

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED  
OMB NO. 1004-0135  
Expires: July 31, 2010

**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.*

5. Lease Serial No.  
NMNM15007

6. If Indian, Allottee or Tribe Name

7. If Unit or CA/Agreement, Name and/or No.

8. Well Name and No.  
GLENWOOD 28 FEDERAL COM 1

9. API Well No.  
30-015-35735

10. Field and Pool, or Exploratory  
HENSHAW

11. County or Parish, and State  
EDDY COUNTY, NM

**SUBMIT IN TRIPLICATE - Other instructions on reverse side.**

1. Type of Well  
 Oil Well  Gas Well  Other

2. Name of Operator  
CIMAREX ENERGY COMPANY  
Contact: ARICKA EASTERLING  
E-Mail: aeasterling@cimarex.com

3a. Address  
202 S. CHEYENNE AVE, SUITE 1000  
TULSA, OK 74103

3b. Phone No. (include area code)  
Ph: 918-560-7060

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)  
Sec 28 T16N R29E NENE 760FNL 760FEL

**12. CHECK 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"/> Fracture Treat	<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 checked="" type="checkbox"/> Other Subsurface Commingling
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	
	<input type="checkbox"/> Convert to Injection	<input 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 recomplete 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 shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompletion in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall 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 down hole commingle the Glenwood 28 Federal Com 1

The well was drilled to the Morrow formation tested and plugged back to the Atoka. A CIBP is set at 10,222? to abandon the Morrow. Currently the well is producing from the Atoka formation. Cimarex proposes to down hole commingle the well by drilling out the CIBP.

**NM OIL CONSERVATION**  
ARTESIA DISTRICT

MAY 03 2016

Royalty, overriding, and working interest owner are the same in each zone. Please see attached documentation.

*Approved refer to recompletions sundry (EC REGENER) for additional information.*

14. I hereby certify that the foregoing is true and correct.

Electronic Submission #335197 verified by the BLM Well Information System  
For CIMAREX ENERGY COMPANY, sent to the Carlsbad  
Committed to AFMSS for processing by PRISCILLA PEREZ on 04/13/2016 ( )

Name (Printed/Typed) ARICKA EASTERLING Title REGULATORY ANALYST

Signature (Electronic Submission) Date 03/31/2016

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved By *[Signature]* Title *Production Engineer* Date *4/25/2016*

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.

Office *Carlsbad Field Office*

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

**\*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\* OPERATOR-SUBMITTED \*\***



### Downhole Commingling Worksheet

Operator: Cimarex Energy Co.  
 Lease/Well Name/API Number/Location: NMNM015007 / Glenwood 28 Fed Com 1/ 30-015-35735 / Sec. 28-16S-29E  
 Date: 3/30/16

Data	Bottom Formation	Middle Formation	Upper Formation	Estimated Combined Production Data
Pool name	Henshaw; Morrow SW (G) 97149		High Lonesome; Atoka SW (G) 97692	
Pool Code				
State Form C-102 with dedicated Acres Provided	Yes		Yes	
Formation Name	Morrow		Atoka	Morrow & Atoka
Top and Bottom of Pay Section (perforated or open-hole interval)	10354'-10382		10067'-10082	10067-10382
Method of production	Flowing		Flowing	Flowing
Bottom Hole Pressure	N/A		N/A	N/A
Reservoir Drive mechanism				
Oil gravity and/or BTU	Oil Gravity: 46 Gas Gravity: 0.707 Gas BTU 1,228 (Dry)		Oil Gravity: 53.2 Gas Gravity: 0.6558 Gas BTU 1,145 (Dry)	* Oil Gravity: 49.6 Gas Gravity: 0.6814 Gas BTU 1,186 (Dry)
Average Sulfur Content (Wt %)	0		0	* 0
Oil sample Analysis provided	No production		Yes	
Gas Analysis provided	Yes		Yes	
Produce Water Analysis provided	Yes		Yes	
H2S present	No		No	* No
Producing, Shut-In or New Zone	Shut in		Producing	N/A
Date and Oil/Gas/Water rates of Last Production (new zones or no production history Operator shall attached production estimated and supporting data)	11-9-2007 0 BOPD 1545 MCFD 0 BWPD		2-24-2016 .3 BOPD 550 MCFD 0 BWPD	Estimated Rates .3 BOPD 2095 MCFD 0 BWPD
Average decline % (provide back up data) Fixed Allocation Percentage	Decline: 25.1% per year Allocation: Oil - 0% Gas - 64%		Decline: 35.9% per year Allocation: Oil - 100% Gas - 36%	Decline: 25.1% per year based on offset well

Remarks:

Operator Signature: *Aricka Eastlund*

Date: 3/30/16

**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.

**DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT  
CASE RECORDATION  
(MASS) Serial Register Page**

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**01 02-25-1920;041STAT0437;30USC181ETSEQ** Total Acres **920.000** Serial Number **NMNM-- - 015007**  
**Case Type 311211: O&G LSE SIMO PUBLIC LAND**  
**Commodity 459: OIL & GAS**  
**Case Disposition: AUTHORIZED**

Serial Number: NMNM-- - 015007

Name & Address			Int Rel	% Interest
CONOCOPHILLIPS CO	PO BOX 7500	BARTLESVILLE OK 740057500	LESSEE	100.000000000
FROSTMAN OIL CORP	PO BOX W	ARTESIA NM 88211	OPERATING RIGHTS	0.000000000
FROSTMAN OIL CORP	PO BOX 1567	HOPE NM 882501567	OPERATING RIGHTS	0.000000000
HARLOW ENTERPRISES	#26 CHALK BLUFF RD	ARTESIA NM 88210	OPERATING RIGHTS	0.000000000
MAGNUM HUNTER PRODUCTION INC	600 N MARIENFELD ST STE 600	MIDLAND TX 797014405	OPERATING RIGHTS	0.000000000
MAGNUM HUNTER PRODUCTION INC	202 S CHEYENNE AVE STE 1000	TULSA OK 741033001	OPERATING RIGHTS	0.000000000

