

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 - 026-43779	⁵ Pool Name Corral Canyon; Bone Spring, South		⁶ Pool Code 13354
⁷ Property Code 308596	⁸ Property Name Big Papi Federal Com		⁹ Well Number 12H

II. ¹⁰ Surface Location

Ul or lot no. B	Section 4	Township 26S	Range 29E	Lot Idn	Feet from the 200	North/South Line North	Feet from the 2060	East/West line East	County Eddy
--------------------	--------------	-----------------	--------------	---------	----------------------	---------------------------	-----------------------	------------------------	----------------

¹¹ Bottom Hole Location

Ul or lot no. O	Section 9	Township 26S	Range 29E	Lot Idn	Feet from the 330	North/South Line South	Feet from the 1975	East/West line East	County Eddy
¹² Lse Code P	¹³ Producing Method Code F	¹⁴ Gas Connection Date 12/6/18	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
	ACC	O
298751	Energy Transfer 2001 Bryan Street Ste 3700 Dallas, TX 75201	G
	RECEIVED	
	JAN 24 2019	

DISTRICT II-ARTESIA O.C.D.

IV. Well Completion Data

²¹ Spud Date 9/2/18	²² Ready Date 12/6/18	²³ TD 18529' / 0678	²⁴ PBT 18441'	²⁵ Perforations 8,845-18,435'	²⁶ DHC, MC
²⁷ Hole Size 17 1/2"	²⁸ Casing & Tubing Size 13 3/8"	²⁹ Depth Set 361'	³⁰ Sacks Cement 500 - circ		
12 1/4"	9 5/8"	2980'	1475 - circ		
8 1/2"	5 1/2"	18517'	3600 - circ		
	2 7/8"	8076'			

V. Well Test Data

³¹ Date New Oil 12/6/18	³² Gas Delivery Date 12/6/18	³³ Test Date 12/6/18	³⁴ Test Length 24 Hrs	³⁵ Tbg. Pressure 850#	³⁶ Csg. Pressure 700
³⁷ Choke Size 28/64"	³⁸ Oil 335	³⁹ Water 2506	⁴⁰ Gas 1081	⁴¹ Test Method Flowing	

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 Analyst

E-mail Address:
aavery@concho.com

Date:
01/23/19

Phone:
575-748-6962

OIL CONSERVATION DIVISION

Approved by:

Title:

Approval Date:

Rusty Klen
Business Ops Spec A
1-31-2019

Pending BLM approvals will
subsequently be reviewed
and scanned

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

RECEIVED

JAN 24 2019

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

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

5. Lease Serial No.
NMNM542911a. Type of Well ☒ Oil Well ☐ Gas Well ☐ Dry ☐ Other
b. Type of Completion ☒ New Well ☐ Work Over ☐ Deepen ☐ Plug Back ☐ Diff. Resvr.
Other _____

DISTRICT # ARTESIA O.G.D.

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.
BIG PAPI FEDERAL COM 12H3. Address
2208 W MAIN STREET
ARTESIA, NM 882103a. Phone No. (include area code)
Ph: 575-748-69409. API Well No.
30-015-437794. Location of Well (Report location clearly and in accordance with Federal requirements)*
Sec 4 T26S R29E Mer NMP

At surface NWNE Lot B 200FNL 2060FEL 32.078409 N Lat, 103.987378 W Lon

Sec 4 T26S R29E Mer NMP

At top prod interval reported below NWNE Lot B 200FNL 2060FEL 32.078409 N Lat, 103.987378 W Lon

Sec 9 T26S R29E Mer NMP

At total depth SWSE Lot O 330FSL 1975FEL 32.050614 N Lat, 103.986805 W Lon

10. Field and Pool, or Exploratory
CORRAL CANYON; BONE SPRIN11. Sec., T., R., M., or Block and Survey
or Area Sec 4 T26S R29E Mer NMP12. County or Parish
EDDY13. State
NM14. Date Spudded
09/02/201815. Date T.D. Reached
09/29/201816. Date Completed
☐ D & A ☒ Ready to Prod.
12/06/201817. Elevations (DF, KB, RT, GL)*
2977 GL18. Total Depth: MD 18529
TVD 8758 867819. Plug Back T.D.: MD 18441
TVD 875820. Depth Bridge Plug Set: MD 18450
TVD 8758

