distance Between Perfs 37 16 22 22 22	3 3 3 3 3 3 5 5 5 4 4 4 3 3 3 3 3 3 3 3	14,891 14,869 14,847 Plug to Plug  Stage 17 14,105 14,079 14,050 14,034 14,010 13,989 13,967 13,944 Plug to Plug  Stage 22 13,192 13,177 13,154 13,134	22 22 81 15,012 Distance Between Perfs 19 29 16 24 21 22 23 79 14,113 Distance Between Perfs 30 23 20 25	3 3 3 3 3 5 5 5 4 4 4 3 3 3 3 3 3 3 5 5 5 5	14,710 14,686 14,666 14ug to Plug Frac Plug Stage 18 13,912 13,899 13,876 13,854 13,831 13,800 13,755 Plug to Plug Frac Plug Stage 23 13,015 12,996 12,974 12,951	24 20 76 14,832 Distance Between Perfs 23 21 25 66 13,920 Distance Between Perfs 23 22 23 22 23 22 23 22 23 22 23 22 23 22 23 22 23 22 23 22 23 22 23 22 23 22 23 22	3 3 3 30 Total Shots Shots 5 5 4 4 4 3 3 3 3 3 3 3 3 5 Total Shots 5 5 4 4 4 4 3 3 5 5 5 5 5 7 5 7 7 8 7 8 8 8 8 8 8 8 8 8	14,531 14,508 14,467 Plug to Plug Frac Plug Stage 19 13,732 13,715 13,696 13,673 13,651 13,628 13,606 13,583 Plug to Plug Frac Plug Stage 24 12,832 12,816 12,791 12,771	23 21 62 14,638 Distance Between Perfs 23 22 23 22 23 27 13,740 Distance Between Perfs 29 25 20 23	3 3 3 3 30 Total Shots 5 5 4 4 3 3 3 3 3 3 3 3 5 Total Shots	14,350 14,328 14,305 Plug to Plug Frac Plug Stage 20 13,560 13,538 13,515 13,493 13,472 13,402 Plug to Plug Frac Plug Stage 25 12,633 12,620 12,600 12,580	22 23 72 14,471  Distance Between Perfs 23 23 22 21 24 28 18 75 13,568  Distance Between Perfs 47 20 20 21	3 3 3 3 3 Total Shots Shots 5 5 4 4 4 3 3 3 3 3 3 3 3 5 Total Shots
Bottom to Top  From Bottom to	15,072 15,050 15,027 Plug to Plug Frac Plug Stage 16 14,282 14,260 14,237 14,215 14,192 14,170 14,148 14,124 Plug to Plug Frac Plug Stage 21 13,365 13,350 13,330 13,331 13,312 13,290	22 23 63 15,180 : Distance Between Perfs 23 22 23 22 24 75 14,290 Distance Perfs 37 16 22 22 23	3 3 3 3 3 5 5 4 4 3 3 3 3 3 3 5 5 5 5 5	14,891 14,869 14,879 Plug to Plug Frac Plug  Stage 17 14,105 14,079 14,050 14,034 14,010 13,989 13,967 13,944 Prac Plug  Stage 22 13,192 13,177 13,154 13,134 13,109	22 22 21 81 15,012 Distance Between Perfs 19 29 16 24 21 22 23 79 14,113 Distance Between Perfs 30 23 20 25 29	3 3 3 3 3 5 5 4 4 3 3 3 3 3 3 5 5 5 5 5	14,710 14,686 14,666 Plug to Plug Frac Plug  Stage 18 13,912 13,899 13,876 13,854 13,831 13,800 13,780 13,750 Plug to Plug  Stage 23 13,015 12,996 12,974 12,951 12,929	24 20 76 14,832 Distance Between Perfs 32 23 22 23 31 20 25  66 13,920 Distance Between Perfs 23 22 23 22 23 22 23 22 23 22 23	3 3 3 3 3 3 0 Total Shots 5 5 4 4 3 3 3 3 3 3 0 Total Shots	14,531 14,508 14,467 14,508 14,467 149 149 149 157 149 157 149 157 149 158 158 158 158 158 158 158 158 158 158	23 21 62 14,638 Distance Between Perfs 23 19 23 22 23 22 23 CFT 13,740 Distance Between Perfs 29 