

District I
1625 N. French Dr., Hobbs, NM 88240
District II
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
Energy, Minerals & Natural Resources

Form C-104
Revised August 1, 2011

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit one copy to appropriate District Office

☐ AMENDED REPORT

I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

¹ Operator name and Address COG Operating LLC 2208 W Main Street Artesia, NM 88210		² OGRID Number 229137
		³ Reason for Filing Code/ Effective Date NW
⁴ API Number 30 - 025-44725	⁵ Pool Name Red Hills; Bone Spring, North	⁶ Pool Code 96434
⁷ Property Code 321303	⁸ Property Name Mortarboard Federal Com	⁹ Well Number 13H

II. ¹⁰ Surface Location

UL or lot no 3	Section 1	Township 24S	Range 34E	Lot Idn	Feet from the 210	North/SouthLine North	Feet from the 1980	East/West line West	County Lea
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¹¹ Bottom Hole Location

UL or lot no F	Section 12	Township 24S	Range 34E	Lot Idn	Feet from the 2433	North/South line North	Feet from the 2001	East/West line West	County Lea
¹² Lse Code F	¹³ Producing Method Code F	¹⁴ Gas Connection Date 10/27/18	¹⁵ C-129 Permit Number	¹⁶ C-129 Effective Date	¹⁷ C-129 Expiration Date				

III. Oil and Gas Transporters

¹⁸ Transporter OGRID	¹⁹ Transporter Name and Address	²⁰ O/G/W
	Alpha Crude Connector Pipeline	O
24650	Targa Midstream Services, LP 1000 Louisiana Ste 4700 Houston, TX 77002	G

IV. Well Completion Data

²¹ Spud Date 6/17/18	²² Ready Date 10/27/18	²³ TD 18,995'	²⁴ PBDT 18,925	²⁵ Perforations 11,826-18,911'	²⁶ DHC, MC
²⁷ Hole Size	²⁸ Casing & Tubing Size	²⁹ Depth Set	³⁰ Sacks Cement		
17 1/2	13 3/8	854'	625		
12 1/4 8 3/4	9 5/8 7 5/8	5,358' 11,431	1450 825		
8 3/4	5 1/2 5	0-10897 10897-18985	1600		
	2 7/8	11063			

V. Well Test Data

³¹ Date New Oil 10/27/18	³² Gas Delivery Date 10/27/18	³³ Test Date 10/27/18	³⁴ Test Length 24 Hrs	³⁵ Tbg. Pressure 3800	³⁶ Csg. Pressure 1350
³⁷ Choke Size 20/64	³⁸ Oil 375	³⁹ Water 1325	⁴⁰ Gas 1134		⁴¹ Test Method

⁴² I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

Signature: *Amanda Avery*

Printed name:
Amanda Avery

Title:
Regulatory Tech II

E-mail Address:
aavery@concho.com

Date:
12/18/18

Phone:
575-748-6962

OIL CONSERVATION DIVISION

Approved by: *Karen Sharp*

Title: *Staff Mgr*

Approval Date: *12-20-18*

Documents pending BLM approvals will
subsequently be reviewed and scanned

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM 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-enter an abandoned well. Use form 3160-3 (APD) for such proposals.*5. Lease Serial No.
NMNM77090

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

8. Well Name and No.
MORTARBOARD FEDERAL COM 13H9. API Well No.
30-025-4472510. Field and Pool or Exploratory Area
RED HILLS; BONE SPRING N11. County or Parish, State
LEA COUNTY, NM**SUBMIT IN TRIPLICATE - Other instructions on page 2**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other2. Name of Operator
COG OPERATING LLCContact: AMANDA AVERY
E-Mail: aavery@concho.com3a. Address
2208 W MAIN STREET
ARTESIA, NM 882103b. Phone No. (include area code)
Ph: 575-748-6940

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 1 T24S R34E Mer NMP 210FNL 1980FWL

12. CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Hydraulic Fracturing	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	Hydraulic Fracture
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.

08/22/18 Test annulus to 1500# Set CBP @ 18,937' and test csg to 11,005#. Good test.

09/09/18 to 09/19/18 Perf 11,826-18,911' (1200). Acdz w/117,600 gal 7 1/2%; frac w/14,709,560# sand & 14,677,762 gal fluid.

