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

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

OIL CONSERVATION
ARTESIA DISTRICT
DEC 12 2018
RECEIVED

Form C-104
Revised August 1, 2011

Submit one copy to appropriate District Office

☐ AMENDED REPORT

I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

[1] Operator name and Address	[2] OGRID Number
COG Operating LLC 2208 W. Main Street Artesia, NM 88210	229137
	[3] Reason for Filing Code/ Effective Date NW

[4] API Number	[5] Pool Name	[6] Pool Code
30 – 015-44862	Cottonwood Draw; Bone Spring	97494

[7] Property Code	[8] Property Name	[9] Well Number
316775	Road Runner Federal Com	3H

II. [10] Surface Location

Ul or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South Line	Feet from the	East/West line	County
N	25	25S	26E		210	South	1995	West	Eddy

[11] Bottom Hole Location

Ul or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South Line	Feet from the	East/West line	County
C	24	25S	26E		210	North	1868	West	Eddy

[12] Lse Code	[13] Producing Method Code	[14] Gas Connection Date	[15] C-129 Permit Number	[16] C-129 Effective Date	[17] C-129 Expiration Date
S	F	9/22/18			

III. Oil and Gas Transporters

[18] Transporter OGRID	[19] Transporter Name and Address	[20] O/G/W
	ACC	O
	Lucid Energy	G

IV. Well Completion Data

[21] Spud Date	[22] Ready Date	[23] TD	[24] PBTD	[25] Perforations	[26] DHC, MC
5/8/18	9/22/18	17268' / 17390	17133'	7594-17123'	

[27] Hole Size	[28] Casing & Tubing Size	[29] Depth Set	[30] Sacks Cement
17 1/2"	13 3/8"	253'	350 - circ
12 1/4"	9 5/8"	2375'	1050 - circ
8 3/4"	5 1/2"	17268' / 17248	3500 - circ
	2 7/8"	6754'	

V. Well Test Data

[31] Date New Oil	[32] Gas Delivery Date	[33] Test Date	[34] Test Length	[35] Tbg. Pressure	[36] Csg. Pressure
9/22/18	9/22/18	9/22/18	24 Hrs	650#	450#

[37] Choke Size	[38] Oil	[39] Water	[40] Gas		[41] Test Method
40/64	432	2218	812		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 Tech II

E-mail Address: aavery@concho.com

Date: 12/4/18

Phone: 575-748-6962

OIL CONSERVATION DIVISION

Approved by: Rusty Klein

Title: Business Ops Spec A

Approval Date: 12-20-2018

Pending BLM approvals will subsequently be reviewed and scanned

NM OIL CONSERVATION
ARTESIA DISTRICT
DEC 12 2018
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Form 3160-4
(August 2007)

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. NMNM112907

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.: ROADRUNNER FEDERAL COM 3H

3. Address: 2208 W MAIN STREET, ARTESIA, NM 88210
3a. Phone No. (include area code): Ph: 575-748-6940

9. API Well No.: 30-015-44862

4. Location of Well (Report location clearly and in accordance with Federal requirements)*
At surface: SESW Lot N 210FSL 1995FWL 32.094125 N Lat, 104.248568 W Lon Sec 25 T25S R26E Mer NMP
At top prod interval reported below: SESW Lot N 210FSL 1995FWL 32.094125 N Lat, 104.248568 W Lon Sec 24 T25S R26E Mer NMP
At total depth: Lot C 210FNL 1868FWL 32.122094 N Lat, 104.248913 W Lon

10. Field and Pool, or Exploratory: COTTON DRAW; BONE SPRING

11. Sec., T., R., M., or Block and Survey or Area: Sec 25 T25S R26E Mer NMP

12. County or Parish: EDDY
13. State: NM

14. Date Spudded: 05/08/2018
15. Date T.D. Reached: 06/04/2018
16. Date Completed: ☐ D & A ☒ Ready to Prod. 09/22/2018
17. Elevations (DF, KB, RT, GL)*: 3241 GL

18. Total Depth: MD 17268, TVD ~~7380~~ 7390
19. Plug Back T.D.: MD 17133, TVD 7360
20. Depth Bridge Plug Set: MD, TVD

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	253		350		0	
12.250	9.625 J55	40.0	0	2375		1050		0	
8.750	5.500 P110	17.0	0	17248		3500		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	6754	6737						

25. Producing Intervals / 26. Perforation Record

	Formation	Top	Bottom	Perforated Interval	Size	No. Holes	Perf. Status
A)	BONE SPRING	7594	17123	7594 TO 17123		1590	
B)							
C)							
D)							

