

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

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

1. Type of Well <input type="checkbox"/> Oil Well <input checked="" type="checkbox"/> Gas Well <input type="checkbox"/> Other		8. Well Name and No. WHITE CITY 31 FED 3
2. Name of Operator CIMAREX ENERGY COMPANY OF CO Contact: TERRI STATHEM E-Mail: tstathem@cimarex.com		9. API Well No. 30-015-34300-00-S1
3a. Address 202 S CHEYENNE AVE SUITE 1000 TULSA, OK 74103.4346	3b. Phone No. (include area code) Ph: 432-620-1936	10. Field and Pool or Exploratory Area WHITE CITY
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) Sec 31 T24S R26E NWNW 950FNL 1000FWL		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			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Hydraulic Fracturing	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input type="checkbox"/> Other
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input checked="" type="checkbox"/> Plug Back	<input type="checkbox"/> 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 recomple 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 recomple 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.

Cimarex Energy Co respectfully requests approval to plugback to the cisco canyon and wolfcamp as indicated on the attached procedure.

Cimarex also requests approval to downhole commingle the cisco and Wolfcamp pools. The 2016 white City Area Downhole Commingling Field Study included the referenced well for the commingling. Field Study approved 7/6/2016.

NMOCD DHC 4802

Attachments C102, Procedure, wellbore diagrams, oil, water & Gas Analysis and DHC worksheet.

Sundry to remove the Strawn test as previously submitted.

NM OIL CONSERVATION
ARTESIA DISTRICT

MAY 30 2017

RECEIVED

**SEE ATTACHED FOR
CONDITIONS OF APPROVAL**

14. I hereby certify that the foregoing is true and correct. Electronic Submission #368907 verified by the BLM Well Information System For CIMAREX ENERGY COMPANY OF CO, sent to the Carlsbad Committed to AFMSS for processing by PRISCILLA PEREZ on 03/07/2017 (17PP0342SE)	
Name (Printed/Typed) TERRI STATHEM	Title MANAGER REGULATORY COMPLIANCE
Signature (Electronic Submission)	Date 03/06/2017
THIS SPACE FOR FEDERAL OR STATE OFFICE USE	
Approved By _____	Title _____ Date MAY 22 2017
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.	
BUREAU OF LAND MANAGEMENT CARLSBAD FIELD OFFICE	

(Instructions on page 2)

**** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ** BLM REVISED ****

Ref 5-30-17

NEW OIL CONSERVATION
ARTESIA DISTRICT

MAY 30 2017

Form C-102

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 Bruzoy 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 & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Revised August 1, 2011
Submit one copy to appropriate
District Office

RECEIVED

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-34300		² Pool Code 87280		³ Pool Name White City; Penn (Gas)	
⁴ Property Code 33815		⁴ Property Name White City 31 Federal			⁴ Well Number 3
⁷ OGRID No. 162683		⁸ Operator Name Cimarex Energy Co. of Colorado			⁹ Elevation 3524'

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
D	31	24S	26E		950	North	1000	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 640	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
--------------------------------------	-------------------------------	----------------------------------	-------------------------

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 align="center">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 for voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</i></p> <p align="right"> 1-9-2017 Signature Date </p> <p> Terri Stathem Printed Name tstathem@cimarex.com E-mail Address </p>
	<p align="center">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>

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ARTESIA DISTRICT

MAY 30 2017

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AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-34300	² Pool Code 97693	³ Pool Name Black River; Wolfcamp, Southwest (Gas)
⁴ Property Code 33815	⁵ Property Name White City 31 Federal	
⁷ OGRID No. 162683	⁶ Operator Name Cimarex Energy Co. of Colorado	⁸ Well Number 3
⁹ Elevation 3524'		

¹⁰ Surface Location

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D	31	24S	26E		950	North	1000	West	Eddy

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¹² Dedicated Acres 320	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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	<p>Signature: <i>[Signature]</i> Date: 1-9-2017</p>		
	<p>Terri Stathem Printed Name</p>		
	<p>tstathem@cimarex.com E-mail Address</p>		
<p>¹⁷ 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.</p>			
<p>Date of Survey: Signature and Seal of Professional Surveyor:</p>			
<p>Certificate Number</p>			