09/21/18 to 09/22/18 Drilled out CFP's. Clean down to PBTD @ 18,925'.

09/27/18 - 9/29/18 Set 2 7/8" 6.5# L-80 tbg @ 11,063'. Installed gas lift system.

10/27/18 Began flowing back & testing. Date of first production.

14. I hereby certify that the foregoing is true and correct.

**Electronic Submission #448192 verified by the BLM Well Information System
For COG OPERATING LLC, sent to the Hobbs**

Name (Printed/Typed) AMANDA AVERY

Title AUTHORIZED REPRESENTATIVE

Signature (Electronic Submission)

Date 12/18/2018

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By _____

Title _____

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office _____

Documents pending BLM approvals will
subsequently be reviewed and scannedTitle 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and wilfully
States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 2)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No.
NMNM77090

1a. Type of Well ☒ Oil Well ☐ Gas Well ☐ Dry ☐ Other
b. Type of Completion ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr.
Other _____

6. If Indian, Allottee or Tribe Name

7. Unit or CA Agreement Name and No.

2. Name of Operator
COG OPERATING LLC

Contact: AMANDA AVERY
E-Mail: aavery@concho.com

8. Lease Name and Well No.
MORTARBOARD FEDERAL COM 13H

3. Address
2208 W MAIN STREET
ARTESIA, NM 88210

3a. Phone No. (include area code)
Ph: 575-748-6940

9. API Well No.
30-025-44725

4. Location of Well (Report location clearly and in accordance with Federal requirements)*

Sec 1 T24S R34E Mer NMP
At surface NENW 210FNL 1980FWL 32.253234 N Lat, 103.425867 W Lon
Sec 1 T24S R34E Mer NMP
At top prod interval reported below NENW 210FNL 1980FWL 32.253234 N Lat, 103.425867 W Lon
Sec 12 T24S R34E Mer NMP
At total depth 2433FNL 2001FWL 32.232601 N Lat, 103.425729 W Lon

10. Field and Pool, or Exploratory
RED HILLS; BONE SPRING N

11. Sec., T., R., M., or Block and Survey
or Area Sec 1 T24S R34E Mer NMP

12. County or Parish
LEA

13. State
NM

14. Date Spudded
06/17/2018

15. Date T.D. Reached
08/05/2018

16. Date Completed
☐ D & A ☒ Ready to Prod.
10/27/2018

17. Elevations (DF, KB, RT, GL)*

18. Total Depth: MD 18995
TVD 11860

19. Plug Back T.D.: MD 18925
TVD 11860

20. Depth Bridge Plug Set: MD 18937
TVD 11860

21. Type Electric & Other Mechanical Logs Run (Submit copy of each)

22. Was well cored? ☒ No ☐ Yes (Submit analysis)
Was DST run? ☒ No ☐ Yes (Submit analysis)
Directional Survey? ☐ No ☒ Yes (Submit analysis)

23. Casing and Liner Record (Report all strings set in well)

Hole Size	Size/Grade	Wt. (#/ft.)	Top (MD)	Bottom (MD)	Stage Cementer Depth	No. of Sks. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
17.500	13.375 J55	54.5	0	854		625		0	
12.250	9.625 L80	40.0	0	5358	915	1450		0	
6.750	5.500 P110	23.0	0	10897				0	
8.750	7.625 L80	29.7	0	11431		825		0	
6.750	5.000 P110	18.0	10897	18985		1075		0	

24. Tubing Record

Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)	Size	Depth Set (MD)	Packer Depth (MD)
2.875	11063							

25. Producing Intervals

26. Perforation Record

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) BONE SPRING	11826	18911	11826 TO 18911		1200	
B)						
C)						
D)						

27. Acid, Fracture, Treatment, Cement Squeeze, Etc.

Depth Interval	Amount and Type of Material
11826 TO 18911	SEE ATTACHED

28. Production - Interval A

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
10/27/2018	10/27/2018	24	→	375.0	1134.0	1325.0			GAS LIFT
Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
20/64	3800 SI	1350.0	→	375	1134	1325		POW	

28a. Production - Interval B

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.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
			→						

(See Instructions and spaces for additional data on reverse side)

ELECTRONIC SUBMISSION #448198 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

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

Documents pending BLM approvals will subsequently be reviewed and scanned

...ED **

28b. Production - Interval C

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	

28c. Production - Interval D

Date First Produced	Test Date	Hours Tested	Test Production →	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API	Gas Gravity	Production Method
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate →	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	

29. Disposition of Gas(Sold, used for fuel, vented, etc.)
SOLD

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.