12.20.18

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

Depth Interval	Amount and Type of Material
7594 TO 17123	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
09/22/2018	09/22/2018	24	→	432.0	812.0	2218.0			GAS LIFT

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio	Well Status
40/64	650 SI	450.0	→	432	812	2218		POW

28a. Production - Interval B

Date First Produced	Test Date	Hours Tested	Test Production	Oil BBL	Gas MCF	Water BBL	Oil Gravity Corr. API
			→				

Choke Size	Tbg. Press. Flwg. SI	Csg. Press.	24 Hr. Rate	Oil BBL	Gas MCF	Water BBL	Gas:Oil Ratio
			→				

Pending BLM approvals will subsequently be reviewed and scanned

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

ELECTRONIC SUBMISSION #446388 VERIFIED BY THE BLM WELL INFORMATION SYSTEM

**** OPERATOR-SUBMITTED ** OPERATOR-SUBMITTED ** OPERATOR-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):

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
TOS	302			TOS	302
BOS	1705			BOS	1705
LMAR	1898			LMAR	1898
BLCN - Bell Canyon	1941			BLCN	1941
CYCN - Cherry Canyon	2800			CYCN	2800
BYCN - Brushy Canyon	2873			BYCN	2873
BSGL - Bone Spring 1st	5479			BSGL	5479
FBSG	6412			FBSG	6412

32. Additional remarks (include plugging procedure):
SBSG 6833 SBSG 6833
SBSG Sand 7218 SBSG Sand 7218

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 #446388 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 12/04/2018

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 fradulent statements or representations as to any matter within its jurisdiction.

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

Form 3160-5
(June 2015)

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

5. Lease Serial No.
NMNM112907

6. If Indian, Allottee or Tribe Name

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

1. Type of Well
☒ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.
ROAD RUNNER FEDERAL COM 3H

2. Name of Operator
COG OPERATING LLC
Contact: AMANDA AVERY
E-Mail: aavery@concho.com

9. API Well No.
30-015-44862

3a. Address
2208 W MAIN STREET
ARTESIA, NM 88210

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

10. Field and Pool or Exploratory Area
COTTONWOOD DRAW; BS

4. Location of Well *(Footage, Sec., T., R., M., or Survey Description)*
Sec 25 T25S R26E SESW 210FSL 1995FWL
32.094125 N Lat, 104.248568 W Lon

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			
☐ 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 Hydraulic Fracture
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	
	☐ 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 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.

7/5/18 Test csg to 8500#. Set composite bridge plug @ 17,133. Test csg to 8502# Good test.

7/31/18 - 8/14/18 Perf and plug 7,594-17,123' Acdz w/ 86,184 gal 7 1/2%; frac w/ 19,110,580 # sand & 16,030,358 gal fluid.
8/17/18 to 8/19/18 Drilled out composite frac plug's. Clean down to CBP @ 17,133'.

8/20/18 - 8/21/18 Set 2 7/8" 6.5# L-80 tbg @ 6,754' & pkr @ 6,737'. Installed gas-lift system.

9/21/18 Begin flowback and testing.
9/22/18 Date of first production.

NM OIL CONSERVATION
ARTESIA DISTRICT
DEC 12 2018
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14. I hereby certify that the foregoing is true and correct.
Electronic Submission #446351 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 12/04/2018

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

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 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.

(Instructions on page 2)

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

Road Runner Federal Com #3H

Perfs	7 1/2% Acid (Gal)	Sand (#)	Fluid (Gal)
1	1512	360170	293202
2	1512	362270	309330
3	1512	360340	309498
4	1512	361150	313446
5	1512	359980	308994
6	1512	360420	380688
7	1512	360090	305159
8	1512	360940	306293
9	1512	360250	322812
10	1512	359580	365639
11	1512	361040	302807
12	1512	361150	301560
13	1512	360280	302988
14	1512	359960	304206
15	1512	361220	303773
16	1512	362140	300174
17	3024	359970	303072
18	3024	360190	297780
19	1512	360920	301182
20	1512	360480	298788
21	1512	360220	297024
22	3024	360250	299628
23	1512	359940	299208
24	1512	360810	296646
25	1512	360110	298746
26	1512	360220	297906
27	1512	359960	298074
28	1512	361190	348390
29	1512	360000	299796
30	1512	360020	297318
31	1512	361100	291690
32	1512	360280	293580
33	1512	360250	297389
34	1512	360050	300594
35	1512	360500	342930
36	1512	360260	294756
37	1512	360290	298998
38	3024	360620	292362
39	1512	360650	291228
40	1512	360610	290514
41	1512	360390	292698
42	1512	359070	289800
43	1512	361810	295134
44	1512	360410	289800
45	1512	360420	288708
46	1512	362820	293244
47	1512	360330	297066
48	1512	359930	286944
49	1512	361500	286566
50	1512	360210	288078
51	1512	360760	287322
52	1512	360360	289758
53	1512	362700	287070
Totals	**86,184**	**19,110,580**	**16,030,358**