25 20 23 22 23 22 23 22 23 23 22	3 3 3 3 3 3 0 Total Shots 5 5 4 4 3 3 3 3 3 3 0 Total Shots 5 5 4 4 4 3 3 3 5 5 5 4 4 4 4 5 5 5 5 5	14,350 14,328 14,305 Plug to Pluf Frac Plug  Stage 20 13,560 13,538 13,513 13,472 13,448 13,420 13,420 13,400 Plug to Plug  Stage 25 12,633 12,620 12,630 12,550 12,550	22 23 72 14,471 Distance Between Perfs 23 23 22 21 24 28 18 75 13,568 Distance Between Perfs 47 20 20 21 18	3 3 3 3 3 3 5 5 5 4 4 4 3 3 3 3 3 0 Fotal Shots  Shots Shots Shots 5 5 4 4 4 4 3 3 3 3 3 0 Fotal Shots  Shots 5 5 4 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3
Bottom to Top  From Bottom to	15,072 15,050 15,027 Plug to Plug Frac Plug Stage 16 14,282 14,260 14,237 14,215 14,192 14,170 14,148 14,124 Plug to Plug Frac Plug Stage 21 13,350 13,334 13,312 13,297	22 23 63 15,180 Distance Between Perfs 23 23 22 24 75 14,290 Distance Between Perfs 37 16 22 22 23 22	3 3 3 3 3 3 3 3 3 3 3 5 5 5 4 4 4 4 4 4	14,891 14,869 14,869 14,847 Plug to Plug Frac Plug  Stage 17 14,105 14,079 14,050 14,030 13,989 13,967 13,944 Plug to Plug Frac Plug  Stage 22 13,197 13,154 13,134 13,109 13,080	22 22 23 81 15,012 Distance Between Perfs 19 29 16 24 21 22 23 79 14,113 Distance Between Perfs 30 23 20 25 29 16	3 3 3 3 3 5 5 4 4 4 3 3 3 3 5 5 5 4 4 4 3 3 3 3	14,710 14,686 14,666 Plug to Plug Frac Plug  Stage 18 13,912 13,899 13,876 13,854 13,800 13,780 13,755 Plug to Plug  Stage 23 13,015 12,996 12,974 12,959 12,906	24 20 76 14,832 Distance Between Perfs 32 23 22 23 31 20 25 66 13,920 Distance Between Perfs 23 22 23 22 23 22 23 22 23 22 23 22 23 22 23 22	3 3 3 3 3 7 Total Shots  5 5 4 4 3 3 3 Total Shots  Shots  Shots  4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	14,531 14,508 14,467 Plug to Plug Frac Plug  13,732 13,715 13,696 13,651 13,628 13,606 13,583 Plug to Plug Frac Plug  Stage 24 12,832 12,816 12,791 12,771 12,748 12,728	23 21 62 14,638 Distance Between Perfs 23 19 23 22 23 67 13,740 Distance Between Perfs 29 25 20 23 22 23	3 3 3 3 7 Total Shots  Shots  5 5 4 4 3 3 7 Total Shots  Shots  Shots  5 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	14,350 14,328 14,305 Plug to Plug Frac Plug  Stage 20 13,560 13,538 13,515 13,439 13,472 13,448 13,420 13,402 Plug to Plug Frac Plug  Stage 25 12,633 12,620 12,550 12,559 12,559 12,541	22 23 72 14,471 Distance Between Perfs 23 23 22 21 24 28 18 75 13,568 Distance Between Perfs 47 20 20 21 18 22	3 3 3 3 3 Total Shots  Shots  5 4 4 4 3 3 3 Total Shots  Shots  Shots  4 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
