

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 - 025-44397	⁵ Pool Name Dogie Draw; Wolfcamp	⁶ Pool Code 17980
⁷ Property Code 319617	⁸ Property Name Square Bill Federal Com	⁹ Well Number 21Y

II. ¹⁰ Surface Location

Ul or lot no P	Section 31	Township 25S	Range 35E	Lot Idn	Feet from the 240	North/SouthLine South	Feet from the 924	East/West line East	County Lea
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¹¹ Bottom Hole Location

UL or lot no I	Section 30	Township 25S	Range 35E	Lot Idn	Feet from the 2426	North/South line South	Feet from the 316	East/West line East	County Lea
¹² Lse Code F	¹³ Producing Method Code F	¹⁴ Gas Connection Date 8/21/18	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 2/20/18	²² Ready Date 8/21/18 ✓	²³ TD 20,035'	²⁴ PBTD 19920	²⁵ Perforations 12850-19836	²⁶ DHC, MC
²⁷ Hole Size	²⁸ Casing & Tubing Size	²⁹ Depth Set	³⁰ Sacks Cement		
14 3/4	10 3/4	1155'	1000		
9 7/8	7 5/8	11,890'	1950		
6 3/4	5 5 1/2	20025-11425 11425 - 0	1675		
	2 7/8	11587			

V. Well Test Data

³¹ Date New Oil 8/21/18	³² Gas Delivery Date 08/21/18	³³ Test Date 8/21/18	³⁴ Test Length 24 Hrs	³⁵ Tbg. Pressure 4500	³⁶ Csg. Pressure 3881
³⁷ Choke Size 16/64	³⁸ Oil 275	³⁹ Water 1049	⁴⁰ Gas 340	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:

10/16/18

Phone:

575-748-6962

OIL CONSERVATION DIVISION

Approved by:

Karen Sharp

Title:

Staff Mgr

Approval Date:

10-24-18

Documents pending BLM approvals will subsequently be reviewed and scanned

Provide additional well information
required by Horizontal Rule effective
6-26-18

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.**HOBBBS OCD**
OCT 19 2018
RECEIVED

SUBMIT IN TRIPLICATE - Other instructions on page 2		5. Lease Serial No. NMNM119280
1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		6. If Indian, Allottee or Tribe Name
2. Name of Operator COG OPERATING LLC Contact: AMANDA AVERY E-Mail: aavery@concho.com		7. If Unit or CA/Agreement, Name and/or No.
3a. Address 2208 W MAIN STREET ARTESIA, NM 88210	3b. Phone No. (include area code) Ph: 575-748-6940	8. Well Name and No. SQUARE BILL FEDERAL COM 21Y
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 31 T25S R35E SESE 240FSL 924FEL 32.080286 N Lat, 103.401028 W Lon		9. API Well No. 30-025-44397
		10. Field and Pool or Exploratory Area DOGIE DRAW; WOLFCAMP
		11. County or Parish, State LEA COUNTY, NM

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

TYPE OF SUBMISSION	TYPE OF ACTION			
<input type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input checked="" type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> 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 recomplete 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 recompletion 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.

05/15/18 - 7/17/18 Test annulus to 1500# Set CBP @ 19,920' and test csg to 11,005#. Good test.
Perf 19,885-19,895' (60). Injection test. Perf 12,850-19,895'.

06/15/18 to 07/15/18 Perf 12,560-19,601' (1600). Acdz w/59,262 gal 7 1/2%; frac w/12,309,953#
sand & 11,789,694 gal fluid.

07/25/18 to 07/26/18 Drilled out CFP's. Clean down to CBP @ 19,920'.

08/06/18 Set 2 7/8" 6.5# L-80 tbg @ 11,587' @ packer @ 11,572. Installed gas lift system.

08/21/18 Began flowing back & testing.

08/22/18 Date of first production.

14. I hereby certify that the foregoing is true and correct. Electronic Submission #439892 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 10/16/2018

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 scanned

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

Secretary of the United States

(Instructions on page 2)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTFORM APPROVED
OMB No. 1004-0137
Expires: July 31, 2010

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No.
NMNM1192801a. 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 LLCContact: AMANDA AVERY
E-Mail: aavery@concho.com8. Lease Name and Well No.
SQUARE BILL FEDERAL COM 21Y3. Address 2208 W MAIN STREET
ARTESIA, NM 882103a. Phone No. (include area code)
Ph: 575-748-69409. API Well No.
30-025-44397

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

At surface SESE 240FSL 924FEL 32.080286 N Lat, 103.401028 W Lon

At top prod interval reported below SESE 240FSL 924FEL 32.080286 N Lat, 103.401028 W Lon