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 Sk. & Type of Cement	Slurry Vol. (BBL)	Cement Top*	Amount Pulled
17.500	13.375 J55	54.5	0	361		500		0	
12.250	9.625 J55	40.0	0	2980		1475		0	
8.750	5.500 P110	17.0	0	18517		3600		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	8076	8066						

25. Producing Intervals

26. Perforation Record

Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A) BONE SPRING	8845	18435	8845 TO 18435		1512	
B)						
C)						
D)						

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

Depth Interval	Amount and Type of Material
8845 TO 18435	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
12/06/2018	12/06/2018	24	→	335.0	1081.0	2506.0			GAS LIFT
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status	
28/64	SI	700.0	→	335	1081	2506		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	Prod.
			→						
Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio		
	SI		→						

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

ELECTRONIC SUBMISSION #451506 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

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

Pending BLM approvals will
subsequently be reviewed
and scanned
1-31-19

SUBMITTED **

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):	31. Formation (Log) Markers
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	622			TOP OF SALT	622
BOTTOM OF SALT	2762			BOTTOM OF SALT	2762
LAMAR	2960			LAMAR	2960
BELL CANYON	2992			BELL CANYON	2992
CHERRY CANYON	3843			CHERRY CANYON	3843
BRUSHY CANYON	5160			BRUSHY CANYON	5160
BONE SPRING LIMESTONE	6704			BONE SPRING LIMESTONE	6704
BONE SPRING 1ST	7644			BONE SPRING 1ST	7644

32. Additional remarks (include plugging procedure):
BONE SPRING 2ND 8274

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 #451506 Verified by the BLM Well Information System.
For COG OPERATING LLC, sent to the Carlsbad

Name (please print) AMANDA AVERY Title AUTHORIZED REPRESENTATIVE

Signature (Electronic Submission) Date 01/23/2019

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 ****

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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-enter an abandoned well. Use form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other		5. Lease Serial No. NMNM54291
2. Name of Operator COG OPERATING LLC		6. If Indian, Allottee or Tribe Name
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. BIG PAPI FEDERAL COM 12H
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 4 T26S R29E Mer NMP NWNE 200FNL 2060FEL		9. API Well No. 30-015-43779
		10. Field and Pool or Exploratory Area CORRAL DRAW; BONE SPRING
		11. County or Parish, State EDDY 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	Hydraulic Fracture	
	<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 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.

10/23/18 Test annulus to 1500# Set CBP @ 18,450' and test csg to 8,480#. Good test.

10/30/18 to 11/09/18 Perf 8,845-18,435' (1512). Acldz w/161,864 gal 7 1/2%; frac w/19,562,680# sand & 17,527,341 gal fluid.

11/11/18 to 11/13/18 Drilled out CFP's. Clean down to PBTD @ 18,441'.

11/14/18 - 11/15/18 Set 2 7/8" 6.5# L-80 tbg @ 8,076' packer @ 8,066. Installed gas lift system.

12/6/18 Began flowing back & testing. Date of first production

RECEIVED

JAN 24 2019

DISTRICT II-ARTESIA O.C.D.

14. I hereby certify that the foregoing is true and correct. Electronic Submission #451509 verified by the BLM Well Information System For COG OPERATING LLC, sent to the Carlsbad	
Name (Printed/Typed) AMANDA AVERY	Title AUTHORIZED REPRESENTATIVE
Signature (Electronic Submission)	Date 01/23/2019

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 _____

Pending BLM approvals will
subsequently be reviewed
and scanned
1-24-19

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly 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 ****