31. Formation (Log) Markers

Formation	Top	Bottom	Descriptions, Contents, etc.	Name	Top Meas. Depth
RUSTLER	798			RUSTLER	798
TOP OF SALT	1126			TOP OF SALT	1126
BOTTOM OF SALT	4964			BOTTOM OF SALT	4964
LAMAR	5333			LAMAR	5333
BELL CANYON	5358			BELL CANYON	5358
CHERRY CANYON	6279			CHERRY CANYON	6279
BRUSHY CANYON	7549			BRUSHY CANYON	7549
BONE SPRINGS LIME STONE	8843			BONE SPRINGS LIME STONE	8843

32. Additional remarks (include plugging procedure):

BONE SPRINGS 1ST 9900
BONE SPRINGS 2ND 10380
BONE SPRINGS 3RD 11359

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 #448198 Verified by the BLM Well Information System.
For COG OPERATING LLC, sent to the Hobbs

Name (please print) AMANDA AVERYTitle AUTHORIZED REPRESENTATIVE

Signature _____ (Electronic Submission)

Date 12/18/2018

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

**** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ** ORIGINAL ****

Mortarboard Federal Com #13H

<u>Perfs</u>	<u>7 1/2% Acid (Gal)</u>	<u>Sand (#)</u>	<u>Fluid (Gal)</u>
1	1554	366730	391146
2	2646	366270	368634
3	3108	361220	530292
4	3108	370400	530292
5	3024	373020	380604
6	3024	364660	412986
7	3108	368770	382620
8	3066	367730	360276
9	3024	371270	316848
10	3024	374250	322476
11	3150	366370	351940
12	3108	364810	421974
13	3024	360080	316848
14	2772	363640	390096
15	2982	374450	337512
16	3108	366930	332094
17	3150	369560	380940
18	2772	361260	366198
19	2772	370420	358848
20	2772	368280	369516
21	2772	371940	388164
22	2772	374340	331758
23	2982	369270	372162
24	3024	372990	330708
25	3150	368570	426300
26	2772	371270	297108
27	2772	362220	335664
28	2982	370710	335664
29	3612	367850	320922
30	3108	364310	349104
31	2772	362070	319788
32	2772	364050	305970
33	2772	360050	619878
34	2772	370520	332892
35	2982	371640	319158
36	2982	372740	343056
37	2982	370110	386442
38	3108	362630	311934
39	3150	366520	313110
40	3066	365640	315840
Totals	117,600	14,709,560	14,677,762

From Bottom to Top		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots	
		18,911	22	4	18,896	59	4	18,556	22	4	18,378	22	4	18,200	22	4
		18,889	22	4	18,888	8	4	18,530	19	4	18,356	23	4	18,178	22	4
		18,867	23	4	18,860	13	4	18,511	17	4	18,333	22	4	18,156	23	4
		18,844	22	4	18,867	23	4	18,494	27	4	18,311	22	4	18,133	19	4
		18,822	22	4	18,844	22	4	18,467		4	18,289	22	4	18,114	25	4
		18,800	22	4	18,822	22	4	18,442	20	4	18,267	22	4	18,089	22	4
		18,778	23	3	18,800	22	3	18,422	22	3	18,245	23	3	18,067	22	3
		18,755		3	18,578		3	18,400		3	18,222		3	18,045		3
		Plug to Plug	86	30	Plug to Plug	42	30	Plug to Plug	73	30	Plug to Plug	79	30	Plug to Plug	79	30
	Frac Plug	18,930	Total Shots	Frac Plug	18,709	Total Shots	Frac Plug	18,567	Total Shots	Frac Plug	18,390	Total Shots	Frac Plug	18,212	Total Shots	

