

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

Form C-101
Revised July 18, 2013

Energy Minerals and Natural Resources

NM OIL CONSERVATION
ARTESIA DISTRICT

Oil Conservation Division

☐ AMENDED REPORT

NOV 03 2015

1220 South St. Francis Dr.

Santa Fe, NM 87505

RECEIVED

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

Operator Name and Address Cimarex Energy Co. of Colorado 202 S. Cheyenne Ave Tulsa, OK 74103		GRID Number 162683
Property Code 29000		API Number 30015-32286 32286
Property Name Echols Com		Well No. 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 P	12. Well Type Gas	13. Cable/Rotary	14. Lease Type Fee	15. Ground Level Elevation 3258
16. Multiple	17. Proposed Depth 12050	18. Formation Atoka	19. Contractor	20. Spud Date
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

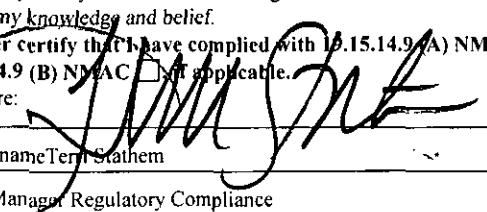
Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surf	17.5	13-3/8"	48#	487	490	surf
Int	12.25	9-5/8"	40	3188	1300	surf
Prod	8.75	5-1/2"	17	12045	1800	202

Casing/Cement Program: Additional Comments

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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 <input checked="" type="checkbox"/> and/or 19.15.14.9(B) NMAC <input type="checkbox"/> not applicable. Signature: 		OIL CONSERVATION DIVISION	
Printed name: Terry Stathem		Approved By: Accepted for record NMOC	
Title: Manager, Regulatory Compliance		Title:	
E-mail Address: tstathem@cimarex.com		Approved Date: XXX Expiration Date:	
Date: 11-2-15 Phone: 432-620-1936		Conditions of Approval Attached	

Need Signed C-102 Plat for approval

NM OIL CONSERVATION

ARTESIA DISTRICT

State of New Mexico

Form C-102

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1625 N. French Dr., Hobbs, NM 88240

Phone: (575) 393-6161 Fax: (575) 393-0720

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Phone: (505) 476-3460 Fax: (505) 476-3462

NOV 02 2015
Energy, Minerals & Natural Resources Department**OIL CONSERVATION DIVISION**

RECEIVED

1220 South St. Francis Dr.

Santa Fe, NM 87505

Revised August 1, 2011

Submit one copy to appropriate

District Office

☐ AMENDED REPORT**WELL LOCATION AND ACREAGE DEDICATION PLAT**

¹ API Number 30015-32286	² Pool Code Echols Com	³ Pool Name Atoka
⁴ Property Code 29000	⁵ Property Name Echols Com	⁶ Well Number 2
⁷ OGRID No. 162683	⁸ Operator Name Cimarex Energy of Colorado	⁹ Elevation 3258'