	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
	17,123	23	4	16,930	35	4	16,753	32	4	16,576	26	4	16,400	25	4
	17,100	22	4	16,920	22	4	16,740	22	4	16,560	23	4	16,383	26	4
From Bottom to Top	17,078	23	4	16,898	23	4	16,718	21	4	16,537	22	4	16,357	27	4
	17,055	22	4	16,875	22	4	16,697	25	4	16,515	23	4	16,330	18	4
	17,033	23	4	16,853	23	4	16,672		4	16,492	22	4	16,312	24	4
	17,010	22	4	16,830	22	4	16,646	19	4	16,470	23	4	16,288	21	4
	16,988	23	3	16,808	23	3	16,627	25	3	16,447	22	3	16,267	23	3
	16,965		3	16,785		3	16,602		3	16,425		3	16,244		3
	Plug to Plug	78	30	Plug to Plug	69	30	Plug to Plug	67	30	Plug to Plug	79	30	Plug to Plug	80	30
	Frac Plug	17,133	Total Shots	Frac Plug	16,944	Total Shots	Frac Plug	16,764	Total Shots	Frac Plug	16,594	Total Shots	Frac Plug	16,410	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
	16,222	22	4	16,038	26	4	15,861	27	4	15,628	76	4	15,494	30	4
	16,199	22	4	16,019	25	4	15,836	20	4	15,616	25	4	15,472	16	4
From Bottom to Top	16,177	23	4	15,994	20	4	15,816	22	4	15,591	11	4	15,456	26	4
	16,154	22	4	15,974	22	4	15,794	23	4	15,580	12	4	15,430	19	4
	16,132	23	4	15,952	23	4	15,771	22	4	15,568	22	4	15,411	23	4
	16,109	19	4	15,929	22	4	15,749	23	4	15,546	10	4	15,388	22	4
	16,090	26	3	15,907	19	3	15,726	22	3	15,536	12	3	15,366	23	3
	16,064		3	15,888		3	15,704		3	15,524		3	15,343		3
	Plug to Plug	79	30	Plug to Plug	79	30	Plug to Plug	79	30	Plug to Plug	66	30	Plug to Plug	75	30
	Frac Plug	16,233	Total Shots	Frac Plug	16,053	Total Shots	Frac Plug	15,873	Total Shots	Frac Plug	15,646	Total Shots	Frac Plug	15,505	Total Shots

	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
	15,321	22	4	15,137	26	4	14,956	27	4	14,780	23	4	14,590	33	4
	15,298	22	4	15,118	22	4	14,933	18	4	14,758	19	4	14,578	23	4
From Bottom to Top	15,276	23	4	15,096	23	4	14,915	25	4	14,739	26	4	14,555	27	4
	15,253	22	4	15,073	22	4	14,890	20	4	14,713	25	4	14,528	18	4
	15,231	23	4	15,051	23	4	14,870	22	4	14,688	20	4	14,510	23	4
	15,208	18	4	15,028	23	4	14,848	23	4	14,668	23	4	14,487	22	4
	15,190	27	3	15,005	22	3	14,825	22	3	14,645	22	3	14,465	23	3
	15,163		3	14,983		3	14,803		3	14,623		3	14,442		3
	Plug to Plug	79	30	Plug to Plug	79	30	Plug to Plug	77	30	Plug to Plug	78	30	Plug to Plug	73	30
	Frac Plug	15,332	Total Shots	Frac Plug	15,152	Total Shots	Frac Plug	14,967	Total Shots	Frac Plug	14,791	Total Shots	Frac Plug	14,601	Total Shots