Bottom to Top  From Bottom to	15,072 15,080 15,027 Plug to Plui Frac Plug Stage 16 14,282 14,260 14,237 14,215 14,192 14,170 14,148 14,124 Plug to Plui Frac Plug Stage 21 13,365 13,350 13,334 13,312 13,267 13,267	22 23 63 15,180 : Distance Between Perfs 23 22 23 22 24 75 14,290 Distance Perfs 37 16 22 22 23	3 3 3 3 3 5 5 5 4 4 4 3 3 3 3 3 3 5 5 5 5	14,891 14,869 14,869 14,867 Plug to Plug Frac Plug  Stage 17 14,105 14,079 14,050 14,034 14,010 13,989 13,967 13,944 Plug to Plug Frac Plug  Stage 22 13,192 13,177 13,154 13,134 13,109 13,080 13,086	22 22 21 81 15,012 Distance Between Perfs 19 29 16 24 21 22 23 79 14,113 Distance Between Perfs 30 23 20 25 29	3 3 3 3 3 5 5 4 4 4 3 3 3 3 3 3 3 3 3 3	14,710 14,686 14,666 Plug to Plug Frac Plug  Stage 18 13,912 13,899 13,876 13,854 13,854 13,800 13,780 13,755 Plug to Plug  Stage 23 13,015 12,996 12,974 12,951 12,996 12,984	24 20 76 14,832 Distance Between Perfs 32 23 22 23 31 20 25  66 13,920 Distance Between Perfs 23 22 23 22 23 22 23 22 23 22 23	3 3 3 3 3 3 7 5 5 5 4 4 4 3 3 3 3 3 3 3 3 5 5 5 4 4 4 4	14,531 14,508 14,467 Plug to Plug Frac Plug  13,732 13,715 13,696 13,673 13,651 13,628 13,606 13,563 Plug to Plug  Stage 24 12,832 12,816 12,791 12,774 12,778 12,778 12,778 12,778 12,778	23 21 62 14,638 Distance Between Perfs 23 19 23 22 23 22 23 CFT 13,740 Distance Between Perfs 29 25 20 23 22 23 22 23 22 23 23 22	3 3 3 3 3 3 5 5 5 4 4 4 3 3 3 3 3 5 5 5 4 4 4 4	14,350 14,328 14,305 Plug to Plug Frac Plug  Stage 20 13,560 13,538 13,515 13,432 13,442 13,402 Plug to Plug  Stage 25 12,633 12,620 12,600 12,550 12,551 12,551	22 23 72 14,471 Distance Between Perfs 23 23 22 21 24 28 18 75 13,568 Distance Between Perfs 47 20 20 21 18	3 3 3 3 Total Shots  Shots  5 4 4 3 3 3 Total Shots  Shots  Shots  5 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3
Bottom to Top	15,072 15,050 15,027 Plug to Plug Frac Plug Stage 16 14,282 14,260 14,237 14,215 14,192 14,170 14,148 14,124 Plug to Plug Frac Plug Stage 21 13,350 13,334 13,312 13,297	22 23 63 15,180 Distance Between Perfs 23 23 22 24 75 14,290 Distance Between Perfs 37 16 22 22 23 22	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	14,891 14,869 14,869 14,847 Plug to Plug Frac Plug  Stage 17 14,105 14,079 14,050 14,030 13,989 13,967 13,944 Plug to Plug Frac Plug  Stage 22 13,197 13,154 13,134 13,109 13,080	22 22 23 81 15,012 Distance Between Perfs 19 29 16 24 21 22 23 79 14,113 Distance Between Perfs 30 23 20 25 29 16	3 3 3 3 3 5 5 5 4 4 4 3 3 3 3 3 3 3 3 3	14,710 14,686 14,666 Plug to Plug Frac Plug  Stage 18 13,912 13,899 13,876 13,854 13,800 13,780 13,755 Plug to Plug  Stage 23 13,015 12,996 12,974 12,959 12,906	24 20 76 14,832 Distance Between Perfs 32 23 21 20 25 66 13,920 Distance Between Perfs 23 22 23 22 23 22 23 22 23 22 23 22 23	3 3 3 3 3 3 7 Total Shots 5 5 4 4 4 3 3 3 3 3 3 7 Total Shots 5 5 4 4 4 4 3 3 3 3 3 3 3 3 3 5 5 5 5 5	14,531 14,508 14,467 Plug to Plug Frac Plug  