At total depth SESE 240FSL 924FEL 32.080286 N Lat, 103.401028 W Lon

10. Field and Pool, or Exploratory
DOGIE DRAW; WOLFCAMP11. Sec., T., R., M., or Block and Survey
or Area Sec 31 T25S R35E Mer NMP12. County or Parish
LEA13. State
NM14. Date Spudded
02/20/201815. Date T.D. Reached
03/25/201816. Date Completed
☐ D & A ☒ Ready to Prod.
08/22/201817. Elevations (DF, KB, RT, GL)*
3273 GL18. Total Depth: MD 20035
TVD 1263019. Plug Back T.D.: MD 19920
TVD 1263020. Depth Bridge Plug Set: MD 19920
TVD 12630

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
14.750	10.750 N80	45.5	0	1155		1000		0	
9.875	7.625 L80	29.7	0	11890	5329	1950		0	
6.750	5.500 P110	23.0	0	11895		1675		0	
6.750	5.000 P110	18.0	11895	20025				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	11587	11572						

25. Producing Intervals

26. Perforation Record

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) WOLFCAMP	12850	19836	12850 TO 19836		1560	
B)						
C)						
D)						

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

Depth Interval	Amount and Type of Material
12850 TO 19836	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
08/22/2018	08/22/2018	24	→	275.0	340.0	1049.0			GAS LIFT
Choke Size	Tbg. Press. Flwg.	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
16/64	SI 4600	1950.0	→	275	340	1049		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	
	SI		→						

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

ELECTRONIC SUBMISSION #439884 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

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

Documents pending BLM approvals will
subsequently be reviewed and scanned

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
RSLR	1065			RSLR	1065
TOS	1483			TOS	1483
BOS	5042			BOS	5042
LMAR	5354			LMAR	5354
BLCN	5401			BLCN	5401
CYCN	6537			CYCN	6537
BYCN	7878			BYCN	7878
FBSP	10391			FBSP	10391

32. Additional remarks (include plugging procedure):

SBSG 11127 SBSG 11127
TBSG 12033 TBSG 12033
WFMP 12507 WFMP 12507

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 #439884 Verified by the BLM Well Information System.
For COG OPERATING LLC, sent to the Hobbs

Name (please print) AMANDA AVERYTitle AUTHORIZED REPRESENTATIVESignature (Electronic Submission)Date 10/16/2018

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 ****

Square Bill Federal Com #21Y

<u>Perfs</u>	<u>7 1/2% Acid (Gal)</u>	<u>Sand (#)</u>	<u>Fluid (Gal)</u>
1	2688	354299	292992
2	1512	362489	292068
3	1512	361498	291270
4	1512	360656	291270
5	3066	362118	322728
6	1554	363049	304164
7	1512	362723	298074
8	1428	362605	298158
9	1512	361551	299754
10	1512	362593	317730
11	1512	359914	325164
12	1512	362749	298788
13	1512	352590	298998
14	1512	361361	290136
15	1512	362583	298284
16	1428	361413	339444
17	1512	358283	294756
18	1428	362317	307902
19	1512	364728	322056
20	1638	362790	304038
21	1680	360985	309624
22	1512	361609	291900
23	1512	364256	305718
24	1554	361118	292110
25	1512	360690	296520
26	1596	365180	333228
27	1512	362628	291690
28	1470	362581	295008
29	1512	362457	288960
30	2100	364121	292362
31	1428	360921	288750
32	1512	361994	288414
33	1512	361644	294084
34	1512	362051	287826
35	1554	359686	291606
36	1512	361923	285264
37	1512	360576	285600
38	1554	366549	302904
39	1470	359799	289212
Totals	58,212	11,938,968	11,698,554