From Bottom to Top	18,022	23	4	17,838	29	4	17,667	28	4	17,489	22	4	17,311	23	4
	18,000	22	4	17,822	22	4	17,645	23	4	17,476	30	4	17,289	22	4
	17,978	22	4	17,800	22	4	17,622	22	4	17,446	23	4	17,267	22	4
	17,956	23	4	17,778	22	4	17,600	22	4	17,423	20	4	17,245	22	4
	17,933	22	4	17,756	18	4	17,578	22	4	17,403	25	4	17,223	23	4
	17,911	22	4	17,738	27	4	17,556	22	4	17,378	23	4	17,200	22	4
	17,889	22	3	17,711	16	3	17,534	23	3	17,355	21	3	17,178	22	3
	17,867		3	17,695		3	17,511		3	17,334		3	17,156		3
	Plug to Plug	77	30	Plug to Plug	71	30	Plug to Plug	78	30	Plug to Plug	77	30	Plug to Plug	83	30
	Frac Plug	18,033	Total Shots	Frac Plug	17,849	Total Shots	Frac Plug	17,678	Total Shots	Frac Plug	17,500	Total Shots	Frac Plug	17,328	Total Shots

From Bottom to Top		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots
	17,128	28	4	16,956	26	4	16,778	22	4	16,596	27	4	16,419	26	4
	17,111	22	4	16,931	19	4	16,756	22	4	16,578	22	4	16,402	24	4
	17,089	20	4	16,912	23	4	16,734	22	4	16,556	22	4	16,378	18	4
	17,069	24	4	16,889	22	4	16,712	23	4	16,534	22	4	16,360	26	4
	17,045	20	4	16,867	22	4	16,689	22	4	16,512	23	4	16,334	25	4
	17,025	25	4	16,845	22	4	16,667	22	4	16,489	22	4	16,309	20	4
	17,000	18	3	16,823	23	3	16,645	22	3	16,467	22	3	16,289	23	3
	16,982		3	16,800		3	16,623		3	16,445		3	16,266		3
	Plug to Plug	70	30	Plug to Plug	78	30	Plug to Plug	77	30	Plug to Plug	78	30	Plug to Plug	70	30
Frac Plug	17,139	Total Shots	Frac Plug	16,967	Total Shots	Frac Plug	16,789	Total Shots	Frac Plug	16,612	Total Shots	Frac Plug	16,430	Total Shots	

From Bottom to Top		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots	
		16,245	21	4	16,067	-911	4	15,885	27	4	15,705	29	4	15,530	30	4
		16,223	22	4	16,045	22	4	15,867	25	4	15,690	23	4	15,512	24	4
		16,201	1023	4	16,023	22	4	15,842	19	4	15,667	22	4	15,488	21	4
		15,178	22	4	16,001	19	4	15,823	22	4	15,645	22	4	15,467	22	4
		15,156	-978	4	15,982	26	4	15,801	22	4	15,623	20	4	15,445	22	4
		16,134	22	4	15,956	26	4	15,779	23	4	15,603	24	4	15,423	22	4
		16,112	22	3	15,930	18	3	15,756	22	3	15,579	19	3	15,401	22	3
		16,090		3	15,912		3	15,734		3	15,560		3	15,379		3
		Plug to Plug	1078	30	Plug to Plug	77	30	Plug to Plug	78	30	Plug to Plug	71	30	Plug to Plug	78	30
	Frac Plug	16,256	Total Shots	Frac Plug	16,078	Total Shots	Frac Plug	15,901	Total Shots	Frac Plug	15,716	Total Shots	Frac Plug	15,545	Total Shots	

From Bottom to Top		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots
	15,351'	28	4	15,179	22	4	14,995	28	4	14,810	35	4	14,645	25	4
	15,334	22	4	15,156	22	4	14,979	18	4	14,801	22	4	14,625	24	4
	15,312	24	4	15,134	22	4	14,961	27	4	14,779	22	4	14,601	26	4
	15,288	20	4	15,112	22	4	14,934	22	4	14,757	23	4	14,575	18	4
	15,268	23	4	15,090	22	4	14,912	22	4	14,734	22	4	14,557	23	4
	15,245	22	4	15,068	22	4	14,890	22	4	14,712	22	4	14,534	22	4
	15,223	22	3	15,046	23	3	14,868	23	3	14,690	20	3	14,512	22	3
	15,201		3	15,023		3	14,845		3	14,670		3	14,490		3
	Plug to Plug	74	30	Plug to Plug	78	30	Plug to Plug	78	30	Plug to Plug	66	30	Plug to Plug	82	30
Frac Plug	15,362	Total Shots	Frac Plug	15,190	Total Shots	Frac Plug	15,012	Total Shots	Frac Plug	14,823	Total Shots	Frac Plug	14,657	Total Shots	