Serial Number: NMNM-- - 015007

Mer Twp	Rng	Sec	STyp	SNr Suff	Subdivision	District/Field Office	County	Mgmt Agency
23	0160S	0290E	010	ALIQ	NE,N2SE;	CARLSBAD FIELD OFFICE	EDDY	BUREAU OF LAND MGMT
23	0160S	0290E	021	ALIQ	SE;	CARLSBAD FIELD OFFICE	EDDY	BUREAU OF LAND MGMT
23	0160S	0290E	028	ALIQ	E2,E2W2,SWSW;	CARLSBAD FIELD OFFICE	EDDY	BUREAU OF LAND MGMT

Serial Number: NMNM-- - 015007

Act Date	Code	Action	Action Remark	Pending Office
11/21/1971	387	CASE ESTABLISHED	SPAR48;	
11/22/1971	888	DRAWING HELD		
02/02/1972	237	LEASE ISSUED		
03/01/1972	496	FUND CODE	05;145003	
03/01/1972	530	RLTY RATE - 12 1/2%		
03/01/1972	868	EFFECTIVE DATE		
03/27/1972	140	ASGN FILED	M BROWN/CONOCO INC	
04/04/1972	139	ASGN APPROVED	EFF 04/01/72;	
04/04/1979	315	RENTAL RATE DET/ADJ	\$2.00;	
10/24/1979	940	NAME CHANGE RECOGNIZED	CONTL OIL/CONOCO INC	
04/20/1981	650	HELD BY PROD - ACTUAL		
11/24/1981	102	NOTICE SENT-PROD STATUS		
10/25/1983	932	TRF OPER RGTS FILED	(1)	
10/25/1983	932	TRF OPER RGTS FILED	(2)	
10/25/1983	932	TRF OPER RGTS FILED	(3)	
12/01/1983	932	TRF OPER RGTS FILED		
12/05/1983	932	TRF OPER RGTS FILED		
01/27/1984	932	TRF OPER RGTS FILED		
05/25/1984	932	TRF OPER RGTS FILED	(1)	
05/25/1984	932	TRF OPER RGTS FILED	(2)	
05/25/1984	932	TRF OPER RGTS FILED	(3)	
05/25/1984	932	TRF OPER RGTS FILED	(4)	
05/25/1984	932	TRF OPER RGTS FILED	(5)	
10/04/1985	567	ASGN RETURNED UNAPPROVED	(1)	
10/04/1985	567	ASGN RETURNED UNAPPROVED	(2)	
10/04/1985	567	ASGN RETURNED UNAPPROVED	(3)	
10/04/1985	567	ASGN RETURNED UNAPPROVED	(4)	
10/04/1985	567	ASGN RETURNED UNAPPROVED	(5)	

