

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
1220 South St. Francis Dr.
Santa Fe, NM 87505

AMENDED REPORT

APR 16 2018

RECEIVED

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

¹ Operator Name and Address Cimarex Energy Co of Colorado 202 S Cheyenne AVE , Suite 1000 Tulsa OK 74103		² OGRID Number 162683
⁴ Property Code 21100	³ Property Name Mallon Bell 3 State Com	⁵ API Number 30-015-29724
		⁶ Well No 2

⁷ Surface Location

UL - Lot	Section	Township	Range	Lot Idn	Feet from	N/S Line	Feet From	E/W Line	County
J	3	24S	26E		1330	South	1980'	East	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

⁹ Pool Name Purple Sage Wolfcamp (Gas)	¹⁰ Pool Code 98220
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Additional Well Information

¹¹ Work Type PB	¹² Well Type G	¹³ Cable/Rotary	¹⁴ Lease Type S	¹⁵ Ground Level Elevation 3329'
¹⁶ Multiple	¹⁷ Proposed Depth 10931 PBTB	¹⁸ Formation Wolfcamp	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 * casing previously set

Type	Hole Size	Casing Size	Casing Weight/ft	Setting Depth	Sacks of Cement	Estimated TOC
Surface	17 1/2"	13 3/8"	48#	495'	450 sks	Surface
Intermediate	12 1/4"	9 5/8"	47#	3800'	2055 sks	Surface
Production	7 7/8"	5 1/2"	23#	11820'	575 sks	

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 and/or 19 15 14 9 (B) NMAC , if applicable

Signature *Amithy Crawford*
Printed name Amithy Crawford

Title Regulatory Analyst
E-mail Address acrawford@cimarex.com

Date 4/4/2018 Phone 432-620-1909

OIL CONSERVATION DIVISION

Approved By *Raymond W. Dodson*
Title *Regulatory Analyst*

Approved Date 4-19-18 Expiration Date 4-19-20

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

APR 16 2018

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-29724		² Pool Code 98220		RECEIVED Purple Sage Wolfcamp (Gas)	
⁴ Property Code 21100		³ Property Name Mallon Bell 3 State Com			⁶ Well Number 2
⁷ OGRID No 162683		⁸ Operator Name Cimarex Energy Co of Colorado			⁹ Elevation 3329

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
J	3	24S	26E		1330	South	1980	East	Eddy

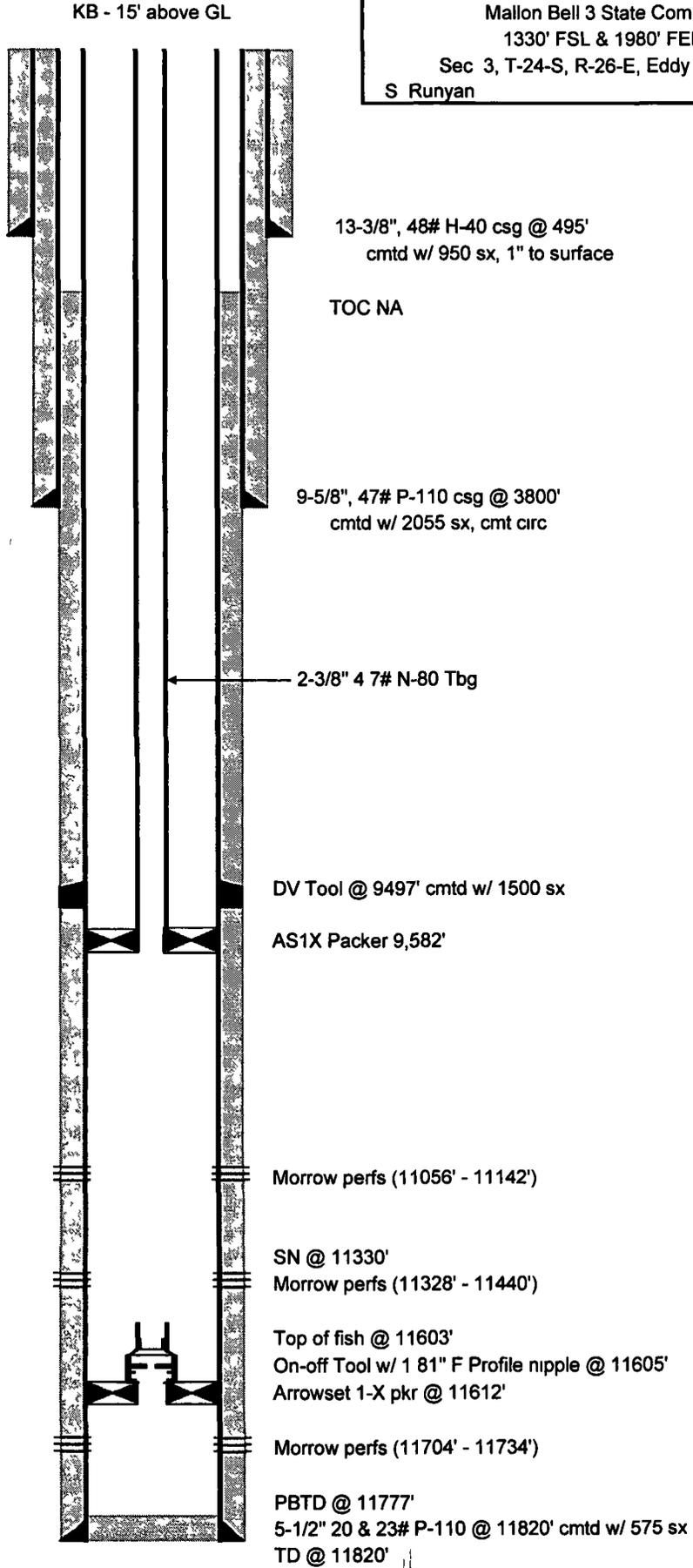
¹¹ Bottom Hole Location If Different From Surface

