

ATS-12-890

Form 3160-3  
(April 2004)

R-111-POTASH

Split Estate

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

OCD Artesia

FORM APPROVED  
OMB No. 1004-0137  
Expires March 31, 2007

5 Lease Serial No.

NM-0560353

6 If Indian, Allottee or Tribe Name

JCS  
11/16/2012

## APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: ☒ DRILL ☐ REENTER

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

1b. Type of Well: ☒ Oil Well ☐ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone

8. Lease Name and Well No

Crescent Hale 12 Federal Com No. 3

&lt;3954&gt;

2 Name of Operator

Cimarex Energy Co. of Colorado

&lt;162683&gt;

9. API Well No.

30-015-40837

3a Address

600 N. Marienfeld St., Ste. 600; Midland, TX 79701

3b Phone No (include area code)

432-571-7800

10. Field and Pool, or Exploratory

Benson; Bone Spring

&lt;5200&gt;

4 Location of Well (Report location clearly and in accordance with any State requirements. \*)

At Surface 330 FNL &amp; 2310 FEL

At proposed prod Zone 330 FSL &amp; 1980 FEL Horizontal Bone Spring test

11. Sec., T. R. M. or Blk. and Survey or Area

12-19S-30E

14. Distance in miles and direction from nearest town or post office\*

12 County or Parish

Eddy

13. State

NM

15 Distance from proposed\*  
location to nearest  
property or lease line, ft  
(Also to nearest drig unit line if  
any) 330'16 No of acres in lease  
NM-0560353 - 2160.32 acres17. Spacing Unit dedicated to this well  
160 acres18 Distance from proposed location\*  
to nearest well, drilling, completed,  
applied for, on this lease, ft 566'19 Proposed Depth  
MD 13076 TVD 865020 BLM/BIA Bond No. on File  
NM-2575; NMB 00835

21 Elevations (Show whether DF, KDB, RT, GL, etc.)

3453' GR

22 Approximate date work will start\*

09.16.12

23 Estimated duration

25-30 days

## 24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form

- 1 Well plat certified by a registered surveyor
- 2 A Drilling Plan
- 3 A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).

- 4 Bond to cover the operations unless covered by an existing bond on Item 20 above)
- 5 Operator Certification
- 6 Such other site specific information and/or plans as may be required by the authorized officer

25. Signature

Name (Printed/Typed)

Tracie J Cherry

Date

07.17.12

Title

Sr. Regulatory Analyst

Approved By (Signature)

/s/ Jesse J. Juen

Name (Printed/Typed)

Date

NOV 5 2012

Title

STATE DIRECTOR

Office

NM STATE OFFICE

Application approval 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.

Conditions of approval, if any, are attached

APPROVAL FOR TWO YEARS

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

\* (Instructions on page 2)

Capitan Controlled Water Basin

Approval Subject to General Requirements  
& Special Stipulations AttachedSEE ATTACHED FOR  
CONDITIONS OF APPROVAL

## DISTRICT I

1625 N. French Dr., Hobbs, NM 88240  
Phone (575) 393-8181 Fax: (575) 393-8720

## DISTRICT II

811 S. First St., Artesia, NM 88210  
Phone (505) 748-1283 Fax: (505) 748-9720

## DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410  
Phone (505) 534-6176 Fax: (505) 534-6170

## DISTRICT IV

1220 S. St. Francis Dr., Santa Fe, NM 87505  
Phone (505) 476-3450 Fax: (505) 476-3452

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102  
Revised August 1, 2011  
Submit one copy to appropriate  
District Office

## OIL CONSERVATION DIVISION

1220 South St. Francis Dr.  
Santa Fe, New Mexico 87505

## WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-015- <b>40837</b>	Pool Code 5200	Pool Name Benson; Bone Spring
Property Code <b>38624-39547</b>	Property Name CRESENT HALE 12 FED COM.	Well Number 3
OGRID No. <b>215099</b>	Operator Name CIMAREX ENERGY CO. / <b>CO</b>	Elevation 3453

## Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	12	19 S	30 E		330	NORTH	2310	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
O	12	19 S	30 E		330	SOUTH	1980	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160			

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>SURFACE LOCATION</b> Lat - N 32°40'52.32" Long - W 103°55'27.93" NADSPCE- N 611794.1 E 667148.4 (NAD-83)</p> <p><b>PROPOSED BOTTOM HOLE LOCATION</b> Lat - N 32°40'06.61" Long - W 103°55'24.10" NADSPCE- N 607176.4 E 667493.1 (NAD-83)</p>	<p>3460.7' 3445.9'</p> <p>2310'</p> <p>330'</p> <p>3451.6' 3445.9'</p> <p>NM-0560353</p> <p>330'</p> <p>1980'</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 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>Tracie Cherry</i> 7/17/2012 Signature Date</p> <p>Tracie Cherry Printed Name</p> <p>tcherry@cimarex.com Email Address</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>Date Surveyed Signature of Professional Surveyor Professional Surveyor No. 7977</p> <p>Certificate No. Gury L. Jones 7977</p> <p>BASIN SURVEYS</p>
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## Operator - Landowner Agreement

Company: Cimarex Energy Co. of Colorado

Proposed Well: Crescent Hale 12 Federal Com No. 3

Federal Lease Number: NM-0560353

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This is to advise that Cimarex Energy Co. of Colorado has an agreement with: Roy Creamer, P.O. Box 2414, Carlsbad, NM 88240, the surface owner, concerning entry and surface restoration after completion of drilling operations at the above described well.