NO WARRANTY IS MADE BY BLM FOR USE OF THE DATA FOR PURPOSES NOT INTENDED BY BLM

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10/04/1985	567	ASGN RETURNED UNAPPROVED	(6)	
10/04/1985	567	ASGN RETURNED UNAPPROVED	(7)	
10/04/1985	933	TRF OPER RGTS APPROVED	(1)EFF 02/01/84;	
10/04/1985	933	TRF OPER RGTS APPROVED	(2)EFF 02/01/84;	
10/04/1985	933	TRF OPER RGTS APPROVED	(3)EFF 02/01/84;	
10/04/1985	933	TRF OPER RGTS APPROVED	EFF 01/01/84;	
10/07/1985	932	TRF OPER RGTS FILED		
10/17/1985	932	TRF OPER RGTS FILED	(1)	
10/17/1985	932	TRF OPER RGTS FILED	(2)	
10/18/1985	933	TRF OPER RGTS APPROVED	(1)EFF 11/01/85;	
10/18/1985	933	TRF OPER RGTS APPROVED	(2)EFF 11/01/85;	
01/07/1986	963	CASE MICROFILMED/SCANNED	CNUM 100,459	AC
09/11/1986	932	TRF OPER RGTS FILED	(1)	
09/11/1986	932	TRF OPER RGTS FILED	(2)	
09/23/1986	933	TRF OPER RGTS APPROVED	EFF 11/01/85;	
10/01/1986	933	TRF OPER RGTS APPROVED	(1)EFF 10/01/86;	
10/01/1986	933	TRF OPER RGTS APPROVED	(2)EFF 10/01/86;	
01/28/1987	932	TRF OPER RGTS FILED	(1)	
01/28/1987	932	TRF OPER RGTS FILED	(2)	
01/28/1987	932	TRF OPER RGTS FILED	(3)	
02/20/1987	932	TRF OPER RGTS FILED		
03/30/1987	933	TRF OPER RGTS APPROVED	(1) EFF 02/01/1987	
03/30/1987	933	TRF OPER RGTS APPROVED	(2) EFF 02/01/1987	
03/30/1987	933	TRF OPER RGTS APPROVED	EFF 03/01/1987	
04/29/1988	974	AUTOMATED RECORD VERIF		GLC/VG
05/16/1988	933	TRF OPER RGTS APPROVED	EFF 02/01/1987	
05/16/1988	974	AUTOMATED RECORD VERIF		GLC/MT
03/19/1990	932	TRF OPER RGTS FILED	(1)DUNCAN/FROSTMAN	
03/19/1990	932	TRF OPER RGTS FILED	(2)DUNCAN/FROSTMAN	
03/21/1990	932	TRF OPER RGTS FILED	(1)LOVEJOY R/FROSTMAN	
03/21/1990	932	TRF OPER RGTS FILED	(2)LOVEJOY R/FROSTMAN	
04/24/1990	899	TRF OF ORR FILED		
05/18/1990	933	TRF OPER RGTS APPROVED	(1)EFF 04/01/90;	
05/18/1990	933	TRF OPER RGTS APPROVED	(2)EFF 04/01/90;	
05/19/1990	933	TRF OPER RGTS APPROVED	(1)EFF 04/01/90;	
05/19/1990	933	TRF OPER RGTS APPROVED	(2)EFF 04/01/90;	
05/29/1990	932	TRF OPER RGTS FILED	GWIN LELAND/FROSTMAN	
07/06/1990	932	TRF OPER RGTS FILED	(1)WOOD R/FROSTMAN	
07/06/1990	932	TRF OPER RGTS FILED	(2)WOOD R/FROSTMAN	
07/17/1990	933	TRF OPER RGTS APPROVED	EFF 06/01/90;	
08/21/1990	933	TRF OPER RGTS APPROVED	(1)EFF 08/01/90;	
08/21/1990	933	TRF OPER RGTS APPROVED	(2)EFF 08/01/90;	
07/26/1991	932	TRF OPER RGTS FILED	FORISTER C/FROSTMAN	
09/26/1991	933	TRF OPER RGTS APPROVED	EFF 08/01/91;	
10/01/1991	932	TRF OPER RGTS FILED	FORISTER C/FROSTMAN	
02/24/1992	933	TRF OPER RGTS APPROVED	EFF 11/01/91;	
06/12/1992	909	BOND ACCEPTED	EFF 04/20/92;NM2030	
11/01/1992	621	RLTY RED-STRIPPER WELL	1.3%;/1/	
03/08/1993	625	RLTY REDUCTION APPV	/1/	
10/18/1993	974	AUTOMATED RECORD VERIF		PR
01/26/1994	932	TRF OPER RGTS FILED	(1)SHOLER/FROSTMAN	
01/26/1994	932	TRF OPER RGTS FILED	(2)SHOLER/FROSTMAN	
03/04/1994	974	AUTOMATED RECORD VERIF		KRP
03/07/1994	933	TRF OPER RGTS APPROVED	(1)02/01/94;	
03/07/1994	933	TRF OPER RGTS APPROVED	(2)02/01/94;	

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04/01/1996	899	TRF OF ORR FILED	
03/27/1997	932	TRF OPER RGTS FILED	RHODES/FROSTMAN OIL
04/07/1997	933	TRF OPER RGTS APPROVED	EFF 04/01/97;
04/07/1997	974	AUTOMATED RECORD VERIF	ANN
06/13/1997	932	TRF OPER RGTS FILED	ELMER SONS/FROSTMAN
07/15/1997	933	TRF OPER RGTS APPROVED	EFF 07/01/97;
07/15/1997	974	AUTOMATED RECORD VERIF	JLV
11/01/2002	899	TRF OF ORR FILED	HUDSON, FRANCIS H;1
01/16/2003	817	MERGER RECOGNIZED	CONOCO/CONOCOPHILLIPS
01/27/2003	932	TRF OPER RGTS FILED	MAGILL J/FROSTMAN OIL
02/25/2003	933	TRF OPER RGTS APPROVED	EFF 02/01/03;
02/26/2003	974	AUTOMATED RECORD VERIF	ANN
07/26/2007	246	LEASE COMMITTED TO CA	CA NMNM118858;
08/21/2007	899	TRF OF ORR FILED	1
08/29/2007	932	TRF OPER RGTS FILED	FROSTMAN/HARALOW E;1
09/14/2007	933	TRF OPER RGTS APPROVED	EFF 09/01/07;
09/14/2007	974	AUTOMATED RECORD VERIF	MV
02/16/2008	643	PRODUCTION DETERMINATION	/1/
02/16/2008	658	MEMO OF 1ST PROD-ACTUAL	/1/ NMNM118858;
06/01/2008	246	LEASE COMMITTED TO CA	CA NM-123453
06/11/2008	658	MEMO OF 1ST PROD-ACTUAL	/2/ NMNM123453;
07/01/2009	246	LEASE COMMITTED TO CA	CA-NM123451
07/14/2009	643	PRODUCTION DETERMINATION	/2/
07/14/2009	658	MEMO OF 1ST PROD-ACTUAL	/2/ NMNM123453;
07/27/2009	932	TRF OPER RGTS FILED	CONOCOPHI/MAGNUM HU;1
10/06/2009	933	TRF OPER RGTS APPROVED	EFF 08/01/09;
10/06/2009	974	AUTOMATED RECORD VERIF	MV
12/04/2009	932	TRF OPER RGTS FILED	CONOCOPHI/MAGNUM HU;1
03/05/2010	933	TRF OPER RGTS APPROVED	EFF 01/01/10;
03/05/2010	974	AUTOMATED RECORD VERIF	JS
04/01/2010	246	LEASE COMMITTED TO CA	CA-124739
12/03/2010	932	TRF OPER RGTS FILED	CONOCOPHI/MAGNUM HU;1
12/03/2010	932	TRF OPER RGTS FILED	CONOCOPHI/MAGNUM HU;2
12/13/2010	899	TRF OF ORR FILED	1
02/10/2011	933	TRF OPER RGTS APPROVED	1 EFF 01/01/2011;
02/10/2011	933	TRF OPER RGTS APPROVED	2 EFF 01/01/2011;
02/10/2011	974	AUTOMATED RECORD VERIF	LBO
03/11/2014	899	TRF OF ORR FILED	1
03/17/2014	899	TRF OF ORR FILED	1
08/31/2014	235	EXTENDED	THRU 08/31/16;
08/31/2014	522	CA TERMINATED	CA NM123453
04/23/2015	974	AUTOMATED RECORD VERIF	MJD
12/15/2015	066	BANKRUPTCY FILED	MAGNUM HUNTER PROD