" Surface Location

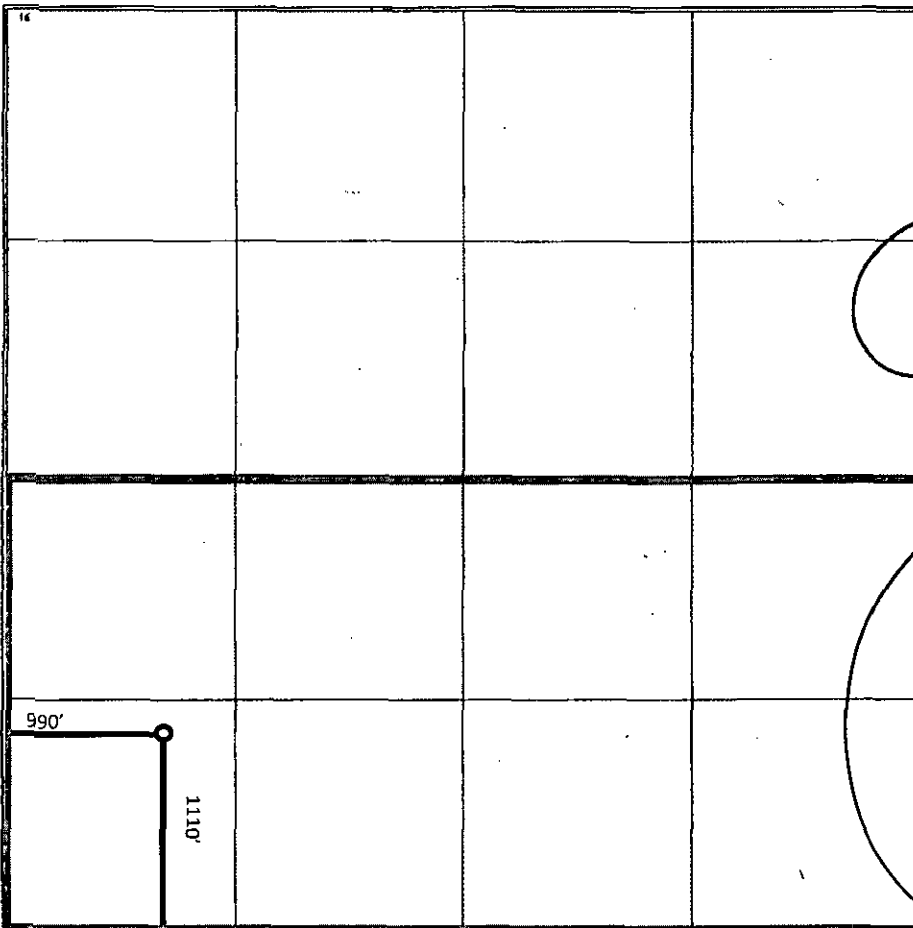
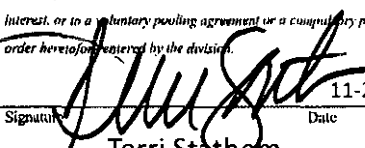
UL or lot no. M	Section 12	Township 23S	Range 26E	Lot Idn. 	Feet from the 1110	North/South line South	Feet from the 990	East/West line West	County Eddy
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" Bottom Hole Location If Different From Surface

UL or lot no. 	Section 	Township 	Range 	Lot Idn. 	Feet from the 	North/South line 	Feet from the 	East/West line 	County
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¹² Dedicated Acres 320	¹³ Joint or Infill 	¹⁴ Consolidation Code 	¹⁵ Order No.
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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.

	" 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 undivided 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 Printed Name: Terri Stathem E-mail Address: tstathem@cimarex.com
	" 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:

NM OIL CONSERVATION
ARTESIA DISTRICT
NOV 03 2015



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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'. Cmt'd 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' & TOO H 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 perms 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 perms.
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. TOO H 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		BS, 7/8 in, 1.3 sg,	150		
2	15% Gelled HCl Acid	10000					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