13,732 13,715 13,696 13,651 13,628 13,606 13,583 Plug to Plug Frac Plug  Stage 24 12,832 12,816 12,791 12,771 12,748 12,728	23 21 62 14,638 Distance Between Perfs 23 19 23 22 23 67 13,740 Distance Between Perfs 29 25 20 23 22 23	3 3 3 3 3 3 7 Total Shots 5 5 4 4 4 3 3 3 3 3 3 7 Total Shots 5 5 4 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3	14,350 14,328 14,305 Plug to Plug Frac Plug  Stage 20 13,560 13,538 13,515 13,439 13,472 13,448 13,420 13,402 Plug to Plug Frac Plug  Stage 25 12,633 12,620 12,550 12,559 12,559 12,541	22 23 72 14,471 Distance Between Perfs 23 23 22 21 24 28 18 75 13,568 Distance Between Perfs 47 20 20 21 18 22	3 3 3 3 3 3 7 Total Shots 5 5 4 4 4 3 3 3 3 3 3 3 7 Total Shots
Bottom to Top	15,072 15,080 15,027 Plug to Plui Frac Plug Stage 16 14,282 14,260 14,237 14,215 14,192 14,170 14,148 14,124 Plug to Plui Frac Plug Stage 21 13,365 13,350 13,334 13,312 13,267 13,267	22 23 15,180 63 15,180 Distance Between Perfs 23 23 22 24 75 14,290 Distance Between Perfs 37 16 22 23 22 23 22 23 26 61	3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3	14,891 14,869 14,869 14,867 Plug to Plug Frac Plug  Stage 17 14,105 14,079 14,050 14,034 14,010 13,989 13,967 13,944 Plug to Plug Frac Plug  Stage 22 13,192 13,177 13,154 13,134 13,109 13,080 13,086	22 22 23 81 15,012 Distance Between Perfs 19 29 16 24 21 22 23 79 14,113 Distance Between Perfs 30 23 20 25 29 16	3 3 3 3 3 5 5 4 4 4 3 3 3 3 3 3 3 3 3 3	14,710 14,686 14,666 Plug to Plug Frac Plug  Stage 18 13,912 13,899 13,876 13,854 13,854 13,800 13,780 13,755 Plug to Plug  Stage 23 13,015 12,996 12,974 12,951 12,996 12,984	24 20 76 14,832 Distance Between Perfs 32 23 22 23 31 20 25 66 13,920 Distance Between Perfs 23 22 23 22 23 22 23 22 23 22 23 22 23 22 23 22	3 3 3 3 3 3 7 5 5 5 4 4 4 3 3 3 3 3 3 3 3 5 5 5 4 4 4 4	14,531 14,508 14,467 Plug to Plug Frac Plug  Stage 19 13,732 13,715 13,696 13,673 13,651 13,628 13,606 13,583 Plug to Plug Frac Plug  Stage 24 12,832 12,816 12,791 12,771 12,748 12,748 12,768 12,703 12,680 Plug to Plu	23 21 62 14,638 Distance Between Perfs 23 19 23 22 23 67 13,740 Distance Between Perfs 29 25 20 23 22 23	3 3 3 3 3 Total Shots 5 5 4 4 4 3 3 3 3 3 3 Total Shots 5 5 4 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3	14,350 14,328 14,305 Plug to Plug Frac Plug  Stage 20 13,560 13,538 13,515 13,432 13,442 13,402 Plug to Plug  Stage 25 12,633 12,620 12,600 12,550 12,551 12,551	22 23 72 14,471 Distance Between Perfs 23 23 22 21 24 28 18 75 13,568 Distance Between Perfs 47 20 20 21 18 22	3 3 3 3 Total Shots  Shots  5 4 4 3 3 3 Total Shots  Shots  Shots  5 4 4 4 3 3 3 3 3 3 3 3 3 3 3 3 3 3 3

## HOBBS OCD

Form 3160-4 (August 2007) → UNITED STATES DEPARTMENT OF THE INTERIOR BETTER OF LAND MANAGEMENT