Serial Number: NMNM-- - 015007

Line Nr	Remarks
0002	10/06/2009 CONOCOPHILLIPS ES0048/NW

DISTRICT I  
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II  
1501 E. Grand Avenue, Artesia, NM 88210

DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised October 12, 2005

Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

**OIL CONSERVATION DIVISION**  
1220 South St. Francis Dr.  
Santa Fe, New Mexico 07505

AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

API Number 30-015-35735	Pool Code 97692	Pool Name WC; High Lonesome; Atoka SW (G)
Property Code	Property Name GLENWOOD "28" FEDERAL	Well Number 1
OGRID No. 162683	Operator Name CIMAREX ENERGY CO. OF COLORADO	Elevation 3645'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	28	16 S	29 E		760	NORTH	760	EAST	EDDY

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

Dedicated Acres 320	Joint or Infill	Consolidation Code P	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

NM-99032	NM-15007	<p>Glenwood 28 Fed Com 1</p> <p>Lot - N32°53'52.21" Lon - W104°04'25.46" NMSPC - N 690464.422 E 621022.041 (NAD-83)</p>	<p><b>OPERATOR CERTIFICATION</b></p> <p>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 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>Aricka Easterling</i> Signature Date 3/30/06</p> <p>Aricka Easterling Printed Name</p>
			<p><b>SURVEYOR CERTIFICATION</b></p> <p>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>JUNE 15, 2007 Date</p> <p><i>Gary L. Jones</i> Signature of Professional Surveyor</p> <p>7977 Professional Surveyor No. 18234</p> <p>Certificate No. Gary L. Jones 7977</p> <p>BASIN SURVEYS</p>

DISTRICT I  
1025 N. French Dr., Hobbs, NM 88240

DISTRICT II  
1301 W. Grand Avenue, Artesia, NM 88210

DISTRICT III  
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV  
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised October 12, 2005

Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

**OIL CONSERVATION DIVISION**  
1220 South St. Francis Dr.  
Santa Fe, New Mexico 87505

AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-35735	Pool Code 97149	Pool Name Henshaw; Morrow SW (G)
Property Code 36648	Property Name GLENWOOD "28" FEDERAL	Well Number 1
OGRID No. 162683	Operator Name CIMAREX ENERGY CO. OF COLORADO	Elevation 3645'

Surface Location

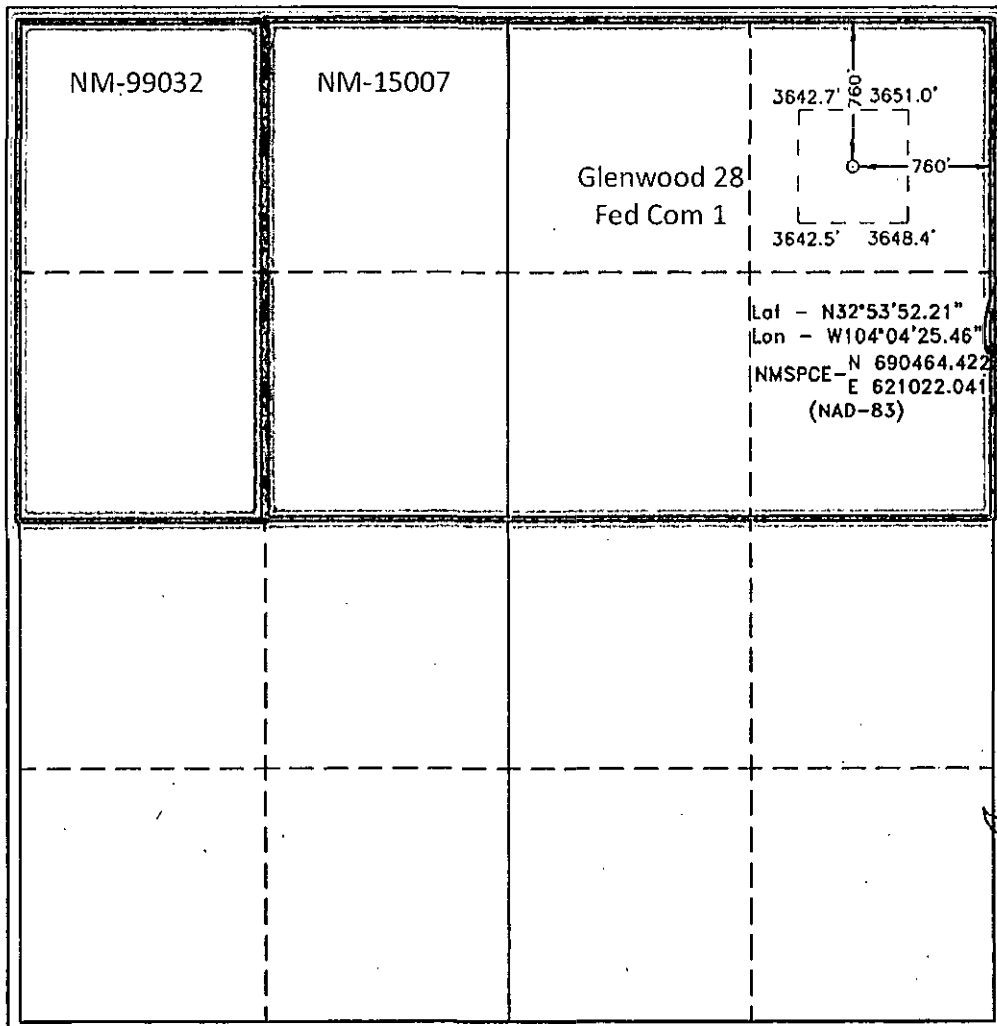
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	28	16 S	29 E		760	NORTH	760	EAST	EDDY

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

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
320		P	

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 unleased mineral interest in the land including the proposed bottom hole 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.

