District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy Minerals and Natural Resources
Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-101
Revised July 18, 2013

☐ AMENDED REPORT

APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE

1. Operator Name and Address	2. OGRID Number
Cimarex Energy Co. of Colorado 202 S. Cheyenne Ave Tulsa, OK 74103	162683
	3. API Number 30-015-32286

4. Property Code	5. Property Name	6. Well No.
29000	Echols Com	2

7. Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
M	12	23S	26E		1110	South	990	West	Eddy

8. Proposed Bottom Hole Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County

9. Pool Information

Pool Name	Pool Code
Atoka	

Additional Well Information

11. Work Type	12. Well Type	13. Cable/Rotary	14. Lease Type	15. Ground Level Elevation
P	Gas		Fee	3258
16. Multiple	**17. Proposed Depth**	**18. Formation**	**19. Contractor**	**20. Spud Date**
	12050	Atoka		

Depth to Ground water:	Distance from nearest fresh water well	Distance to nearest surface water

☐ We will be using a closed-loop system in lieu of lined pits

21. Proposed Casing and Cement Program

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	17.5	13-3/8"	48#	487	490	surf
Int	12.25	9-5/8"	40	3188	1300	surf
Prod	8.75	5-1/2"	17	12045	1800	202

Casing/Cement Program: Additional Comments

22. Proposed Blowout Prevention Program

Type	Working Pressure	Test Pressure	Manufacturer

23. I hereby certify that the information given above is true and complete to the best of my knowledge and belief. I further certify that I have complied with 19.15.14.9 (A) NMAC ☑ and/or 19.15.14.9 (B) NMAC ☐ if applicable. Signature:	OIL CONSERVATION DIVISION Approved By: **DENIED** BRD
Printed name: Terri Stathem	Title:
Title: Manager Regulatory Compliance	Approved Date: / Expiration Date:
E-mail Address: tstathem@cimarex.com	
Date: 11-2-15 / Phone: 432-620-1936	Conditions of Approval Attached

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State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
30015-32286		Atoka

[4] Property Code	[5] Property Name	[6] Well Number
29000	Echols Com	2

[7] OGRID No.	[8] Operator Name	[9] Elevation
162683	Cimarex Energy of Colorado	3258'

[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
M	12	23S	26E		1110	South	990	West	Eddy

[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
320			

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

[16]

990'

1110'

[17] OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Signature — Date: 11-2-2015

Terri Stathem

Printed Name

tstathem@cimarex.com

E-mail Address

[18] SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date of Survey

Signature and Seal of Professional Surveyor:

Certificate Number

Echols Com 2
Atoka Recompletion Procedure
Michael Karner 9/10/15

Well Data

KB	16'
TD	12,050'
PBTD	11,023'
Casing	13-3/8" 48# H-40 @ 487'. Cmt'd w/ 490 sx, cmt circ 9-5/8" 40# J-55 @ 3,188'. Cmt'd w/ 1,300 sx, cmt circ 5-1/2" 17# N-80 & P-110 @ 12,045'. Cmtd w/ 1,800 sx. DV @ 7,011'. TOC @ 2,020' by TS
Tubing	2-3/8" 4.7# L-80 8rd, EOT @ 11,393' (345 joints)
Packer	5-1/2" x 2-3/8" Arrowset 1X packer @ 11,409'
Current Prod. Perfs	Morrow (11,474' – 11,909')
Proposed RC Perfs	Atoka (11,026' – 11,038'), (11,080' – 11,127'), (11,155' – 11,166'), (11,172' – 11,182'), (11,206' – 11,217'), and (11,231' – 11,238')

Contacts

Name	Company or Position if XEC	Email or Alternate Phone	Phone
Shane Hines	Flowco Production Solutions	shane.hines@flowcosolutions.com	830-832-8910
Aldo Mendoza	Basic Energy Services	432-557-2370	432-687-1994
Kim Barton	Production Superintendent	kbarton@cimarex.com	432-620-1952
Paul Stock	Workover Superintendent	pstock@cimarex.com	432-620-1955
Mike Karner	Production Engineer	mkarner@cimarex.com	432-571-7895
Matt	Apollo Wireline		432-563-0891
	Basin Testers LP		432-362-5072
	BLM	575-361-2822	575-234-5972
Mark Dennis	Cameron	575-441-7709	575-397-1325

Procedure

Notify NMOCD 24 – 48 hours prior to starting operations. Contact Cameron company representative 1-2 days prior to starting operations to set up having the wellhead and tubing hanger picked up so that they can be inspected and returned within a few days.