Big Papi Federal Com #12H

<u>Perfs</u>	<u>7 1/2% Acid (Gal)</u>	<u>Sand (#)</u>	<u>Fluid (Gal)</u>
1	0	360700	315294
2	3054	361450	324648
3	3000	361930	314985
4	3024	361020	319536
5	3024	360280	312690
6	3024	360630	315714
7	3012	360610	313602
8	3012	360670	314694
9	3024	360330	313488
10	3024	360180	316134
11	3024	360810	312082
12	3012	360400	322338
13	3024	360320	309876
14	3024	361180	310632
15	3012	360100	310158
16	3024	360270	306852
17	3012	360540	309528
18	3024	360120	309288
19	3000	360111	310272
20	3024	360440	307398
21	3024	360560	307062
22	4536	360410	311178
23	3000	360500	308083
24	3012	360370	308310
25	3024	360400	307524
26	3066	360310	305760
27	3024	360460	305256
28	3024	360690	305340
29	3012	360220	303860
30	3012	360430	338084
31	3012	360340	353208
32	3024	360540	345198
33	3024	360530	342027
34	3012	360190	337332
35	3012	360630	334980
36	3024	360370	345314
37	3012	360370	333636
38	3024	361380	335538
39	3024	360710	335993
40	3012	360030	344136
41	3108	359458	340830
42	3012	359307	336366
43	3024	359970	319872
44	3024	360530	335244
45	3024	360100	336672
46	2982	360520	351414
47	3066	360705	328230
48	3150	360808	331758
49	3024	362140	333186
50	3024	363433	347634
51	3024	361650	343434
52	3024	361860	322896
53	3024	388749	366198
54	3066	421919	356580
Totals	161,864	19,562,680	17,527,341

From Bottom to Top	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
	18,435	23	4	18,254	22	4	18,072	26	4	17,898	29	4	17,720	22	4
	18,412	22	4	18,232	23	4	18,054	23	4	17,876	23	4	17,698	23	4
	18,390	23	4	18,209	22	4	18,031	23	4	17,853	23	4	17,675	22	4
	18,367	23	4	18,187	22	4	18,008	21	4	17,830	21	4	17,653	22	4
	18,344	22	3	18,165	22	3	17,987		3	17,809	22	3	17,631	22	3
	18,322	23	3	18,143	23	3	17,960	18	3	17,787	23	3	17,609	23	3
	18,299	23	3	18,120	22	3	17,942	15	3	17,764	22	3	17,586	22	3
	18,276		3	18,098		3	17,927		3	17,742		3	17,564		3
	Plug to Plug	83	28	Plug to Plug	78	28	Plug to Plug	74	28	Plug to Plug	79	28	Plug to Plug	78	28
Frac Plug		18,450	Total Shots	Frac Plug	18,265	Total Shots	Frac Plug	18,082	Total Shots	Frac Plug	17,909	Total Shots	Frac Plug	17,731	Total Shots

From Bottom to Top	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
	17,542	22	4	17,359	27	4	17,186	22	4	17,000	30	4	16,830	28	4
	17,520	23	4	17,342	19	4	17,164	22	4	16,986	22	4	16,804	18	4
	17,497	22	4	17,323	26	4	17,142	23	4	16,964	23	4	16,786	26	4
	17,475	22	4	17,297	28	4	17,119	22	4	16,941	22	4	16,760	19	4
	17,453	22	3	17,269	19	3	17,097	22	3	16,919	17	3	16,741	25	3
	17,431	23	3	17,250	19	3	17,075	22	3	16,902	27	3	16,716	19	3
	17,408	22	3	17,231	23	3	17,053	23	3	16,875	17	3	16,697	23	3
	17,386		3	17,208		3	17,030		3	16,858		3	16,674		3
	Plug to Plug	78	28	Plug to Plug	78	28	Plug to Plug	80	28	Plug to Plug	68	28	Plug to Plug	81	28
Frac Plug		17,553	Total Shots	Frac Plug	17,375	Total Shots	Frac Plug	17,199	Total Shots	Frac Plug	17,009	Total Shots	Frac Plug	16,841	Total Shots