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

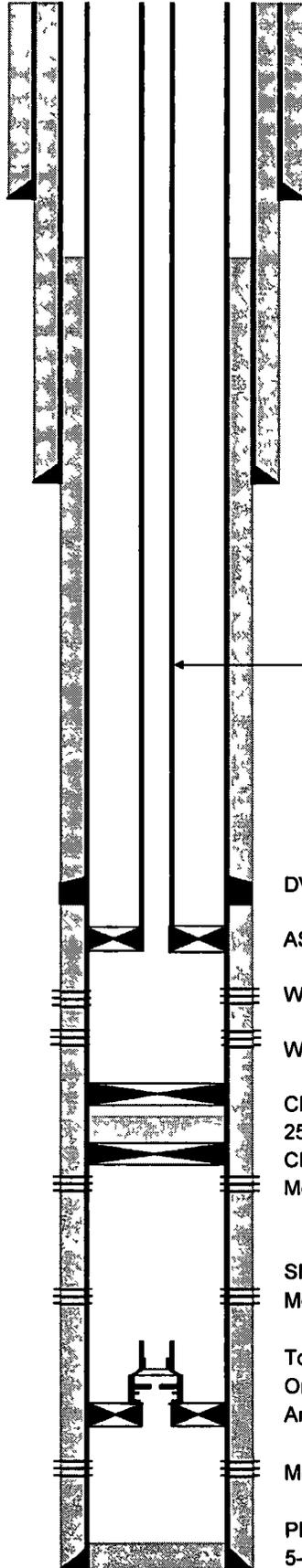
¹² Dedicated Acres 320	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division

	<p>¹⁷ OPERATOR CERTIFICATION</p> <p><i>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.</i></p> <p><u>Amithy Crawford</u> 4/4/2018 Signature Date</p> <p><u>Amithy Crawford</u> Printed Name</p> <p><u>acrawford@cimarex.com</u> E-mail Address</p>
	<p>¹⁸ SURVEYOR CERTIFICATION</p> <p><i>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</i></p> <p>_____ Date of Survey</p> <p>_____ Signature and Seal of Professional Surveyor</p>
	<p>_____ Certificate Number</p>



KB - 15' above GL



13-3/8", 48# H-40 csg @ 495'
cmtd w/ 950 sx, 1" to surface

TOC NA

9-5/8", 47# P-110 csg @ 3800'
cmtd w/ 2055 sx, cmt circ

2-3/8" 4 7# N-80 Tbg

DV Tool @ 9497' cmtd w/ 1500 sx

AS1X Packer 9,582'