White City 31 Fed 3
Ciscamp Recompletion Procedure
Michael Karner 3/6/17

Well Data

KB	21'
TD	12,135'
PBTD	11,940'
Casing	13-3/8" 48# H-40 @ 215'. Cmt'd w/ 210 sx, cmt circ 9-5/8" 40# J-55 @ 1,938'. Cmt'd w/ 725 sx, cmt circ 5-1/2" 17# P-110 @ 12,130'. Cmt'd w/ 2,180 sx. DV @ 7,154'. TOC @ 6,030' by CBL
Tubing	2-3/8" 4.7# L-80 8rd
Proposed RC Perf	Wolfcamp (8,384' – 9,936') & Cisco Canyon (9,937' – 10,341')

Procedure

Notify BLM 24 hours prior to start of workover operations.

1. MIRU PU, rental flare, and choke manifold.
2. Kill well with produced water if available or FW as necessary.
3. ND WH, NU 5K BOP
4. Release packer and TOOH w/ 2-3/8" 4.7# L-80 tbg. Stand back Tubing.
5. PU CIBP and set at +/- 11,318'
6. Pump 25 sacks cement on top of CIBP at +/- 11,318'
7. RU Pump truck and pressure test casing to 8,500 psi on a chart for 30 minutes with no more than 10% leak off.
8. ND 5k BOP, RDMO PU
9. RU two 10k frac valves and flow cross
10. MIRU water transfer with frac tanks to contain water to be pumped from frac pond
11. Test frac valves and flow cross prior to frac job. Arrange for these items, manlift, forklift, and Pace testers to be on location the day before the frac job to test so that we do not have the frac waiting on a successful test the following day.
12. RU frac valves, flow cross, goat head, and wireline lubricator.
13. RIH w/ gauge ring/junk basket for 5-1/2" 17# P-110 csg to +/- 10,341'
14. Perforate Cisco Canyon from 9,937' – 10,341'. *(includes Strawn Formation)*
15. RU frac and flowback equipment.
16. Acidize and frac Cisco Canyon perms down casing.
17. Set 10k flow through composite plug 15' uphole of top perforation
18. Test to 8,500 psi

19. Perforate Wolfcamp from 8,384' – 9,936'.
20. Acidize and frac Wolfcamp perms down casing.
21. RD frac
22. MIRU 2" coiled tbg unit.
23. RIH w/ blade mill & downhole motor on 2" CT and drill out sand and composite plugs using freshwater for circulation. Pump sweeps each time a plug is tagged, each time a plug is drilled out, and every 60 bbls pumped.
24. Clean out to PBTB
25. POOH w/ blade mill, motor & CT
26. RDMO coiled tbg unit.
27. Flow back well for 24 hours, then SI well overnight.
28. RU wireline and lubricator.
29. RIH w/ GR/JB for 5-1/2" 17# P-110 to +/- 8,334'
30. RIH w/ 2-3/8" WEG, 2-3/8" pump out plug pinned for 1,500 – 2,000 psi differential pressure, 10' 2-3/8" 4.7# L-80 tbg sub w/ 1.875" XN profile nipple w/ blanking plug in place, 5-1/2" Arrowset 1X packer and on-off tool stinger w/ 1.875" X profile nipple. Set packer +/- 8,334'. From downhole up:
 - a. 2-3/8" pump out plug pinned for 1,500 – 2,000 psi differential pressure
 - b. 1.875" XN profile nipple
 - c. 10' 2-3/8" 4.7# L-80 tbg sub
 - d. 5-1/2" x 2-3/8" Arrowset 1X packer and on-off tool stinger w/ 1.875" X profile nipple
31. RD WL and lubricator
32. ND goat head and frac valve, NU BOP, MIRU Pulling Unit
33. TIH w/ on/off tool overshot, GLVs, and 2-3/8" 4.7# L-80 tbg.
34. Latch overshot onto on-off tool and space out tubing
35. ND BOP, NU WH
36. RDMO pulling unit
37. RU pump truck and pump out plug. Put well on production.
38. **Run Production Log for allocation purposes after recovering load. Run additional production logs if actual production varies significantly from expected performance. Send copies of these logs to BLM and file for an adjustment of allocation factor if necessary.**



