

**District I**  
1625 N French Dr., Hobbs, NM 88240  
Phone (575) 393-6161 Fax (575) 393-9720

**District II**  
811 S First St., Artesia, NM 88210  
Phone (575) 748-1283 Fax (575) 748-9720

**District III**  
1000 Rio Brazos Road, Artes, 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**

<sup>1</sup> Operator Name and Address Cimarex Energy Co. of Colorado 202 S. Cheyenne Ave., Suite 1000		<sup>2</sup> OGRID# Number 162683
		<sup>3</sup> API Number 30-015-33229
<sup>4</sup> Property Code	NM DD State Com <sup>5</sup> Property Name	#2 <sup>6</sup> Well No.

**<sup>7</sup> Surface Location**

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
L	32	24S	26E		1975	South	1200	West	Eddy

**<sup>8</sup> Proposed Bottom Hole Location**

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

**<sup>9</sup> Pool Information**

Pool Name Purple Sage Wolfcamp Gas & White City Penn Gas	<i>DHC 4818</i> Pool Code 98220/87280
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**Additional Well Information**

<sup>11</sup> Work Type PB	<sup>12</sup> Well Type Gas	<sup>13</sup> Cable/Rotary	<sup>14</sup> Lease Type State	<sup>15</sup> Ground Level Elevation 3398'
<sup>16</sup> Multiple	<sup>17</sup> Proposed Depth PBD 11057'	<sup>18</sup> Formation Cisco Canyon/ Wolfcamp	<sup>19</sup> Contractor	<sup>20</sup> Spud Date
Depth to Ground water 300'	Distance from nearest fresh water well		Distance to nearest surface water	

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

**<sup>21</sup> Proposed Casing and Cement Program**

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surface	17 1/2"	13 3/8" J-55	54.5#	361'	980 sks	Surface
Intermediate	12 1/4"	9 5/8" NS110HC	40#	1682'	1100 sks	Surface
Production	8 3/4"	5 1/2" P-110	17#	11815'	2090 sks	580'

**Casing/Cement Program: Additional Comments**

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**<sup>22</sup> Proposed Blowout Prevention Program**

Type	Working Pressure	Test Pressure	Manufacturer

<sup>23</sup> 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"/> , if applicable. Signature: <i>Amilthy Crawford</i> Printed name: Amilthy Crawford Title: Regulatory Analyst E-mail Address: acrawford@cimarex.com Date: 9/1/2017 Phone: 432-620-1909	<b>OIL CONSERVATION DIVISION</b> Approved By: <i>Raymond W. Rodany</i> Title: <i>Geologist</i> Approved Date: <i>9-5-2017</i>   Expiration Date: <i>9-5-19</i> Conditions of Approval Attached
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\*\* All Casing Previously set\*\*

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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

<sup>1</sup> API Number 30-015-33229		<sup>2</sup> Pool Code 98220		<sup>3</sup> Pool Name Purple Sage Wolfcamp Gas	
<sup>4</sup> Property Code		<sup>5</sup> Property Name NM DD State Com			<sup>6</sup> Well Number 2
<sup>7</sup> OGRID No. 162683		<sup>8</sup> Operator Name Cimarex Energy Co of Colorado			<sup>9</sup> Elevation 3398'

<sup>10</sup> Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	32	24S	26E		1975	South	1200	West	Eddy

<sup>11</sup> 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

<sup>12</sup> Dedicated Acres 640	<sup>13</sup> Joint or Infill	<sup>14</sup> Consolidation Code	<sup>15</sup> 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.

<p><sup>16</sup></p>	<p><b><sup>17</sup> OPERATOR CERTIFICATION</b> 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.</p> <p>Signature: <i>Amithy Crawford</i> Date: 9/1/2017</p> <p>Printed Name: Amithy Crawford E-mail Address: acrawford@cimarex.com</p>			
	<p><b><sup>18</sup> SURVEYOR CERTIFICATION</b> 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.</p> <p>Date of Survey: Signature and Seal of Professional Surveyor:</p>			
	<p>Certificate Number</p>			

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AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

<sup>1</sup> API Number 30-015-33229		<sup>2</sup> Pool Code 87280		<sup>3</sup> Pool Name White City (Penn) Gas	
<sup>4</sup> Property Code		<sup>5</sup> Property Name NM DD State Com			<sup>6</sup> Well Number 2
<sup>7</sup> OGRID No. 162683		<sup>8</sup> Operator Name Cimarex Energy Co of Colorado			<sup>9</sup> Elevation 3398'

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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.