Wolfcamp D (9,338' - 9,591')

Wolfcamp E (9,632' - 9,852')

CIBP @ 10,931'

25' Cmt

CIBP @ 11,006'

Morrow perms (11056' - 11142')

SN @ 11330'

Morrow perms (11328' - 11440')

Top of fish @ 11603'

On-off Tool w/ 1 81" F Profile nipple @ 11605'

Arrowset 1-X pkr @ 11612'

Morrow perms (11704' - 11734')

PBD @ 11777'

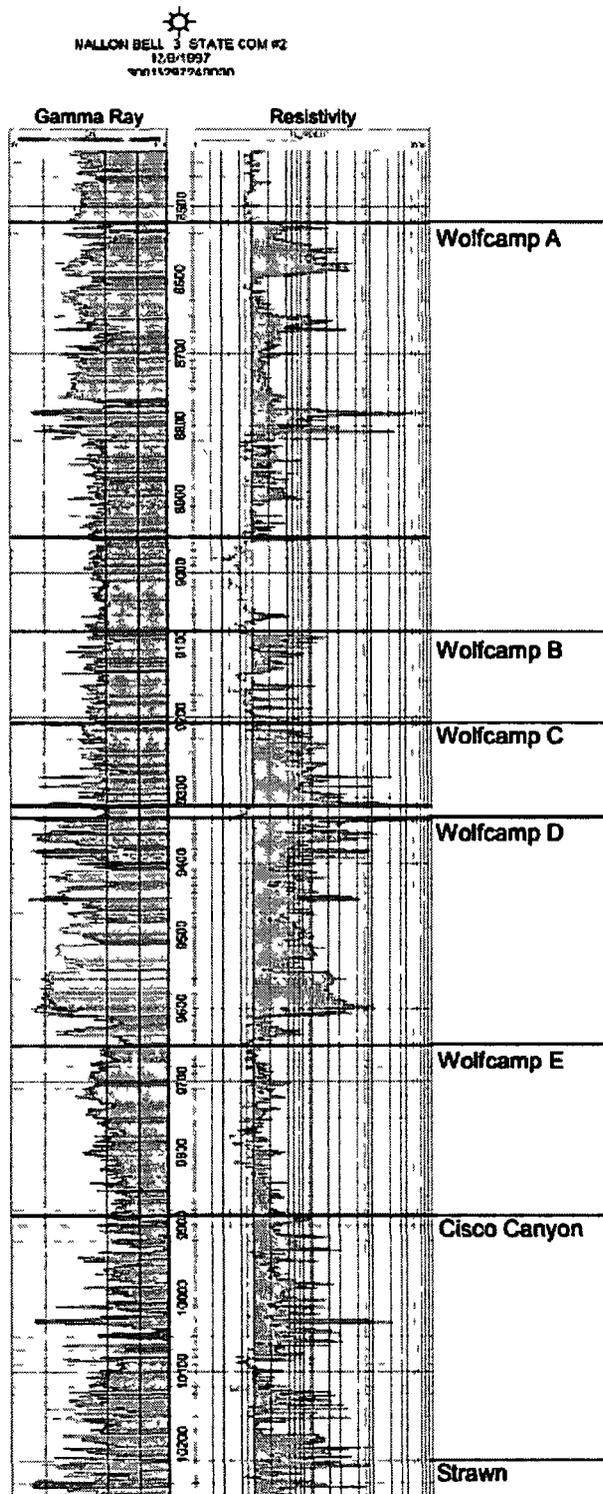
5-1/2" 20 & 23# P-110 @ 11820' cmtd w/ 575 sx

TD @ 11820'



CONFIDENTIAL. April 12, 2018
Production Operations – Carlsbad Region, Permian Basin
Mallon Bell 3 State Com 2 - Wolfcamp Proposed Recompletion
Eddy County, NM

Appendix A Log section from top of Wolfcamp to top of Strawn – Mallon Bell 3 State Com 2





Appendix C: Recompletion Procedure – Gulf Federal Com 3

Well Data

KB 15'
TD 11,820'
PBTD 11,777'