KB - 23' above GL

Cimarex Energy Co. of Colorado

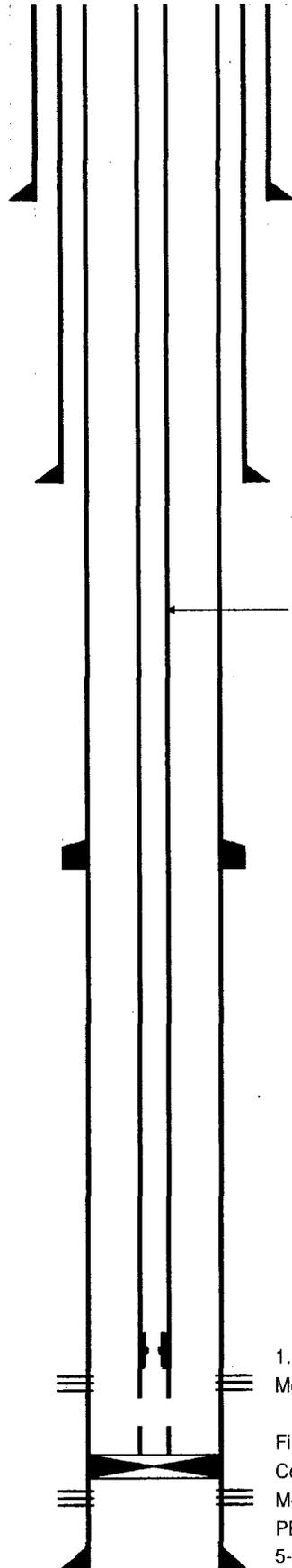
White City 31 Federal #3

950' FNL & 1000' FWL

Sec. 31, T-24-S, R-26-E, Eddy Co., NM

S. Gengler

02/09/2012



13-3/8", 48# H-40 csg @ 215'
cmtd w/ 210 sx, cmt circ

TOC @ 1376' by CBL

9-5/8", 40# J-55 csg @ 1938'
cmtd w/ 725 sx, cmt circ

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

TOC @ 6030' by CBL

DV Tool @ 7154'
cmtd w/ 1180 sx

TOC @ 10448' by CBL

1.81" F Profile Nipple @ 11447'
Morrow perfs (11368' - 11829')

Fish (Bit, bit sub, and 5' of tbg)
Composite BP @ 11940'
Morrow perfs (11466' - 11780')

PBTB @ 12070'
5-1/2" 17# P-110 @ 12130', cmtd w/ 1000 sx
TD @ 12135'



Proposed Ciscamp WBD

KB - 23' above GL

Cimarex Energy Co. of Colorado

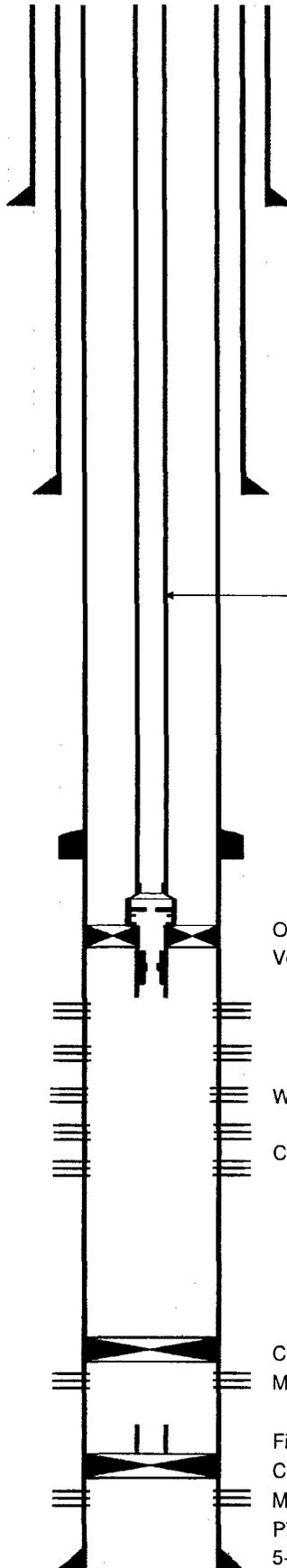
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9-5/8", 40# J-55 csg @ 1938'
cmtd w/ 725 sx, cmt circ