From Bottom to Top	Stage 11	Distance Between Perfs	Shots	Stage 12	Distance Between Perfs	Shots	Stage 13	Distance Between Perfs	Shots	Stage 14	Distance Between Perfs	Shots	Stage 15	Distance Between Perfs	Shots
	16,652	22	4	16,474	22	4	16,296	23	4	16,118	23	4	15,940	23	4
	16,630	22	4	16,452	22	4	16,274	22	4	16,096	22	4	15,918	22	4
	16,608	23	4	16,430	22	4	16,252	22	4	16,074	22	4	15,896	22	4
	16,585	22	4	16,408	23	4	16,230	23	4	16,052	23	4	15,874	23	4
	16,563	22	3	16,385	22	3	16,207	22	3	16,029	22	3	15,851	22	3
	16,541	22	3	16,363	22	3	16,185	22	3	16,007	22	3	15,829	22	3
	16,519	23	3	16,341	22	3	16,163	22	3	15,985	22	3	15,807	22	3
	16,496		3	16,319		3	16,141		3	15,963		3	15,785		3
	Plug to Plug	78	28	Plug to Plug	77	28	Plug to Plug	77	28	Plug to Plug	77	28	Plug to Plug	78	28
Frac Plug		16,663	Total Shots	Frac Plug	16,485	Total Shots	Frac Plug	16,307	Total Shots	Frac Plug	16,129	Total Shots	Frac Plug	15,952	Total Shots

From Bottom to Top	Stage 16	Distance Between Perfs	Shots	Stage 17	Distance Between Perfs	Shots	Stage 18	Distance Between Perfs	Shots	Stage 19	Distance Between Perfs	Shots	Stage 20	Distance Between Perfs	Shots
	15,762	23	4	15,584	23	4	15,407	22	4	15,229	22	4	15,051	22	4
	15,740	22	4	15,562	22	4	15,384	22	4	15,206	22	4	15,028	22	4
	15,718	22	4	15,540	22	4	15,362	22	4	15,184	22	4	15,006	22	4
	15,696	23	4	15,518	22	4	15,340	22	4	15,162	22	4	14,984	22	4
	15,673	22	3	15,496	23	3	15,318	23	3	15,140	23	3	14,962	23	3
	15,651	22	3	15,473	22	3	15,295	22	3	15,117	22	3	14,939	22	3
	15,629	22	3	15,451	22	3	15,273	22	3	15,095	22	3	14,917	22	3
	15,607		3	15,429		3	15,251		3	15,073		3	14,895		3
	Plug to Plug	78	28	Plug to Plug	78	28	Plug to Plug	78	28	Plug to Plug	78	28	Plug to Plug	78	28
Frac Plug		15,774	Total Shots	Frac Plug	15,596	Total Shots	Frac Plug	15,418	Total Shots	Frac Plug	15,240	Total Shots	Frac Plug	15,062	Total Shots

From Bottom to Top	Stage 21	Distance Between Perfs	Shots	Stage 22	Distance Between Perfs	Shots	Stage 23	Distance Between Perfs	Shots	Stage 24	Distance Between Perfs	Shots	Stage 25	Distance Between Perfs	Shots
	14,873	22	4	14,695	22	4	14,517	22	4	14,339	22	4	14,161	22	4
	14,850	22	4	14,672	22	4	14,495	23	4	14,317	23	4	14,134	18	4
	14,828	22	4	14,650	22	4	14,472	22	4	14,294	23	4	14,116	26	4
	14,806	22	4	14,628	22	4	14,450	22	4	14,271	21	4	14,090	18	4
	14,784	23	3	14,606	23	3	14,428	22	3	14,250	22	3	14,072	29	3
	14,761	22	3	14,583	27	3	14,406	23	3	14,228	23	3	14,043	18	3
	14,739	22	3	14,566	17	3	14,383	22	3	14,205	22	3	14,025	17	3
	14,717		3	14,539		3	14,361		3	14,183		3	14,008		3
	Plug to Plug	78	28	Plug to Plug	78	28	Plug to Plug	78	28	Plug to Plug	79	28	Plug to Plug	82	28
Frac Plug		14,884	Total Shots	Frac Plug	14,706	Total Shots	Frac Plug	14,528	Total Shots	Frac Plug	14,350	Total Shots	Frac Plug	14,172	Total Shots