	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
	14,420	22	4	14,235	27	4	14,062	20	4	13,875	27	4	13,702	19	4
	14,397	17	4	14,212	18	4	14,037	27	4	13,860	26	4	13,676	24	4
From Bottom to Top	14,380	28	4	14,194	22	4	14,010	18	4	13,834	25	4	13,652	21	4
	14,352	25	4	14,172	23	4	13,992	23	4	13,809	20	4	13,631	22	4
	14,327	20	4	14,149	22	4	13,969	22	4	13,789	23	4	13,609	23	4
	14,307	22	4	14,127	23	4	13,947	23	4	13,766	22	4	13,586	22	4
	14,285	23	3	14,104	22	3	13,924	22	3	13,744	23	3	13,564	23	3
	14,262		3	14,082		3	13,902		3	13,721		3	13,541		3
	Plug to Plug	79	30	Plug to Plug	75	30	Plug to Plug	81	30	Plug to Plug	76	30	Plug to Plug	82	30
	Frac Plug	14,431	Total Shots	Frac Plug	14,247	Total Shots	Frac Plug	14,073	Total Shots	Frac Plug	13,885	Total Shots	Frac Plug	13,713	Total Shots

	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
	13,515	26	4	13,340	21	4	13,148	33	4	12,978	23	4	12,788	32	4
	13,492	18	4	13,316	18	4	13,136	23	4	12,956	23	4	12,763	23	4
From Bottom to Top	13,474	23	4	13,298	27	4	13,113	17	4	12,933	23	4	12,740	15	4
	13,451	22	4	13,271	25	4	13,096	28	4	12,910	18	4	12,725	17	4
	13,429	23	4	13,246	20	4	13,068	23	4	12,892	27	4	12,708	23	4
	13,406	22	4	13,226	23	4	13,045	22	4	12,865	22	4	12,685	22	4
	13,384	23	3	13,203	22	3	13,023	22	3	12,843	23	3	12,663	23	3
	13,361		3	13,181		3	13,001		3	12,820		3	12,640		3
	Plug to Plug	75	30	Plug to Plug	79	30	Plug to Plug	64	30	Plug to Plug	79	30	Plug to Plug	74	30
	Frac Plug	13,526	Total Shots	Frac Plug	13,350	Total Shots	Frac Plug	13,160	Total Shots	Frac Plug	12,989	Total Shots	Frac Plug	12,799	Total Shots

	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
	12,618	22	4	12,436	28	4	12,257	23	4	12,068	31	4	11,897	22	4
	12,595	26	4	12,414	22	4	12,235	17	4	12,049	23	4	11,874	22	4
From Bottom to Top	12,569	19	4	12,392	22	4	12,218	28	4	12,026	23	4	11,852	23	4
	12,550	23	4	12,370	23	4	12,190	24	4	12,003	19	4	11,829	19	4
	12,527	22	4	12,347	22	4	12,166	21	4	11,984	24	4	11,810	26	4
	12,505	23	4	12,325	23	4	12,145	23	4	11,960	11	4	11,784	16	4
	12,482	18	3	12,302	22	3	12,122	23	3	11,949	30	3	11,768	29	3
	12,464		3	12,280		3	12,099		3	11,919		3	11,739		3
	Plug to Plug	79	30	Plug to Plug	78	30	Plug to Plug	78	30	Plug to Plug	77	30	Plug to Plug	79	30
	Frac Plug	12,629	Total Shots	Frac Plug	12,448	Total Shots	Frac Plug	12,268	Total Shots	Frac Plug	12,080	Total Shots	Frac Plug	11,908	Total Shots

	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
	11,700	39	4	11,536	29	4	11,344	35	4	11,176	22	4	10,986	32	4
	11,694	23	4	11,514	23	4	11,323	19	4	11,153	22	4	10,975	24	4
From	11,671	22	4	11,491	22	4	11,304	23	4	11,131	23	4	10,951	27	4
Bottom to	11,649	23	4	11,469	19	4	11,281	21	4	11,108	20	4	10,924	18	4
Top	11,626	22	4	11,450	26	4	11,260	20	4	11,088	25	4	10,906	23	4
	11,604	23	4	11,424	24	4	11,240	19	4	11,063	22	4	10,883	23	4
	11,581	16	3	11,400	21	3	11,221	23	3	11,041	23	3	10,860	22	3
	11,565		3	11,379		3	11,198		3	11,018		3	10,838		3
	Plug to Plug	62	30	Plug to Plug	79	30	Plug to Plug	76	30	Plug to Plug	79	30	Plug to Plug	73	30
	Frac Plug	11,711	Total Shots	Frac Plug	11,548	Total Shots	Frac Plug	11,357	Total Shots	Frac Plug	11,187	Total Shots	Frac Plug	10,997	Total Shots