DEC 1 7 2018

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

WELL COMPLETION OR RECOMPLETION REPORT AND LOCK

	WELL (	COMPL	ETÎON C	R REC	OMPL	ETIC	ON RE	PORT	AND	DEEL	•		ease Serial N IMNM1203		
la. Type of	_	Oil Well	_	_	Dry			<b>-</b> ni	- ·	<b>- D</b> :cc		6. If	Indian, Allo	ottee or	Tribe Name
b. Type of	f Completion	Othe	lew Well er	□ Work	Over	D D	eepen	☐ Plug	g Back	☐ Diff.	Resvr.	7. U	nit or CA A	greeme	nt Name and No.
2. Name of COG O	Operator PERATING	LLC	E	-Mail: aav				AVERY	,				ease Name a IENNIN FE		
3. Address	3. Address 2208 W MAIN STREET ARTESIA, NM 88210 3a. Phone No. (include area code) Ph: 575-748-6940 9. API Well No. 30-025-44640 4. Location of Well (Report location clearly and in accordance with Federal requirements)* 10. Field and Pool, or Exploratory														
4. Location	of Well (Re	port locat	on clearly an	d in accor	dance wi	th Fed	eral requ	uirements	)*				Field and Po VILDCAT; I		
At top p			10FNL 2132							N3 353738	: W.Lon	11. S	Sec., T., R., r Area Sec	M., or 1 3 <b>T</b> 26	Block and Survey SS R35E Mer NMP
At top prod interval reported below NWNE Lot B 210FNL 2132FEL 32.078998 N Lat, 103.353738 W Lon  At total depth Lot O 200FSL 1956FEL  At total depth Lot O 200FSL 1956FEL  Or Area Sec 3 1205 R35E Wer NM  12. County or Parish LEA  NM															
14. Date Spudded 05/19/2018															
18. Total D	epth:	MD TVD	17199 12443		9. Plug	Back T	.D.:	MD TVD	16	6962 2443	20. Dej	pth Bri	dge Plug Se		MD 17065 TVD 12443
21. Type El	lectric & Oth	er Mecha	nical Logs R	un (Submi	t copy of	each)				Was	well core DST run? ctional Su	•	<b>⊠</b> No	☐ Yes	(Submit analysis) (Submit analysis) (Submit analysis)
23. Casing an	nd Liner Rec	ord (Repo	ort all strings	set in wel	)					<u> </u>					· · · · · · · · · · · · · · · · · · ·
Hole Size	Size/G	rade	Wt. (#/ft.)	Top (MD)		ttom (ID)		Cementer epth		of Sks. & of Cement	Slurry (BB		Cement T	Гор*	Amount Pulled
14.750		750 L80	45.5		0	1009	_			85	0	0			
6.750 9.875	i e	00 P110 625 L80	23.0 29.7	ļ		<u>11317</u> 11720		5278	5278 1950					0	
6.750	1	00 P110	18.0	113		17180	1	3210		126	_			0	
24 7 1 .											<u> </u>				
24. Tubing Size	Depth Set (N	(D)   P	acker Depth	(MD) T	Size	Dent	h Set (N	4D) [	acker De	epth (MD)	Size	De	pth Set (MI	<u> </u>	Packer Depth (MD)
2.875		1456	acker Deptil	11446	Size	Бері	ii bet (iv	(LD) 1	acker De	pui (WID)	Bizc	1	pui sei (wii	<del>"</del>	acker Depth (MD)
25. Producii	ng Intervals					26.	Perfora	tion Rec	ord						
	ormation	_	Тор		Bottom	_	P	erforated			Size	1	No. Holes		Perf. Status
A)	BONE SP	RING	1	2496	1694	12496 TO 16949						750			
B) C)						+			···			+			
D)						十									
	acture, Treat		nent Squeeze	, Etc.											