From Bottom to Top		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots
	14,468	22	4	14,288	24	4	14108	26	4	13,935	22	4	13,757	22	4
	14,446	23	4	14,268	22	4	14090	22	4	13,912	22	4	13,735	23	4
	14,423	22	4	14,246	23	4	14068	22	4	13,890	22	4	13,712	22	4
	14,401	22	4	14,223	22	4	14046	23	4	13,868	22	4	13,690	18	4
	14,379	22	4	14,201	22	4	14023	23	4	13,846	23	4	13,672	26	4
	14,357	21	4	14,179	22	4	14000	21	4	13,823	22	4	13,646	26	4
	14,336	24	3	14,157	23	3	13979	22	3	13,801	22	3	13,620	19	3
	14,312		3	14,134		3	13957		3	13,779		3	13,601		3
	Plug to Plug	78	30	Plug to Plug	79	30	Plug to Plug	73	30	Plug to Plug	78	30	Plug to Plug	78	30
Frac Plug	14,479	Total Shots	Frac Plug	14,302	Total Shots	Frac Plug	14,119	Total Shots	Frac Plug	13,946	Total Shots	Frac Plug	13,768	Total Shots	

From Bottom to Top		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots	
		13,576	25	4	13,401	23	4	13,224	26	4	13,046	22	4	12,868	22	4
		13,557	22	4	13,379	22	4	13,199	20	4	13,024	22	4	12,846	22	4
		13,535	23	4	13,357	22	4	13,179	22	4	13,002	23	4	12,824	22	4
		13,512	22	4	13,335	23	4	13,157	22	4	12,979	19	4	12,802	23	4
		13,490	22	4	13,312	20	4	13,135	22	4	12,960	25	4	12,779	22	4
		13,468	22	4	13,292	24	4	13,113	23	4	12,935	18	4	12,757	22	4
		13,446	22	3	13,268	18	3	13,090	22	3	12,917	27	3	12,735	22	3
		13,424		3	13,250		3	13,068		3	12,890		3	12,713		3
		Plug to Plug	78	30	Plug to Plug	77	30	Plug to Plug	78	30	Plug to Plug	78	30	Plug to Plug	77	30
	Frac Plug	13,590	Total Shots	Frac Plug	13,412	Total Shots	Frac Plug	13,235	Total Shots	Frac Plug	13,057	Total Shots	Frac Plug	12,879	Total Shots	

From Bottom to Top		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots	
		12,685	28	4	12,513	22	4	12,335	22	4	12,144	35	4	11,976	26	4
		12,668	22	4	12,490	22	4	12,313	19	4	12,135	22	4	11,957	22	4
		12,646	19	4	12,468	22	4	12,294	26	4	12,113	22	4	11,935	22	4
		12,627	25	4	12,446	22	4	12,268	24	4	12,091	23	4	11,913	22	4
		12,602	27	4	12,424	22	4	12,244	20	4	12,068	22	4	11,891	23	4
		12,575	18	4	12,402	23	4	12,224	22	4	12,046	22	4	11,868	22	4
		12,557	22	3	12,379	22	3	12,202	23	3	12,024	22	4	11,846	20	4
		12,535		3	12,357		3	12,179		3	12,002		4	11,826		4
		Plug to Plug	69	30	Plug to Plug	78	30	Plug to Plug	78	30	Plug to Plug	64	32	Plug to Plug	74	32
	Frac Plug	12,695	Total Shots	Frac Plug	12,524	Total Shots	Frac Plug	12,346	Total Shots	Frac Plug	12,155	Total Shots	Frac Plug	11,987	Total Shots	