*Aricka Easterling* 3/30/06  
Signature Date

Aricka Easterling  
Printed Name

---

**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.

JUNE 15, 2007  
Date

Gary L. Jones  
Signature of Professional Surveyor

7977  
Professional Surveyor No.

8234  
Plat No.

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

Cimarex Energy Co.  
600 N. Marienfeld St.  
Suite 600  
Midland, TX 79701  
MAIN 432.571.7800



March 23, 2016

Mr. Michael A. McMillan  
New Mexico Oil Conservation Division  
1220 South St. Francis Drive  
Santa Fe, New Mexico 87505

RE: Ownership Verification  
Glennwood 28 Fed Com 1H  
API No. 30-015-35735  
760' FNL x 760' FEL  
Sec. 28-T16S-R29E  
Eddy County, New Mexico

Dear Mr. McMillan:

Per the review of our records, it has been determined that there is common ownership for the Atoka and Morrow zones. Please feel free to contact me if there are any questions.

Sincerely,

A handwritten signature in black ink, appearing to read "Mark Compton". The signature is fluid and cursive, written over a light background.

Mark Compton  
Landman  
432-571-7896  
[mcompton@cimarex.com](mailto:mcompton@cimarex.com)





# LABORATORY SERVICES

Natural Gas Analysis

www.permianls.com

575.397.3713 2609 W Marland Hobbs NM 88240

For:	Cimarex Energy	Sample:	Sta. # Glen28Fed
	Attention: Mark Cummings	Identification:	Glenwood 28 Fed. 1
	600 N. Marienfeld, Suite 600	Company:	Cimarex Energy
	Midland, Texas 79701	Lease:	
		Plant:	

Sample Data:	Date Sampled	1/28/2015	9:55 AM	
	Analysis Date	1/29/2015		
	Pressure-PSIA	204		Sampled by: J. Jiron
	Sample Temp F	71		Analysis by: Vicki McDaniel
	Atmos Temp F	55		

H2S = 0.2 PPM

### Component Analysis

		Mol Percent	GPM
Hydrogen Sulfide	H2S		
Nitrogen	N2	1.411	
Carbon Dioxide	CO2	0.139	
Methane	C1	86.421	
Ethane	C2	7.592	2.025
Propane	C3	2.744	0.754
I-Butane	IC4	0.341	0.111
N-Butane	NC4	0.605	0.190
I-Pentane	IC5	0.168	0.061
N-Pentane	NC5	0.143	0.052
Hexanes Plus	C6+	<u>0.436</u>	<u>0.189</u>
		100.000	3.382

REAL BTU/CU.FT.		Specific Gravity	
At 14.65 DRY	1141.6	Calculated	0.6558
At 14.65 WET	1121.7		
At 14.696 DRY	1145.1		
At 14.696 WET	1125.6	Molecular Weight	18.9939
At 14.73 DRY	1147.8		
At 14.73 Wet	1128.0		

Test Method GPA 2261-95

Calculations based on GPA 2145-09



www.permianls.com

575.397.3713 2609 W Marland Hobbs NM 88240

For: Cimarex Energy  
Attention: Mark Cummings  
600 N. Marienfeld, Suite 600  
Midland, Texas 79701

Sample: Sta. #SHFTGSNDS  
Identification: Shifting Sands #1  
Company: Cimarex Energy  
Lease:  
Plant:

Sample Data: Date Sampled 5/22/2012  
Analysis Date 5/25/2012  
Pressure-PSIA 47  
Sample Temp F 76.4  
Atmos Temp F 81

Sampled by: K. Hooten/Gas Meas.  
Analysis by: Dustin Armstrong

H2S =

Component Analysis

		Mol Percent	GPM
Hydrogen Sulfide	H2S		
Nitrogen	N2	2.102	
Carbon Dioxide	CO2	0.244	
Methane	C1	72.100	
Ethane	C2	12.629	3.369
Propane	C3	7.521	2.067
I-Butane	IC4	1.084	0.354
N-Butane	NC4	2.253	0.708
I-Pentane	IC5	0.547	0.200
N-Pentane	NC5	0.507	0.183
Hexanes Plus	C6+	<u>1.013</u>	<u>0.438</u>
		100.000	7.319

REAL BTU/CU.FT.