	<p><b><sup>16</sup> OPERATOR CERTIFICATION</b> 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.</p> <p><i>Amithy Crawford</i> 9/1/2017 Signature Date</p> <p>Amithy Crawford Printed Name</p> <p>acrawford@cimarex.com E-mail Address</p>	
	<p><b><sup>17</sup> SURVEYOR CERTIFICATION</b> 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.</p> <p>Date of Survey Signature and Seal of Professional Surveyor:</p>	
	<p>Certificate Number</p>	

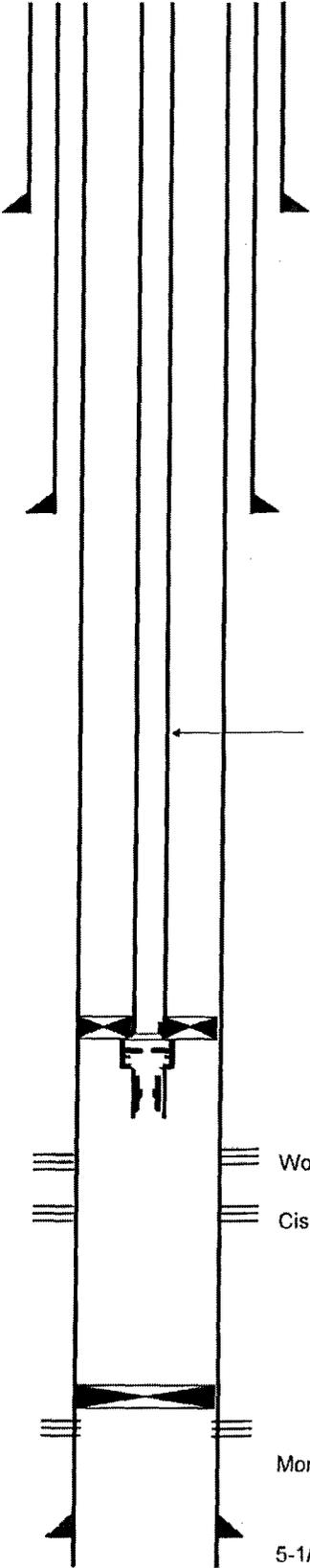
Proposed



KB - 23' above GL

Cimarex Energy Co. of Colorado  
 New Mexico DD State Com #2  
 SHL - 1975' FSL & 1200' FWL

Sec. 26, T-32-S, R-26-E, Eddy Co., NM  
 S. Runyan 08/24/2017



13-3/8", 54.5# J-55 csg @ 361'  
cmtd to surface

9-5/8", 40# P-110 csg @ 1682'  
cmtd to sfc

2-3/8" 4.7#J-55 Tbg

Wolfcamp Perfs (8,372'-9,667)

Cisco Canyon Perfs (9,692-10,074)

Morrow perfs (11,142' - 11,610')

5-1/2" 17# P-110 @ 11,815'  
TD @ 11,815'

CIBP @ 11,092 with 25 sxs of cmt

Current



KB - 23' above GL

Cimarex Energy Co. of Colorado  
New Mexico DD State Com #2  
SHL - 1975' FSL & 1200' FWL

Sec. 26, T-32-S, R-26-E, Eddy Co., NM  
S. Runyan 08/24/2017

TOC in 5-1/2" csg 580'