!	Depth Interva		242 055 47	TA OU (50)				A	mount an	d Type of l	Material				
	1249	6 TO 16	949 SEE AT	TACHED											
															<del> </del>
				···											
	ion - Interval		Tm :	lou.	I.a.		11.	Iona				<b>.</b>			
Date First Produced 10/19/2018	Test Date 10/19/2018	Hours Tested 24	Production	Oil BBL 229.0	Gas MCF 258	ŀ	Water BBL 512.0	Oil G Corr.		Gas Gravi	ty	Production Method  GAS LIFT		FT	
Choke Size 18/64	Tbg. Press. Flwg. 3800 SI	Csg. Press. 2800.0	24 Hr. Rate	Oil BBL 229	Gas MCF 258	ŀ	Water BBL 512	Gas:C Ratio	li	1	Status POW				
28a. Produc	tion - Interva	ıl B								•					
Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF		Water BBL	Oil G Corr.		Gas Gravi	ty	Producti	ion Method		
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF		Water BBL	Gas:C Ratio	Pil	Well	Status				A approvals will
/C /			diaid. dada		: - ( - )					1	_		11.00	a BLN	V ahh, į <sup>ccauu</sup> ec

(See Instructions and spaces for additional data on reverse side)
ELECTRONIC SUBMISSION #447676 VERIFIED BY THE BLM WELL INFORMATION SYSTEM
\*\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\* OF

Subsequently be reviewed and sca

28b. Production - Interval C Due Print Training State															
Section   Descriptions   Descripti	28b. Prod		al C												
Size   Find   Press   Rate   DBL   MCF   DBL   Ratio					Oil BBL				,		P	Production Method			
Due   Tend   Producted   Due   Tend   Production   State   State   Production   State   Production   State   State   Production   State   State   Production   State		Flwg.								Well Status	Status				
Production   Date   Tested   Production   Date	28c. Prod	luction - Interv	al D	······································		<del></del>									
Size   Fing   Press   Rate   State									,				<u> </u>		
SolD 30. Summary of Promus Zones (Include Aquifers). Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tens, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.  Formation Top Bottom Descriptions, Contents, etc. Name Top. Meas. Depth RUSTLER 1070 FO SALT 1282 LAMAR 1282 LA		Flwg.								Well Status					
30. Summary of Porous Zones (Include Aquifers):  Show all important zones of porosity and contents thereof: Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.  Formation Top Bottom Descriptions, Contents, etc.  Name Top Meas. Depth Top OF SALT 1262 LAMAR 5291 LAM			Sold, used	for fuel, vent	ed, etc.)										