HOBBS OCD
OCT 19 2018
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From Bottom to Top		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots
	19,836	19	5	19,875	24	5	19,495	26	5	19,319	20	5	19,103	55	5
	19,817	20	5	19,852	20	5	19,472	21	5	19,292	28	5	19,086	17	5
	19,797	19	5	19,832	25	5	19,451	24	5	19,264	17	5	19,069	17	5
	19,778	20	5	19,807	18	5	19,427	19	5	19,247	19	5	19,052	17	5
	19,758	24	5	19,589	27	5	19,408		5	19,228	26	5	19,035	17	5
	19,734	18	5	19,562	18	5	19,382	18	5	19,202	19	5	19,018	17	5
	19,716	17	5	19,544	23	5	19,364	25	5	19,183	25	5	19,001	18	5
	19,699		5	19,521		5	19,339		5	19,158		5	18,983		5
	Plug to Plug	67	40	Plug to Plug	77	40	Plug to Plug	84	40	Plug to Plug	81	40	Plug to Plug	60	40
Frac Plug		19,845	Total Shots	Frac Plug	19,684	Total Shots	Frac Plug	19,511	Total Shots	Frac Plug	19,328	Total Shots	Frac Plug	19,112	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
	18,981	22	5	18,777	19	5	18,601	19	5	18,421	19	5	18,241	19	5
	18,932	27	5	18,751	28	5	18,571	26	5	18,391	26	5	18,211	18	5
	18,905	19	5	18,723	17	5	18,545	19	5	18,365	19	5	18,193	27	5
	18,886	17	5	18,706	28	5	18,526	25	5	18,346	26	5	18,186	25	5
	18,869	28	5	18,678	17	5	18,501	20	5	18,320	19	5	18,141	20	5
	18,841	27	5	18,661	26	5	18,481	23	5	18,301	26	5	18,121	27	5
	18,814	18	5	18,635	15	5	18,458	18	5	18,275	15	5	18,094	14	5
	18,796		5	18,620		5	18,440		5	18,260		5	18,080		5
	Plug to Plug	84	40	Plug to Plug	80	40	Plug to Plug	84	40	Plug to Plug	84	40	Plug to Plug	84	40
Frac Plug		18,970	Total Shots	Frac Plug	18,786	Total Shots	Frac Plug	18,610	Total Shots	Frac Plug	18,430	Total Shots	Frac Plug	18,250	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
	18,051	29	5	17,881	19	5	17,691	28	5	17,521	19	5	17,331	27	5
	18,031	25	5	17,850	24	5	17,670	24	5	17,490	25	5	17,310	25	5
	18,006	20	5	17,826	21	5	17,646	21	5	17,465	20	5	17,285	20	5
	17,986	25	5	17,805	24	5	17,625	19	5	17,445	25	5	17,265	24	5
	17,961	21	5	17,781	21	5	17,606	26	5	17,420	20	5	17,241	21	5
	17,940	25	5	17,760	24	5	17,580	24	5	17,400	25	5	17,220	23	5
	17,915	15	5	17,736	17	5	17,556	16	5	17,375	17	5	17,197	17	5
	17,900		5	17,719		5	17,540		5	17,358		5	17,180		5
	Plug to Plug	84	40	Plug to Plug	85	40	Plug to Plug	81	40	Plug to Plug	85	40	Plug to Plug	81	40
Frac Plug		18,070	Total Shots	Frac Plug	17,890	Total Shots	Frac Plug	17,706	Total Shots	Frac Plug	17,530	Total Shots	Frac Plug	17,346	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
	17,151	29	5	16,968	26	5	16,789	25	5	16,609	25	5	16,428	26	5
	17,130	24	5	16,949	24	5	16,767	23	5	16,586	23	5	16,405	23	5
	17,106	21	5	16,925	21	5	16,744	23	5	16,563	22	5	16,382	23	5
	17,085	26	5	16,904	25	5	16,721	23	5	16,541	22	5	16,359	23	5
	17,059	20	5	16,879	20	5	16,698	22	5	16,519	22	5	16,336	21	5
	17,039	24	5	16,859	26	5	16,676	22	5	16,497	23	5	16,315	21	5
	17,015	21	5	16,833	19	5	16,654	20	5	16,474	20	5	16,294	20	5
	16,994		5	16,814		5	16,634		5	16,454		5	16,274		5
	Plug to Plug	81	40	Plug to Plug	79	40	Plug to Plug	83	40	Plug to Plug	83	40	Plug to Plug	84	40
Frac Plug		17,166	Total Shots	Frac Plug	16,983	Total Shots	Frac Plug	16,804	Total Shots	Frac Plug	16,624	Total Shots	Frac Plug	16,443	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
	16,249	25	5	16,061	32	5	15,881	32	5	15,698	35	5	15,517	36	5
	16,227	22	5	16,044	18	5	15,863	17	5	15,681	16	5	15,502	17	5
	16,205	21	5	16,026	23	5	15,846	23	5	15,665	22	5	15,485	22	5
	16,184	23	5	16,003	22	5	15,823	22	5	15,643	23	5	15,463	23	5
	16,161	22	5	15,981	23	5	15,801	23	5	15,620	22	5	15,440	22	5
	16,139	23	5	15,958	22	5	15,778	22	5	15,598	23	5	15,418	26	5
	16,116	23	5	15,936	23	5	15,756	23	5	15,575	22	5	15,392	16	5
	16,093		5	15,913		5	15,733		5	15,553		5	15,376		5
	Plug to Plug	80	40	Plug to Plug	67	40	Plug to Plug	67	40	Plug to Plug	64	40	Plug to Plug	63	40
Frac Plug		16,264	Total Shots	Frac Plug	16,070	Total Shots	Frac Plug	15,890	Total Shots	Frac Plug	15,707	Total Shots	Frac Plug	15,526	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	25	5	15,171	25	5	14,990	27	5	14,810	26	5	14,629	28	5
	15,328	23	5	15,147	22	5	14,967	22	5	14,787	23	5	14,607	23	5
	15,305	22	5	15,125	23	5	14,945	23	5	14,764	22	5	14,584	22	5
	15,283	23	5	15,102	22	5	14,922	22	5	14,742	22	5	14,562	23	5
	15,260	22	5	15,080	23	5	14,900	23	5	14,720	23	5	14,539	22	5
	15,238	23	5	15,057	22	5	14,877	22	5	14,697	23	5	14,517	23	5
	15,215	19	5	15,035	18	5	14,855	19	5	14,674	17	5	14,494	17	5
	15,196		5	15,017		5	14,836		5	14,657		5	14,477		5
	Plug to Plug	83	40	Plug to Plug	84	40	Plug to Plug	85	40	Plug to Plug	84	40	Plug to Plug	85	40
Frac Plug		15,366	Total Shots	Frac Plug	15,186	Total Shots	Frac Plug	15,007	Total Shots	Frac Plug	14,826	Total Shots	Frac Plug	14,647	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
	14,449	28	5	14,261	31	5	14,089	27	5	13,901	30	5	13,722	29	5
	14,427	23	5	14,243	19	5	14,066	22	5	13,883	19	5	13,703	20	5
	14,404	22	5	14,224	23	5	14,044	23	5	13,864	23	5	13,683	22	5
	14,382	23	5	14,201	22	5	14,021	22	5	13,841	22	5	13,661	23	5
	14,359	22	5	14,179	23	5	13,999	23	5	13,819	23	5	13,638	22	5
	14,337	23	5	14,158	22	5	13,976	22	5	13,796	22	5	13,616	23	5
	14,314	22	5	14,134	18	5	13,954	23	5	13,774	23	5	13,593	22	5
	14,292		5	14,116		5	13,931		5	13,751		5	13,571		5
	Plug to Plug	85	40	Plug to Plug	69	40	Plug to Plug	85	40	Plug to Plug	69	40	Plug to Plug	70	40
	Frac Plug	14,467	Total Shots	Frac Plug	14,270	Total Shots	Frac Plug	14,108	Total Shots	Frac Plug	13,910	Total Shots	Frac Plug	13,731	Total Shots