13-3/8", 54.5# J-55 csg @ 361'  
cmtd to surface

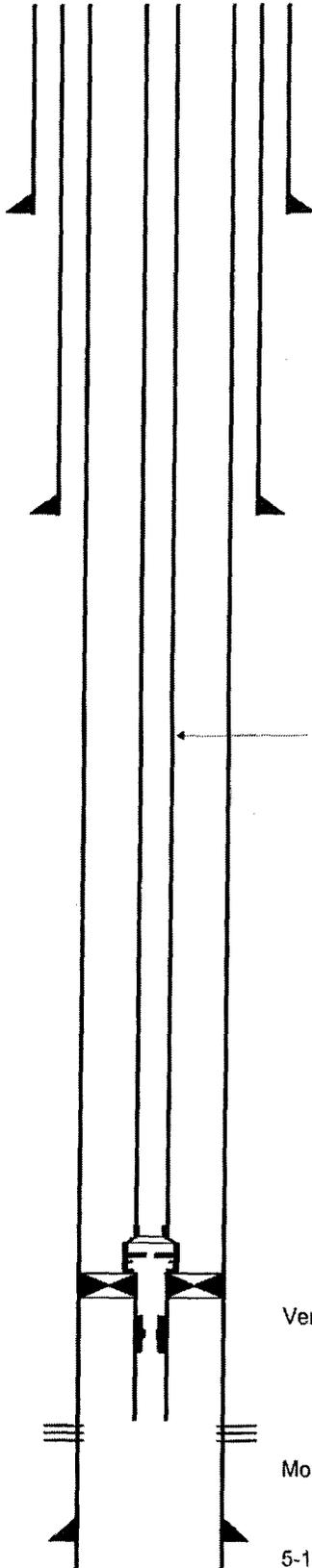
9-5/8", 40# P-110 csg @ 1682'  
cmtd to sfc

2-3/8" 4.7# J-55 Tbg

Versa Set pkr @ 11,080'

Morrow perms (11,142' - 11,610')

5-1/2" 17# P-110 @ 11,815'  
TD @ 11,815'





### Appendix C: Recompletion Procedure – New Mexico DD State #2

#### Well Data

KB	23'
TD	11,815'
PBTD	11,814'
Casing	13-3/8" 54.5# J-55 @ 361'. Cmt'd w/ 400 sx, cmt to sfc 9-5/8" 40# J-55 @ 1,682'. Cmt'd w/ 1,775 sx, cmt circ 5-1/2" 17# P-110 @ 11,734'. Cmt'd w/ 930 sx, cmt @ 580'
Tubing	2-3/8" 4.7# L-80 8rd, EOT @ 10,845'
Proposed RC Perfs	Wolfcamp (8,372' – 9,667') & Cisco Canyon (9,884' – 10,074')

#### PROCEDURE

1. Pull test anchors, replace as necessary before rig arrival.
2. MIRU pulling unit, rental flare, and choke manifold.
3. Hold safety meeting and perform JSA, discuss risks.
4. Kill well with FSW as needed. Observe all pressures on well and note detail in report.
  - a. **NOTE: Treat all water throughout job with biocide.**
  - b. Brendan McCalpin 406-498-6647
5. MIRU WSU. Ensure WSU is set and balanced on rig mats before proceeding.
  - a. Everyone on location has the ability to use STOP WORK AUTHORITY to shut down operations should a problem or concern arise.
6. ND WH and flowline, NU 5,000 psi hydraulic BOPs.
7. PU tubing, release 5-1/2" versa-set packer @ 11,080' (1/4 turn right hand release).
8. POOH w/2-3/8" tubing & packer. Lay down packer and tubing.
9. MIRU WL and 5-1/2" 17# CIBP.
10. Set CIBP @ +/- 11,092'.
11. Mix 25 sxs class H cement.
12. PU RIH with dump bailor on WL and dump bail cement on top of CIBP.
13. PU 2<sup>nd</sup> CIBP and set @ +/- 10,800'.
14. RDMO WL company.



15. MIRU pump truck and pressure test CIBP, Cmt, and casing to 8,500 psi on a chart for thirty minutes observing leak-off.
  - a. Leak-off can be no more than 10%.
  - b. Report pressure back to Midland office.
  - c. If pressure test is successful proceed with Ciscamp completion.
16. ND 5k BOPs.
17. NU two 10k frac valves and flow cross.
18. MIRU water transfer with frac tanks to contain water pumped from frac ponds.
  - a. Test frac valves and flow cross prior to fracing to 10,000 psi.
19. MIRU WL with full lubricator for perforating the Ciscamp formation.
20. RIH with 4-1/2" gauge ring/JB to +/- 10,100'.
21. Perforate according to detailed perforation cluster sheet provided in separate document.
22. Perforate and frac the Ciscamp according to stimulation design in separate document.
  - a. 10K CBP will be set in between each stage (6 in total).