From Bottom to Top	Stage 26	Distance Between Perfs	Shots	Stage 27	Distance Between Perfs	Shots	Stage 28	Distance Between Perfs	Shots	Stage 29	Distance Between Perfs	Shots	Stage 30	Distance Between Perfs	Shots
	13,983	25	4	13,805	29	4	13,627	22	4	13,449	22	4	13,265	28	4
	13,961	23	4	13,780	20	4	13,605	22	4	13,427	27	4	13,246	25	4
	13,938	22	4	13,760	22	4	13,583	23	4	13,400	18	4	13,221	21	4
	13,916	22	4	13,738	22	4	13,560	22	4	13,382	17	4	13,200	24	4
	13,894	26	3	13,716	23	3	13,538	22	3	13,365	27	3	13,176	18	3
	13,868	13	3	13,693	22	3	13,516	22	3	13,338	22	3	13,158	25	3
	13,855	21	3	13,671	22	3	13,494	23	3	13,316	23	3	13,133	18	3
	13,834		3	13,649		3	13,471		3	13,293		3	13,115		3
	Plug to Plug	78	28	Plug to Plug	78	28	Plug to Plug	78	28	Plug to Plug	78	28	Plug to Plug	82	28
Frac Plug		13,994	Total Shots	Frac Plug	13,816	Total Shots	Frac Plug	13,638	Total Shots	Frac Plug	13,460	Total Shots	Frac Plug	13,282	Total Shots

From Bottom to Top	Stage 31	Distance Between Perfs	Shots	Stage 32	Distance Between Perfs	Shots	Stage 33	Distance Between Perfs	Shots	Stage 34	Distance Between Perfs	Shots	Stage 35	Distance Between Perfs	Shots
	13,090	25	4	12,905	32	4	12,729	30	4	12,559	27	4	12,373	45	4
	13,071	22	4	12,893	22	4	12,710	17	4	12,537	22	4	12,355	18	4
	13,049	23	4	12,871	23	4	12,693	22	4	12,515	22	4	12,337	22	4
	13,026	22	4	12,848	22	4	12,671	23	4	12,493	23	4	12,315	23	4
	13,004	22	3	12,826	22	3	12,648	22	3	12,470	22	3	12,292	22	3
	12,982	22	3	12,804	22	3	12,626	22	3	12,448	22	3	12,270	22	3
	12,960	23	3	12,782	23	3	12,604	18	3	12,426	8	3	12,248	20	3
	12,937		3	12,759		3	12,586		3	12,418		3	12,228		3
	Plug to Plug	78	28	Plug to Plug	68	28	Plug to Plug	67	28	Plug to Plug	85	28	Plug to Plug	67	28
	Frac Plug	13,104	Total Shots	Frac Plug	12,916	Total Shots	Frac Plug	12,738	Total Shots	Frac Plug	12,578	Total Shots	Frac Plug	12,382	Total Shots