From Bottom to Top		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots		Distance Between Perfs	Shots	Stage 40	Distance Between Perfs	Shots
	13,542	29	5	13,361	30	5	13,181	29	5	13,001	29	5		12850	
	13,523	20	5	13,343	20	5	13,162	19	5	12,982	19	5			
	13,503	22	5	13,323	22	5	13,143	23	5	12,963	23	5			
	13,481	23	5	13,301	23	5	13,120	22	5	12,940	22	5			
	13,458	22	5	13,278	23	5	13,098	23	5	12,918	23	5			
	13,436	23	5	13,255	22	5	13,075	22	5	12,895	22	5			
	13,413	22	5	13,233	23	5	13,053	23	5	12,873	23	5			
	13,391		5	13,210		5	13,030		5	12,850		5			
	Plug to Plug	70	40	Plug to Plug	69	40	Plug to Plug	70	40	Plug to Plug	70	40	Plug to Plug	0	0
	Frac Plug	13,551	Total Shots	Frac Plug	13,370	Total Shots	Frac Plug	13,190	Total Shots	Frac Plug	13,010	Total Shots	Frac Plug		Total Shots

From Bottom to Top	Stage 41	Distance Between Perfs	Shots	Stage 42	Distance Between Perfs	Shots	Stage 43	Distance Between Perfs	Shots	Stage 44	Distance Between Perfs	Shots	Stage 45	Distance Between Perfs	Shots
		0	5		0	5		0	5		0	5		0	5
			5			5			5			5			5
			5			5			5			5			5
			5			5			5			5			5
			5			5			5			5			5
			5			5			5			5			5
			5			5			5			5			5
			5			5			5			5			5
	Plug to Plug	0	40	Plug to Plug	0	40	Plug to Plug	0	40	Plug to Plug	0	40	Plug to Plug	0	40