#### POST FRAC

23. RDMO frac crew.
24. MIRU 2" CTU with sufficient tubing to wash down to PBTD +/- 10,800' (CIBP)
25. MU 2.88" OD coil connector and perform pull test to 20k.
  - a. Note Check weight indicator versus hydraulics and note any discrepancy
26. Fill coil and flush with 2% KCL to ensure tubing is clean
27. MU recommended BHA listed below
  - a. Coil Connector
  - b. Dual BPV
  - c. Dual Hydraulic Double Acting Jars
  - d. Hydraulic Disconnect
  - e. Dual Circulating Sub
  - f. PD Motor
  - g. 4.625" OD Blade Mill



CONFIDENTIAL. August 24, 2017

Production Operations – Carlsbad Region, Permian Basin  
**New Mexico DD State Com #2 - Cisco Canyon and Wolfcamp**  
*(Ciscamp) Proposed Commingling Allocation Factors. Eddy County, NM*

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28. Verify coil company has mechanical means on location to splice coil together if coil parts across gooseneck while TOH.
29. Function test motor and mill on the surface.
30. NU BOPs and MU Injector head. Test BOPs and all lines to 4800 psi high and 500 psi low.
31. Break circulation and RIH to first plug depth.
32. D/O composite plugs one at a time.
33. Pumping sweeps:
  - a. After each plug is tagged
  - b. After each plug is drilled out
  - c. After every 60 bbls of fluid is pumped
34. Note weights, trip speeds, pump rates, flowrates, pressures, and viscosities on Drill\_IT reports while verifying return rates every 15 minutes.
35. Continue washing/milling to PBTD +/- 10,800'.
36. When clean out is complete and decision is made to POOH, pump a sweep and circulate double bottoms up.
  - a. Ensure clean returns before POOH.
37. POOH with motor, mill, and CT.
38. LD tools, close well BOP, and RD CTU.
  - a. DO NOT ND BOPs.
39. MIRU pulling unit.
40. MIRU WL unit with 5K lubricator.
41. Call Globe for AS1X (resettable) packer, on/off tool, and BHA
  - a. John Williams 432-553-0195
  - b. Daniel Ruiz 432-528-3919
42. Pickup 5-1/2" 17# AS1X packer packer with 1.875" X-Nipple
  - a. 2-3/8" collar with WLEG and pump out plug pinned to 3,000 psi
  - b. 2-3/8" 8rd EUE XN profile nipple w/1.791" No-Go
  - c. Wireline set 4-1/2" 13.5# AS1X packer
  - d. On/off tool with 2.00" X-Nipple
43. RIH and set packer @ +/- 8,322'.
44. POOH with setting tools and RDMO Wireline.
45. PU ON/OFF stinger and 2-3/8" tubing. RIH w/tbg & gas lift valves (GLV design attached).



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Production Operations – Carlsbad Region, Permian Basin  
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*(Ciscamp) Proposed Commingling Allocation Factors. Eddy County, NM*

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46. With tubing above packer pump 148 bbls of corrosion inhibited biocide treated packer fluid down the tubing and displace with 32 bbls fresh water. (Annular capacity – 148 bbls & Tubing capacity – 32 bbls).
  47. Engage on/off tool. Set down 15 pts to ensure packer is set.
  48. Space out tubing, PU and land tubing in 10k lbs tension.
  49. ND BOP and NU wellhead.
  50. RU kill truck and pressure up to break pump-out plug.
  51. RD WSU.
  52. Open well to frac tanks and turn well over to flowback.
  53. When the well begins to make gas SWI. Notify Midland and turn production into the facility.
  54. Report daily production and pressures to Midland office for 10 days.
  55. Run production log for allocation purposes after recovering load. Run additional production logs if actual production varies significantly from expected performance
- 1.