1. Test anchors prior to moving in rig.
2. Move in rig up pulling unit.
3. Kill well as necessary with 4% KCl.
4. Nipple down wellhead, nipple up 5,000 psi blow out preventer stack. Send wellhead with Cameron company representative for inspection and to replace seals in tubing hanger. Call Cameron company representative 1-2 days prior to starting operations to arrange having equipment picked up so that it can be returned within a few days.
5. Release AS-1X pkr @ 11,409' & TOOH w/ 2-3/8" 4.7# L-80 tbg & packer. Stand back tbg. Note: If unable to release packer, plan to set a blanking plug in packer, release from on/off tool, and leave packer in the well rather than fish for the packer. Packer is 65' from top of Morrow perfs so it should be left behind, and the CIBP should be set as close to this as possible (CIBP must be set within 100' of top Morrow perforations at 11,474', so must be set below 11,374' but above the packer left in the hole if we are unable to release packer).
6. MIRU wireline and 5k short lubricator
7. RIH with 4.6" gauge ring and junk basket down to +/- 11,500' (OD of CIBP = 4.24").
8. RIH w/ CIBP and set @ +/- 11,424'
9. RIH w/ bailer and bail 35' of cement on top of CIBP – abandoning Morrow perfs.
10. WOC 6-8 hours
11. RU pump truck and test casing to 500 psi for 30 minutes with no more than 10% leakoff. Record this test on a circular test chart.
12. TIH w/ 2-3/8" 4.7# L-80 tbg to tag TOC @ +/- 11,389'
13. Circulate one bottoms up of 4%
14. TOOH w/ 2-3/8" 4.7# L-80 tbg to surface and stand back tubing.
15. RIH w/ 4.6" gauge ring and junk basket to tag TOC at +/- 11,389'
    Note: Expected reservoir pressure is 4,124 psi. 4% KCl is 8.56 ppg, so a hydrostatic column of 7% KCl will be 9,265', or 1,973' from surface. Make sure that top of fluid tagged is at least this depth so that guns are not shot to surface causing a fishing job.
16. RIH w/ 3-1/8" casing guns and perforate Atoka with 1 SPF and 0° phasing at the following depths: 11,026' – 11,238'
17. Pin 2-3/8" pump out plug for 1,500 – 2,000 psi differential pressure
18. RIH w/ AS-1X packer w/ 1.81" X nipple, 1 10' pup joint 2-3/8" 4.7# L-80 tubing, 1.81" XN nipple and pump, out plug set at +/- 10,976' From downhole up:
    a. 2-3/8" Pump out plug
    b. 1.81" XN nipple
    c. 10' 2-3/8" 4.7# L-80 pup joint
    d. AS-1X packer w/ 1.81" X nipple
19. RDMO wireline and 5k short lubricator
20. TIH w/ T-2 on-off tool on 2-3/8" 4.7 L-80 tbg and latch into Arrowset packer hydrotest while TIH.
21. Set tubing into tubing hanger and RU tree. Space out tubing with 2-3/8" 4.7# tubing subs to hang tubing with 10klbs compression on packer.
22. MIRU Guardian Tree Saver and Stroke to isolate tree.
23. MIRU Baker Hughes acid

24. Pump out plug
25. Pump staged acid job including 10,000 total gallons of 15% HCl with gel retarder and ball sealers followed by 2121 gallon (50.5 bbl) overflush down 2-3/8" tubing as per design below:

PROCEDURE

Stage	Fluid		Diverting Agents				
	Type	Volume (gal)	Conc. (pda)	Type	Stage (volume)	Cum (lbs)	Cum (b.s.)
1	2% KCl Water	500					
2	15% Gelled HCl Acid	10000		BS, 7/8 in, 1.3 sg,	150		150
3	2% KCl Water	2121					150
Total		12621					150

TREATMENT SCHEDULE

Stage	Surface Treating Pressure (psi)	Rates			Volume				Stage Pump Time hh:mm:ss
		Slurry (bpm)	Clean Fluid (bpm)	Divertor Rate (lb/min)	Slurry		Fluid		
					Stage (bbls)	Cum. (bbls)	Stage (bbls)	Cum. (bbls)	
1	6069	5.0	5.0		11.9	11.9	11.9	11.9	00:02:22
2	5832	5.0	5.0		238.1	250.0	238.1	250.0	00:47:37
3	6069	5.0	5.0		50.5	300.5	50.5	300.5	00:10:06
							Total Pump Time:		01:00:05

26. RU well to production