	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
	10,815	23	4	10,633	27	4	10,450	28	4	10,267	30	4	10,095	30	4
	10,793	27	4	10,608	20	4	10,432	26	4	10,254	24	4	10,072	22	4
From	10,766	18	4	10,588	20	4	10,406	19	4	10,230	18	4	10,050	23	4
Bottom to	10,748	23	4	10,568	23	4	10,387	23	4	10,212	27	4	10,027	23	4
Top	10,725	22	4	10,545	22	4	10,364	22	4	10,185	29	4	10,004	22	4
	10,703	23	4	10,523	23	4	10,342	22	4	10,156	16	4	9,982	22	4
	10,680	20	3	10,500	22	3	10,320	23	3	10,140	15	3	9,960	23	3
	10,660		3	10,478		3	10,297		3	10,125		3	9,937		3
	Plug to Plug	79	30	Plug to Plug	76	30	Plug to Plug	79	30	Plug to Plug	66	30	Plug to Plug	79	30
	Frac Plug	10,827	Total Shots	Frac Plug	10,644	Total Shots	Frac Plug	10,466	Total Shots	Frac Plug	10,278	Total Shots	Frac Plug	10,106	Total Shots

	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
	9,909	28	4	9,724	33	4	9,554	29	4	9,360	36	4	9,193	27	4
	9,890	23	4	9,712	23	4	9,539	30	4	9,344	38	4	9,171	23	4
From	9,867	20	4	9,689	22	4	9,509	23	4	9,306	22	4	9,148	22	4
Bottom to	9,847	23	4	9,667	23	4	9,486	22	4	9,284	23	4	9,126	23	4
Top	9,824	22	4	9,644	19	4	9,464	23	4	9,261	22	4	9,103	22	4
	9,802	23	4	9,625	26	4	9,441	22	4	9,239	19	3	9,081	19	4
	9,779	22	3	9,599	16	3	9,419	23	3	9,220		3	9,062	26	3
	9,757		3	9,583		3	9,396		3				9,036		3
	Plug to Plug	79	30	Plug to Plug	69	30	Plug to Plug	79	30	Plug to Plug	101	26	Plug to Plug	79	30
	Frac Plug	9,926	Total Shots	Frac Plug	9,736	Total Shots	Frac Plug	9,565	Total Shots	Frac Plug	9,385	Total Shots	Frac Plug	9,205	Total Shots

	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
	9,011	25	4	8,833	23	4	8,637	38	4	8,473	22	4	8,280	35	4
	8,991	23	4	8,811	21	4	8,623	15	4	8,450	24	4	8,260	18	4
From	8,968	22	4	8,790	25	4	8,608	23	4	8,426	21	4	8,242	22	4
Bottom to	8,946	23	4	8,765	17	4	8,585	22	4	8,405	19	4	8,220	20	4
Top	8,923	16	4	8,748	28	4	8,563	17	4	8,386	26	4	8,200	20	4
	8,907	29	4	8,720	26	4	8,546	28	4	8,360	23	4	8,180	23	4
	8,878	22	3	8,694	19	3	8,518	23	3	8,337	22	3	8,157	22	3
	8,856		3	8,675		3	8,495		3	8,315		3	8,135		3
	Plug to Plug	79	30	Plug to Plug	79	30	Plug to Plug	63	30	Plug to Plug	79	30	Plug to Plug	74	30
	Frac Plug	9,025	Total Shots	Frac Plug	8,844	Total Shots	Frac Plug	8,648	Total Shots	Frac Plug	8,484	Total Shots	Frac Plug	8,294	Total Shots

	Stage 51	Distance Between Perfs	Shots	Stage 52	Distance Between Perfs	Shots	Stage 53	Distance Between Perfs	Shots	Stage 54	Distance Between Perfs	Shots	Stage 55	Distance Between Perfs	Shots
	8,112	23	4	7,922	33	4	7,752	28	4		7594			0	
	8,090	22	4	7,909	22	4	7,727	21	4						
From	8,068	23	4	7,887	23	4	7,706	22	4						
Bottom to	8,045	29	4	7,864	22	4	7,684	22	4						
Top	8,016	16	4	7,842	19	4	7,662	23	4						
	8,000	23	4	7,823	26	4	7,639	22	4						
	7,977	22	3	7,797	17	3	7,617	23	3						
	7,955		3	7,780		3	7,594		3						
	Plug to Plug	78	30	Plug to Plug	69	30	Plug to Plug	79	30	Plug to Plug	6650	0	Plug to Plug	0	0
	Frac Plug	8,123	Total Shots	Frac Plug	7,933	Total Shots	Frac Plug	7,763	Total Shots	Frac Plug	6,650	Total Shots	Frac Plug	.	Total Shots