From Bottom to Top	Stage 36	Distance Between Perfs	Shots	Stage 37	Distance Between Perfs	Shots	Stage 38	Distance Between Perfs	Shots	Stage 39	Distance Between Perfs	Shots	Stage 40	Distance Between Perfs	Shots
	12,186	32	4	12,018	30	4	11,840	30	4	11,665	27	4	11,492	28	4
	12,178	19	4	12,003	22	4	11,825	22	4	11,647	22	4	11,472	25	4
	12,159	22	4	11,981	22	4	11,803	22	4	11,625	28	4	11,447	28	4
	12,137	23	4	11,959	23	4	11,781	22	4	11,597	16	4	11,419	16	4
	12,114	22	3	11,936	22	3	11,759	23	3	11,581	27	3	11,403	20	3
	12,092	22	3	11,914	22	3	11,736	22	3	11,554	18	3	11,383	25	3
	12,070	22	3	11,892	22	3	11,714	22	3	11,536	16	3	11,358	18	3
	12,048		3	11,870		3	11,692		3	11,520		3	11,340		3
	Plug to Plug	68	28	Plug to Plug	68	28	Plug to Plug	78	28	Plug to Plug	79	28	Plug to Plug	84	28
	Frac Plug	12,205	Total Shots	Frac Plug	12,027	Total Shots	Frac Plug	11,859	Total Shots	Frac Plug	11,676	Total Shots	Frac Plug	11,503	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
	11,311	29	4	11,134	26	4	10,958	28	4	10,780	22	4	10,593	31	4
	11,293	24	4	11,113	22	4	10,933	20	4	10,758	20	4	10,580	20	4
	11,269	19	4	11,091	25	4	10,913	28	4	10,738	25	4	10,560	25	4
	11,250	25	4	11,066	19	4	10,885	20	4	10,713	19	4	10,535	20	4
	11,225	20	3	11,047	26	3	10,865	18	3	10,694	25	3	10,515	24	3
	11,205	25	3	11,021	19	3	10,847	23	3	10,669	20	3	10,491	23	3
	11,180	20	3	11,002	16	3	10,824	22	3	10,649	25	3	10,468	22	3
	11,160		3	10,986		3	10,802		3	10,624		3	10,446		3
	Plug to Plug	72	28	Plug to Plug	78	28	Plug to Plug	84	28	Plug to Plug	78	28	Plug to Plug	78	28
	Frac Plug	11,322	Total Shots	Frac Plug	11,144	Total Shots	Frac Plug	10,969	Total Shots	Frac Plug	10,791	Total Shots	Frac Plug	10,613	Total Shots

From Bottom to Top	Stage 46	Distance Between Perfs	Shots	Stage 47	Distance Between Perfs	Shots	Stage 48	Distance Between Perfs	Shots	Stage 49	Distance Between Perfs	Shots	Stage 50	Distance Between Perfs	Shots
	10,424	22	4	10,237	31	4	10,068	28	4	9,890	25	4	9,712	25	4
	10,402	19	4	10,224	18	4	10,046	23	4	9,861	15	4	9,694	26	4
	10,383	26	4	10,206	27	4	10,023	22	4	9,846	29	4	9,668	28	4
	10,357	20	4	10,179	19	4	10,001	22	4	9,817	17	4	9,640	17	4
	10,337	24	3	10,160	25	3	9,979	22	3	9,800	27	3	9,623	22	3
	10,313	23	3	10,135	23	3	9,957	23	3	9,773	18	3	9,601	22	3
	10,290	22	3	10,112	16	3	9,934	19	3	9,755	18	3	9,579	23	3
	10,268		3	10,096		3	9,915		3	9,737		3	9,556		3
	Plug to Plug	78	28	Plug to Plug	78	28	Plug to Plug	83	28	Plug to Plug	84	28	Plug to Plug	83	28
	Frac Plug	10,435	Total Shots	Frac Plug	10,257	Total Shots	Frac Plug	10,084	Total Shots	Frac Plug	9,901	Total Shots	Frac Plug	9,723	Total Shots

From Bottom to Top	Stage 51	Distance Between Perfs	Shots	Stage 52	Distance Between Perfs	Shots	Stage 53	Distance Between Perfs	Shots	Stage 54	Distance Between Perfs	Shots			
	9,534	22	4	9,356	22	4	9,169	31	4	9,002	22	4			
	9,512	22	4	9,334	22	4	9,156	21	4	8,978	22	4			
	9,490	23	4	9,312	23	4	9,135	24	4	8,956	22	4			
	9,467	22	4	9,289	20	4	9,111	20	4	8,934	23	4			
	9,445	22	3	9,269	24	3	9,091	24	3	8,911	22	3			
	9,423	22	3	9,245	22	3	9,067	21	3	8,889	22	3			
	9,401	23	3	9,223	23	3	9,046	22	3	8,867	22	3			
	9,378		3	9,200		3	9,024		3	8,845		3			
	Plug to Plug	78	28	Plug to Plug	78	28	Plug to Plug	78	28	Plug to Plug	79	28			
	Frac Plug	9,545	Total Shots	Frac Plug	9,367	Total Shots	Frac Plug	9,189	Total Shots	Frac Plug	9,013	Total Shots			