At 14.65 DRY	1345.5
At 14.65 WET	1322.0
At 14.696 DRY	1349.7
At 14.696 WET	1326.7
At 14.73 DRY	1352.8
At 14.73 Wet	1329.5

Specific Gravity

Calculated 0.7948

Molecular Weight

23.0207



# LABORATORY SERVICES

Natural Gas Analysis

www.permianls.com

575.397.3713 2609 W Marland Hobbs NM 88240

For: Cimarex Energy  
Attention: Mark Cummings  
600 N. Marienfeld, Suite 600  
Midland, Texas 79701

Sample: Sta. # Glen 28 Fed  
Identification: Glenwood 28 Fed. # 1  
Company: Cimarex Energy  
Lease:  
Plant:

Sample Data: Date Sampled 7/10/2013  
Analysis Date 7/12/2013  
Pressure-PSIA 580  
Sample Temp F 93  
Atmos Temp F 93

Sampled by: J. Stevens/Gas Meas  
Analysis by: Vicki McDaniel

H2S = 1 PPM

### Component Analysis

		Mol Percent	GPM
Hydrogen Sulfide	H2S		
Nitrogen	N2	1.475	
Carbon Dioxide	CO2	0.165	
Methane	C1	86.627	
Ethane	C2	7.388	1.971
Propane	C3	2.577	0.708
I-Butane	IC4	0.314	0.102
N-Butane	NC4	0.607	0.191
I-Pentane	IC5	0.192	0.070
N-Pentane	NC5	0.155	0.056
Hexanes Plus	C6+	<u>0.500</u>	<u>0.216</u>
		100.000	3.315

REAL BTU/CU.FT.		Specific Gravity	
At 14.65 DRY	1139.8	Calculated	0.6558
At 14.65 WET	1119.9		
At 14.696 DRY	1143.3		
At 14.696 WET	1123.8	Molecular Weight	18.9924
At 14.73 DRY	1145.9		
At 14.73 Wet	1126.1		



Laboratory Services, Inc.  
2609 W. Marland  
Hobbs, New Mexico 88240  
Telephone: (505) 397-3713

Scanned

**SULFUR IN CRUDE OIL**

Cimarex Energy  
Attention: Manuel Cabezuela  
P.O. Box 1237  
Eunice, New Mexico 88231

Nov 16, 2007

	Total Sulfur	API Gravity @ 60° F	Specific Gravity @ 60° F
Glenwood 28 Fed. #1	0.0533 wt. %	53.2	0.7661

Thank You,  
Vickie Sullivan



Laboratory Services, Inc.  
 2609 West Marland  
 Hobbs, New Mexico 88240  
 Telephone: (505) 397-3713

Scanned

FOR: Cimarex Energy  
 Attention: Manuel Cabezuela  
 P.O. Box 1237  
 Eunice, New Mexico 88231

SAMPLE: Morrow Formation  
 IDENTIFICATION: Glenwood 28 Fed. #1  
 COMPANY: Cimarex Energy  
 LEASE:  
 PLANT:

SAMPLE DATA: DATE SAMPLED: 11/15/07 11:30am  
 ANALYSIS DATE: 11/16/07  
 PRESSURE - PSIG: 82  
 SAMPLE TEMP. °F:  
 ATMOS. TEMP. °F: 51

REMARKS: H2S = 0.4 PPM

GAS (XX) LIQUID ( )  
 SAMPLED BY: Vickie Sullivan  
 ANALYSIS BY: Vickie Sullivan

COMPONENT ANALYSIS

COMPONENT	MOL PERCENT	GPM
Hydrogen Sulfide (H2S)		
Nitrogen (N2)	1.025	
Carbon Dioxide (CO2)	0.246	
Methane (C1)	83.180	
Ethane (C2)	7.915	2.112
Propane (C3)	3.766	1.035
I-Butane (IC4)	0.533	0.174
N-Butane (NC4)	1.261	0.397
I-Pentane (IC5)	0.455	0.166
N-Pentane (NC5)	0.522	0.189
Hexane Plus (C6+)	1.097	0.476
	100.000	4.549

BTU/CU.FT. - DRY 1225  
 AT 14.650 DRY 1221  
 AT 14.650 WET 1200  
 AT 14.73 DRY 1228  
 AT 14.73 WET 1206

MOLECULAR WT. 20.5405

SPECIFIC GRAVITY -  
 CALCULATED 0.707  
 MEASURED



**Laboratory Services, Inc.**  
2609 W. Marland  
Hobbs, New Mexico 88240  
Telephone: (505) 397-3713

### SULFUR IN CRUDE OIL

Cimarex Energy  
Attention: Manuel Cabezueta  
P.O. Box 1237  
Eunice, New Mexico 88231

Aug 6, 2008

	Total Sulfur	API Gravity @ 60° F	Specific Gravity @ 60° F
Glenwood 28 #4	0.0396 wt.%	46.0	0.7971
Juno 27 Fed. Com. #2	0.0197 wt.%	54.0	0.7628

Thank You,

Vicki McDaniel

North Permian Basin Region  
P.O. Box 740  
Sundown, TX 79372-0740  
(806) 229-8121  
Lab Team Leader - Sheila Hernandez  
(432) 495-7240

## Water Analysis Report by Baker Petrolite

Company:	CIMAREX ENERGY	Sales RDT:	44212
Region:	PERMIAN BASIN	Account Manager:	WAYNE PETERSON (575) 910-9389
Area:	CARLSBAD, NM	Sample #:	434992
Lease/Platform:	GLENWOOD '28' FEDERAL	Analysis ID #:	85162
Entity (or well #):	1	Analysis Cost:	\$80.00
Formation:	STRAWN		
Sample Point:	WATER TANK		