Casing 13-3/8" 48# H-40 @ 495' Cmt'd w/ 950 sx, cmt to sfc
9-5/8" 47# P-110 @ 3,800' Cmt'd w/ 2,055 sx, cmt circ
5-1/2" 20#/23# P-110 @ 11,820' Cmt'd w/ 575 sxs,
DV tool @ 9,497' cmt with 1500 sxs

Tubing 2-3/8" 4 7# L-80 8rd, EOT @ 11,330'

Proposed RC Perfs Wolfcamp (8,562' – 9,852')

- 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 Chad Collins 512-413-1606
- 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, POOH w/2-3/8" tubing & packer Lay down packer and tubing
- 8 MIRU WL and 5-1/2" 20# CIBP
- 9 Set CIBP @ +/- 11,000'
- 10 Mix 25' class H cement
- 11 PU RIH with dump bailor on WL and dump bail cement on top of CIBP
- 12 PU 2nd CIBP and set @ +/- 10,900'
- 13 RDMO WL company
- 14 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 Wolfcamp completion
- 15 ND 5k BOPs
- 16 NU two 10k frac valves and flow cross
- 17 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
- 18 MIRU WL with full lubricator for perforating the Wolfcamp formation
- 19 RIH with 5-1/2" gauge ring/JB to +/- 10,100'
- 20 Perforate according to detailed perforation cluster sheet provided in separate document
- 21 Perforate and frac the Wolfcamp according to stimulation design in separate document
- a 10K CBP will be set in between each stage

POST FRAC

- 22 RDMO frac crew
- 23 MIRU 2" CTU with sufficient tubing to wash down to PBTD +/- 10,100' (CIBP)
- 24 MU 2 88" OD coil connector and perform pull test to 20k
- a Note Check weight indicator versus hydraulics and note any discrepancy
- 25 Fill coil and flush with 2% KCL to ensure tubing is clean
- 26 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
- 27 Verify Coil Company has mechanical means on location to splice coil together if coil parts across gooseneck while TOH
- 28 Function test motor and mill on the surface
- 29 NU BOPs and MU Injector head Test BOPs and all lines to 4800 psi high and 500 psi low



- 30 Break circulation and RIH to first plug depth
- 31 D/O composite plugs one at a time
- 32 Pumping sweeps
 - a After each plug is tagged
 - b After each plug is drilled out
 - c After every 60 bbls of fluid is pumped
- 33 Note weights, trip speeds, pump rates, flowrates, pressures, and viscosities on Drill_IT reports while verifying return rates every 15 minutes
- 34 Continue washing/milling to +/- 10,100'
- 35 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
- 36 POOH with motor, mill, and CT
- 37 LD tools, close well BOP, and RD CTU
 - a DO NOT ND BOPs
- 38 MIRU pulling unit
- 39 MIRU WL unit with 5K lubricator
- 40 Call Globe for AS1X (resettable) packer, on/off tool, and BHA
 - a John Williams 432-553-0195
 - b Daniel Ruiz 432-528-3919
- 41 Pickup 5-1/2" 20# AS1X packer with 1 875" X-Nipple
 - a 2-3/8 L-80 10' PUP Joint
 - b 2-3/8" collar with WLEG and pump out plug pinned to 3,000 psi
 - c 2-3/8" 8rd EUE XN profile nipple w/1 791" No-Go
 - d Wireline set 5-1/2" 23# AS1X packer
 - e On/off tool with 2 00" X-Nipple
- 42 RIH and set packer @ +/- 9,288'
- 43 POOH with setting tools and RDMO Wireline
- 44 PU ON/OFF stinger and 2-3/8" tubing RIH w/tbg & gas lift valves (GLV design attached)
- 45 With tubing above packer pump 146 bbls of corrosion inhibited biocide treated packer fluid down the tubing and displace with 36 bbls fresh water (Annular capacity – 146 bbls & Tubing capacity – 36 bbls)



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- 46 Engage on/off tool Set down 15 pts to ensure packer is set
- 47 Space out tubing, PU and land tubing in 10k lbs tension
- 48 ND BOP and NU wellhead
- 49 RU kill truck and pressure up to break pump-out plug
- 50 RD WSU
- 51 Open well to frac tanks and turn well over to flowback
- 52 When the well begins to make gas SWI Notify Midland and turn production into the facility
- 53 Report daily production and pressures to Midland office for 10 days