Show all important zones of perosity and contents thereof. Cored intervals and all drill-stem tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures and recoveries.  Formation Top Bottom Descriptions, Contents, etc. Name Top Meas. Depth RUSTLER 10P OF SALT 1282 LAMAR 5251 BELL CANYON 5273 CHERRY CANYON 6185 BUSHY CANYON 6185 BUSHY CANYON 6185 BUSHY CANYON 7820 BONE SPRING 2ND 10889  32. Additional temarks (include plugging procedure):  BONE SPRING 2ND 10889  33. Circle enclosed attachments:  1. Electrical/Mechanical Logs (I full set req'd.) 5. Sundyly Notice for plugging and cement verification 6. Core Analysis 7 Other:  34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions):  Electronic Submission #447676 Verified by the BLM Well Information System.  For COG OFERATING LLC, sent to the Hobbs  Name (please print) AMANDA AVERY  Title AUTHORIZED REPRESENTATIVE  Signature (Electronic Submission)  Date 12/13/2018			Zones (In	iclude Aquife	rs):					31.	Form	ation (Log) Markers			
Formation Top Bottom Descriptions, Contents, etc. Name Meas. Depth Meas. Depth Top Or Sal. 1 1282 1 10 POR Sal. 1	tests,	including deptl													
TOP OF SALT 1282 LAMAR 5251 BELL CANYON 5273 CHERRY CANYON 6185 BRUSHY CANYON 7800 BRUSHY		Formation		Тор	Bottom	Bottom Descriptions, Contents,						Name	Top Meas. Depth		
33. Circle enclosed attachments:  1. Electrical/Mechanical Logs (1 full set req'd.)  2. Geologic Report  3. DST Report  4. Directional Survey  5. Sundry Notice for plugging and cement verification  6. Core Analysis  7 Other:  34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions):  Electronic Submission #447676 Verified by the BLM Well Information System.  For COG OPERATING LLC, sent to the Hobbs  Name (please print) AMANDA AVERY  Title AUTHORIZED REPRESENTATIVE  Signature (Electronic Submission)  Date 12/13/2018	TOP OF SALT 1262 LAMAR 5251 BELL CANYON 5273 CHERRY CANYON 6185 BRUSHY CANYON 7800 BONE SPRING 1ST 10357										TOP LAM/ BELL CHEI BRUS BON	OF SALT AR - CANYON RRY CANYON SHY CANYON E SPRING 1ST	1262 5251 5273 6185 7800 10357		
5. Sundry Notice for plugging and cement verification 6. Core Analysis 7 Other:  34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions):  Electronic Submission #447676 Verified by the BLM Well Information System.  For COG OPERATING LLC, sent to the Hobbs  Name (please print) AMANDA AVERY  Title AUTHORIZED REPRESENTATIVE  Signature (Electronic Submission)  Date 12/13/2018	BON	E SPRING 3ri	d 120	ongging proce											
34. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records (see attached instructions):  Electronic Submission #447676 Verified by the BLM Well Information System.  For COG OPERATING LLC, sent to the Hobbs  Name (please print) AMANDA AVERY  Title AUTHORIZED REPRESENTATIVE  Signature (Electronic Submission)  Date 12/13/2018			_	•	• •		_	-							
Electronic Submission #447676 Verified by the BLM Well Information System. For COG OPERATING LLC, sent to the Hobbs  Name (please print) AMANDA AVERY  Title AUTHORIZED REPRESENTATIVE  Signature (Electronic Submission)  Date 12/13/2018	J. 3u	mary monec 10	. broggini	5 and coment			o. Colo Al			, Guio					
Signature (Electronic Submission) Date 12/13/2018	34. I here	by certify that	the forego	•	ronic Subm	ission #447	676 Verific	ed by the BI	LM Well In	nformation			ons):		
	Name	e(please print)	AMAND	A AVERY				Т	itle <u>AUTH</u>	ORIZED F	REPR	RESENTATIVE	· <u></u>		
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212 make it a crime for any person knowledge and willfully to make to any department or agency	Signa	ature	(Electror	nic Submissi	on)			D	ate <u>12/13/</u>	2018					
	Title 19 I	ISC Section	1001 and	Title 43 II S	C Section 1	212 make	it a crime f	or any person	knowingly	v and willfi	ully to	make to any department or a	gency		

. . . .

of the United States any false, fictitious or fradulent statements or representations as to any matter within its jurisdiction.