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

TOC @ 6030' by CBL

DV Tool @ 7154'
cmtd w/ 1180 sx

On-off Tool w/ 1.875" Profile nipple @ 10285'
Versaset pkr @ 10292'

Wolfcamp perms (8,384' - 9,936')

Cisco Canyon perms (9,937' - 10,341')

CIBP @ 11318' w/ 25 sx cmt pumped on top
Morrow perms (11368' - 11829')

Fish (Bit, bit sub, and 5' of tbg)

Composite BP @ 11940'

Morrow perms (11466' - 11780')

PBTD @ 12070'

5-1/2" 17# P-110 @ 12130', cmtd w/ 1000 sx
TD @ 12135'

Downhole Commingling Worksheet

Operator: Cimarex Energy
 Lease/Well Name/API Number/Location: White City 31 Fed 3/30-015-34300/Sec. 31, T24S, R26E
 Date:

Data	Bottom Formation	Upper Formation	Estimated Combined Production Data
Pool name	White City Penn (Gas)	Black River, Wolfcamp Southwest (Gas)	
Pool Code	87280	97693	
State Form C-102 with dedicated Acres Provided	640 acres	320 acres	
Formation Name	Cisco Canyon	Wolfcamp	
Top and Bottom of Pay Section (Perforated or open-hole interval)	9,937' - 10,342'	8,384' - 9,937'	8,384' - 10,342'
Method of production	Flowing	Flowing	Flowing
Bottom Hole Pressure	Within 150% of top perf	Within 150% of top perf	Within 150% of top perf
Reservoir Drive mechanism	Gas Drive	Gas Drive	Gas Drive
Oil gravity and/or BTU	Oil: 53.5° API Gas: 1142.4 BTU dry / 1122.6 BTU wet @ 14.73 psi	Oil: 51.8° API Gas: 1225.8 BTU dry / 1204.6 BTU wet @ 14.73 psi	Oil: 52.2° API Gas: 1208.3 BTU dry / 1187.4 BTU wet @ 14.7 psi
Average Sulfur Content (Wt %)	0	0	0
Oil sample Analysis provided	Yes	Yes	
Gas Analysis provided	Yes	Yes	
Produce Water Analysis provided	Yes	Yes	
H2S present	No	No	No
Producing, Shut-in or New Zone	New Zone	New Zone	
Date and Oil/Gas/Water rates of Last Production (new zones or no production history Operator shall attached production estimated and supporting data)	Date: N/A Expected Rate: 18 BOPD, 451 MCFD, 114 BWPD	Date: N/A Expected Rate: 82 BOPD, 2,056 MCFD, 519 BWPD	Date: N/A Expected Rate: 100 BOPD, 2507 MCFD, 633 BWPD
Average decline % (provide back-up data)	7% (terminal)	7% (terminal)	7% (terminal)
Fixed Allocation Percentage	Oil: 18% Gas: 18%	Oil: 82% Gas: 82%	Oil: 100% Gas: 100%

Remarks: Production history for analogs for both zones provided in field study appendix.

Operator Signature: *[Handwritten Signature]*
 Date: 2/1/15

Attached Supporting documents
 State Form C-102 with dedicated Acres Provided
 Oil sample Analysis provided (Must be current)
 Gas Analysis provided (Must be current)
 Produce Water Analysis provided (Must be current)
 Any additional supporting data (i.e. offset well production and decline curves etc.)
 *Utilize weighted average.