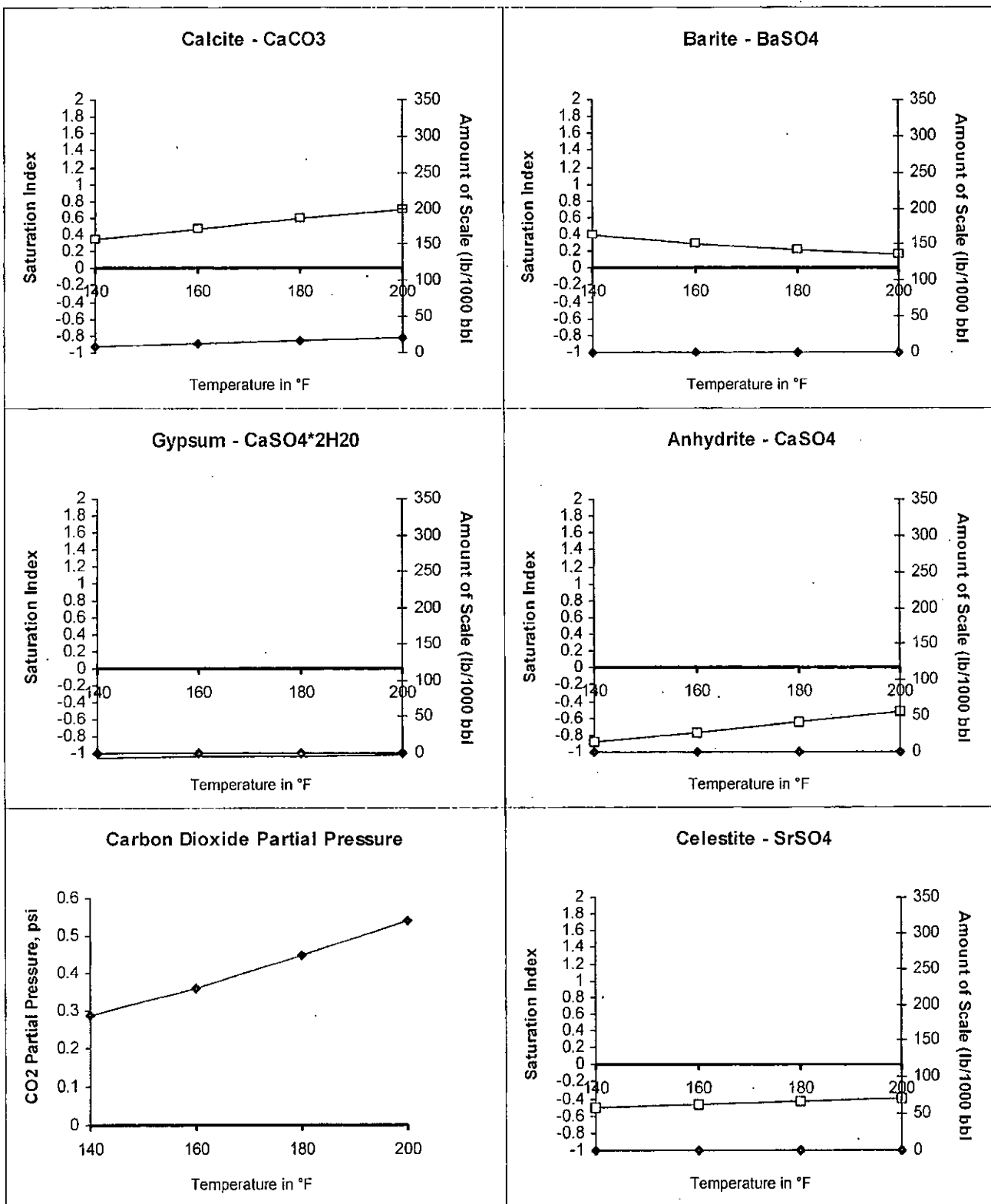
Summary		Analysis of Sample 434992 @ 75 °F					
Sampling Date:	08/29/08	Anions	mg/l	meq/l	Cations	mg/l	meq/l
Analysis Date:	09/10/08	Chloride:	13080.0	368.94	Sodium:	4720.9	205.35
Analyst:	LISA HAMILTON	Bicarbonate:	219.6	3.6	Magnesium:	68.0	5.59
TDS (mg/l or g/m3):	25215.6	Carbonate:	0.0	0.	Calcium:	350.0	17.47
Density (g/cm3, tonne/m3):	1.016	Sulfate:	630.0	13.12	Strontium:	18.0	0.41
Anion/Cation Ratio:	1.0000000	Phosphate:			Barium:	0.3	0.
		Borate:			Iron:	8.0	0.29
		Silicate:			Potassium:	6120.0	156.51
Carbon Dioxide:	40 PPM	Hydrogen Sulfide:		0 PPM	Aluminum:		
Oxygen:	0 PPM	pH at time of sampling:		7.24	Chromium:		
Comments:		pH at time of analysis:			Copper:		
		pH used in Calculation:		7.24	Lead:		
					Manganese:	0.800	0.03
					Nickel:		

Conditions		Values Calculated at the Given Conditions - Amounts of Scale in lb/1000 bbl										
Temp	Gauge Press.	Calcite CaCO <sub>3</sub>		Gypsum CaSO <sub>4</sub> ·2H <sub>2</sub> O		Anhydrite CaSO <sub>4</sub>		Celestite SrSO <sub>4</sub>		Barite BaSO <sub>4</sub>		CO <sub>2</sub> Press
		Index	Amount	Index	Amount	Index	Amount	Index	Amount	Index	Amount	
°F	psi											psi
140	0	0.35	8.55	-1.05	0.00	-0.87	0.00	-0.49	0.00	0.40	0.00	0.29
160	0	0.47	12.65	-1.04	0.00	-0.76	0.00	-0.46	0.00	0.30	0.00	0.36
180	0	0.59	16.75	-1.03	0.00	-0.64	0.00	-0.43	0.00	0.23	0.00	0.45
200	0	0.70	21.53	-1.02	0.00	-0.51	0.00	-0.39	0.00	0.17	0.00	0.54

- Note 1: When assessing the severity of the scale problem, both the saturation index (SI) and amount of scale must be considered.
- Note 2: Precipitation of each scale is considered separately. Total scale will be less than the sum of the amounts of the five scales.
- Note 3: The reported CO<sub>2</sub> pressure is actually the calculated CO<sub>2</sub> fugacity. It is usually nearly the same as the CO<sub>2</sub> partial pressure.