CIMAREX

Current WBD
KB - 18' above GL

Cimarex Energy Co. of Colorado

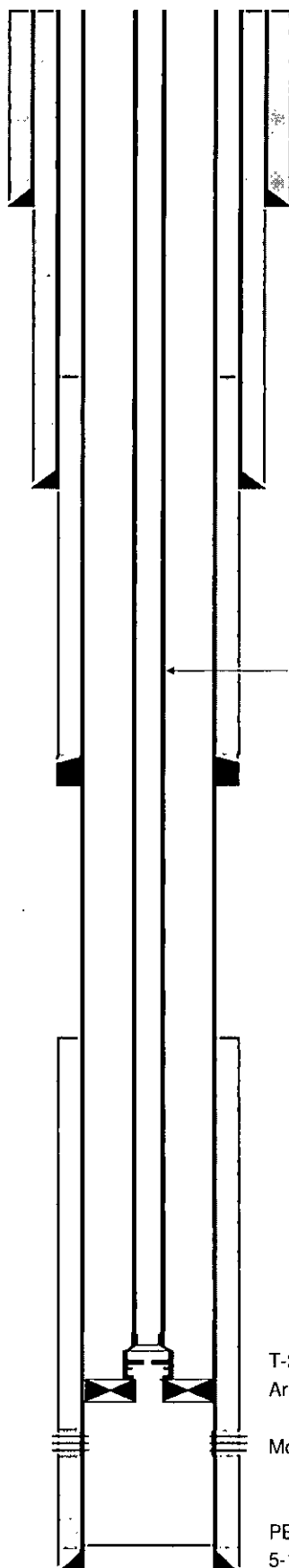
Echols #2

1110' FSL & 990' FWL

Sec. 12, T-23-S, R-26-E, Eddy Co., NM

S. Gengler

05/11/2009



13-3/8", 48# H-40 csg @ 487'
cmtd w/ 490 sx, cmt circ

TOC @ 2020' by TS

9-5/8", 40# J-55 csg @ 3188'
cmtd w/ 1300 sx, cmt circ

345 jts 2 3/8" 4.7# L-80 Tbg

DV Tool @ 7011'
cmtd w/ 800 sx

TOC @ 9200' by CBL

T-2 On-off Tool w/ 1.81" F Profile nipple @ 11402'
Arrowset 1X pkr @ 11409'

Morrow perfs (11474' - 11909')

PBTD @ 12023'
5-1/2" 17# N-80 & P-110 @ 12045' cmtd w/ 1000 sx
TD @ 12050'



Proposed WBD
KB - 18' above GL

Cimarex Energy Co. of Colorado

Echols #2

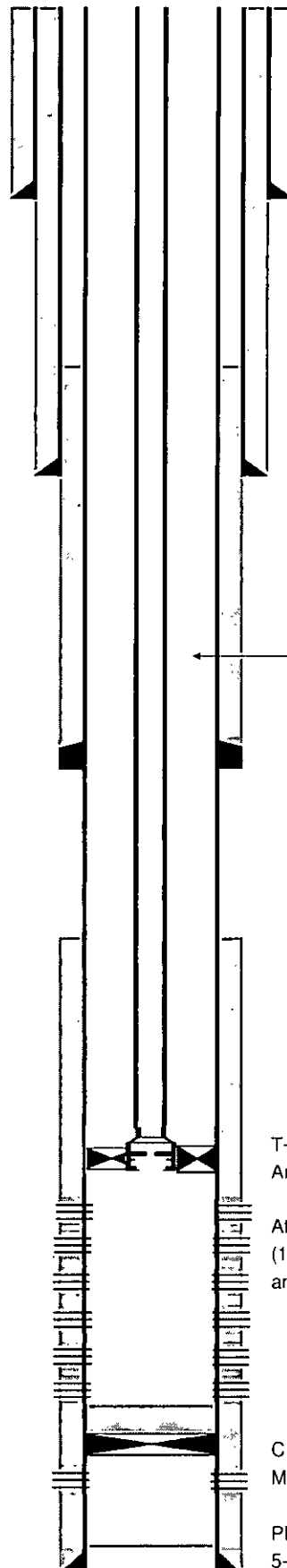
1110' FSL & 990' FWL

Sec. 12, T-23-S, R-26-E, Eddy Co., NM

M. Karner

09/9/2015

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ARTESIA DISTRICT
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13-3/8", 48# H-40 csg @ 487'
cmtd w/ 490 sx, cmt circ

TOC @ 2020' by TS

9-5/8", 40# J-55 csg @ 3188'
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345 jts 2 3/8" 4.7# L-80 Tbg

DV Tool @ 7011'
cmtd w/ 800 sx

TOC @ 9200' by CBL

T-2 On-off Tool w/ 1.81" F Profile nipple @ 10919'
Arrowset 1X pkr @ 10926'

Atoka Perfs (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')

CIBP at 11,424' w/ 35' cmt bailed on top
Morrow perfs (11,474' - 11,909')

PBTD @ 12023'
5-1/2" 17# N-80 & P-110 @ 12045' cmtd w/ 1000 sx
TD @ 12050'