Conditions of Approval
Cimarex Energy Company of Co.
White City - 03, API 3001534300
T24S-R26E, Sec 31, 950FNL & 1000FWL
May 22, 2017

- 1. Operator is required to have the BLM approved NOI procedure with applicable conditions of approval on location for this workover operation.**
2. Before casing or a liner added, replaced, or repaired prior BLM approval of the design is required. Use notice of intent Form 3160-5.
3. Subject to like approval by the New Mexico Oil Conservation Division.
4. Surface disturbance beyond the existing pad must have prior approval.
5. A closed loop system is required. The operator shall properly dispose of drilling/circulating contents at an authorized disposal site. Tanks are required, no excavated pits.
6. Functional H₂S monitoring equipment shall be on location.
7. Blow Out Prevention Equipment 3000 (3M) to be used. All BOPE and workover procedures shall establish fail safe well control. Ram(s) for the work string(s) used is required equipment. Manual BOP closure system including a blind ram and pipe ram(s) designed to close on all (hand wheels) equipment installed regardless of BOP design. Function test the installed BOPE to 500psig when well conditions allow. Related equipment, (choke manifolds, kill trucks, gas vent or flare lines, etc.) employed when needed for reasonable well control requirements.
8. All waste (i.e. trash, salts, chemicals, sewage, gray water, etc.) created by work over operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area. Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.
- 9. This procedure is subject to the next three numbered paragraphs.**
10. Set cement plugs to cover a minimum of 100ft plus 10ft for every 1,000ft from the bottom of the plug, rounding the number of necessary sacks up to the nearest 5 sacks. Never use less than 25sx. Examples: A cement plug set at 8000 in 7" casing would require a min of 35sx. A 25sx plug in 5 ½" casing should cover 250ft, which may exceed 100ft plus 10ft per 1000ft.
11. Class H > 7500ft & C < 7500ft) cement plugs(s) will be necessary. For any plug that requires a tag or pressure test a minimum WOC time of 4 hours(C) & 8 hours(H) is recommended. Formation isolation plugs of Class "C" to be mixed 14.8#/gal, 1.32 ft³/sx, 6.3gal/sx water and "H" to be mixed 16.4#/gal, 1.06ft³/sx, 4.3gal/sx water.
12. Minimum requirement for mud placed between plugs is 25 sacks of salt water gel per 100 barrels in 9 lb/gal brine.

13. **On the Step 5 CIBP to be set at 11318' set a Class H formation isolation plug mixed 16.4#/gal, 1.06ft³/sx, 4.3gal/sx water to cover the Morrow formation top. WOC 8 hours minimum & tag the plug with tubing at 11000 or higher.**
14. **Provide BLM with an electronic copy (Adobe Acrobat Document) record of a cement bond log from 4300 to TOC taken at 0psig. Attach the CBL to a pswartz@blm.gov email.**

Operations for a Well with Production Packer

- 1) Conduct a Mechanical Integrity Test of the packer/tubing/casing annulus prior to producing the well.
- 2) The minimum test pressure should be 500 psig for 30 minutes or 300 psig for 60 minutes, with a minimum 200 psig differential between tubing and casing pressure (at test time) but no more than 70% of casing burst pressure as described by Onshore Order 2.III.B.1.h. (The tubing or reservoir pressure may need reduced). **Verify all annular casing vents plumbed to surface and open during this pressure test.**
- 3) Document the pressure test on a one hour full rotation calibrated (within 6 months) recorder chart registering within 35 to 75 per cent of its full range. Greater than 10% pressure leakoff viewed as a failed MIT. Less than 10% pressure leakoff will be evaluated site specifically and may restrict injection approval.
- 4) Arrange 24 hours before the test for BLM to witness. In 575-361-2822 Eddy Co. Leave a voice mail or email with the API#, workover purpose, and your phone number.
- 5) "Best Practice" is installation of equipment that daily displays corrosion inhibited fluid level open to atmosphere above the annular vent.
- 6) The subsequent report is to describe ball action and stimulation pressures. Report maximum/minimum injection rate (BPM) and max/min stimulation injection pressures (psig).
- 7) File intermediate **subsequent sundry** Form 3160-5 within 30 days of any interrupted workover activity.
- 8) Submit within 30 days of completion the full workover subsequent report (dated daily) via BLM's Well Information System; <https://www.blm.gov/wispermits/wis/SP> with the Mechanical Integrity Test chart document.
- 9) Submit the BLM Form 3160-4 **Recompletion Report** within 30 days of the date all BLM approved procedures are complete.
- 10) BLM compliance requires sundry notice of a wellbore inactive/idle over 90 days.