# Scale Predictions from Baker Petrolite

Analysis of Sample 434992 @ 75 °F for CIMAREX ENERGY, 09/10/08

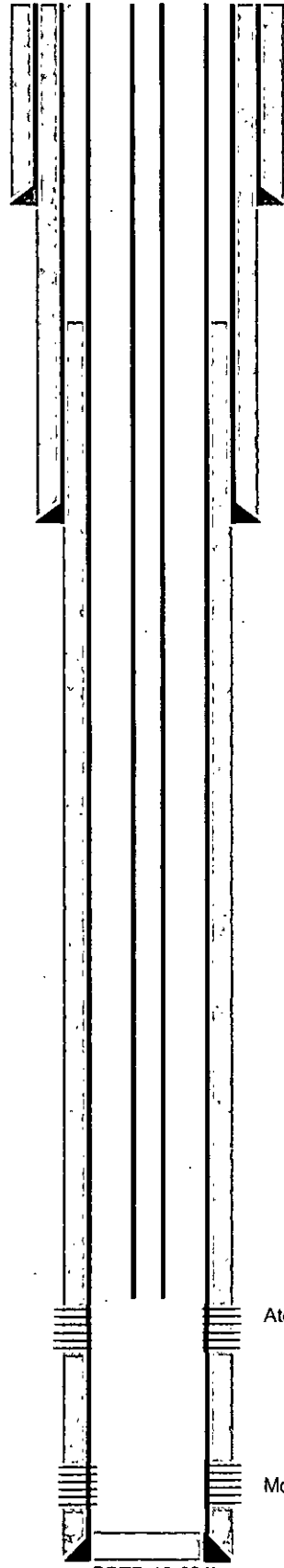






Proposed

Cimarex Energy Co. of Colorado  
Glenwood 28 Federal Com #1  
API 30-015-35735  
Sec 28 T16S R29E 760' FNL & 760' FEL  
D. Pearson 2/23/2016



13-3/8" 48# H-40 @ 355' 530 sx cmt  
circl'd cmt to surface

TOC @ 980' (CBL)

8 5/8" 24# J-55 @ 2,660' w/831 sx cmt  
circl'd cmt to surface

Atoka 10,067'-10,082' (91 holes)

Morrow 10,354'-10,382' (110 holes)

PBTJ 10,621'  
TD 10,621'

5-1/2" 17# P-110 @ 10,621 w/ 1,425 sx cmt

State of New Mexico  
Energy, Minerals and Natural Resources Department

Susana Martinez  
Governor

David Martin  
Cabinet Secretary

Tony Delfin  
Deputy Cabinet Secretary

David R. Catanach, Division Director  
Oil Conservation Division



Administrative Order DHC-4791

Order Date: April 13, 2016

Application Reference Number: pMAM1609746434

Cimarex Energy Co. of Colorado  
600 North Marienfeld Street, Suite 600  
Midland, Tx. 79701

Attention: Ms. Aricka Easterling

Glenwood "28" Federal Well No: 1  
API No. 30-015-35735  
Unit A, Section 28, Township 16 South, Range 29 East, NMPM  
Eddy County, New Mexico

Pool: WC; HIGH LONESOME; ATOKA, SW (G) Gas (97692)  
Names: HENSHAW; MORROW, SW (G) Gas (97149)

Reference is made to your recent application for an exception to Division Rule 19.15.12.9A. NMAC of the Division Rules and Regulations to permit the above-described well to commingle production from the subject pools in the wellbore.

It appears that the subject well qualifies for approval for such exception pursuant to the provisions of Division Rule 19.15.12.11A. NMAC, and since reservoir damage or waste will not result from such downhole commingling, and correlative rights will not be violated thereby, you are hereby authorized to commingle the production as described above and any Division Order which authorized the dual completion or otherwise required separation of the zones is hereby placed in abeyance.

In accordance with Division Rule 19.15.12.11A.(6) NMAC, the production attributed to any commingled pool within the well shall not exceed the allowable applicable to that pool.

As per the application, the assignment of allowable and allocation of oil and gas production from the subject well for the WC; High Lonesome; Atoka, SW Pool shall be based on the actual production of the well. Production for the subject well from the Henshaw; Morrow, SW shall be based on prior production, before a plug was set on top of the formation.

Assignment of allowable and allocation of production from the well shall be as follows:

WC; HIGH LONESOME; ATOKA, SW (G) POOL	Pct. Oil: 100	Pct. Gas: 36
HENSHAW; MORROW, SW (G) POOL	Pct. Oil: 0	Pct. Gas: 64

It is also understood that notice of this application, pursuant to Division Rule 19.15.4.12A.(6), is not required since the interest ownership between the zones to be commingled is common throughout.

REMARKS: The operator shall notify the Division's District II office upon implementation of commingling operations.

This Order is subject to like approval from the Bureau of Land Management.

Pursuant to Division Rule 19.15.12.11B. NMAC, the commingling authority granted herein may be rescinded by the Division Director if conservation is not being best served by such commingling.



**David R. Catanach**  
Director

DRC/mam

cc: New Mexico Oil Conservation Division – Artesia  
Bureau of Land Management - Carlsbad