After abandonment of the well, all pits will be filled and levelled and all equipment and trash will be removed from the well site. No other requirements were made concerning restoration of the well site.

July 17, 2012  
Date

  
Signature  
Trace J Cherry  
Sr. Regulatory Analyst

Operator Certification Statement  
Crescent Hale 12 Federal Com No. 3  
Cimarex Energy Co. of Colorado  
Unit B, Section 12  
T19S-R30E, Eddy County, NM

Operator's Representative

Cimarex Energy Co. of Colorado  
600 N. Marienfeld St., Ste. 600  
Midland, TX 79701  
Office Phone: (432) 571-7800  
Paula Brunson

**CERTIFICATION:** I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

Executed this 16th day of July, 2012

NAME:   
Tracie J. Cherry

TITLE: Sr. Regulatory Analyst

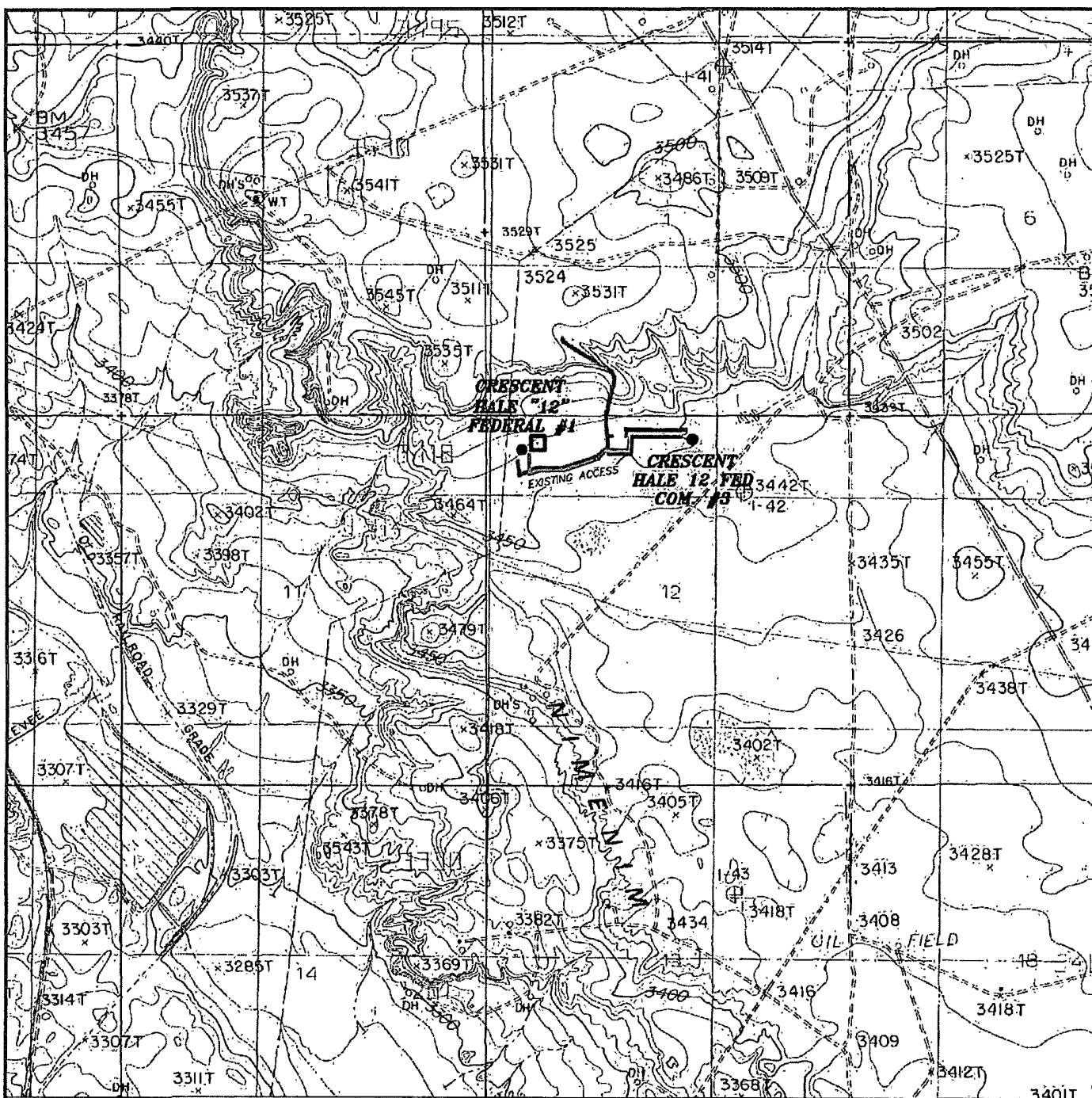
ADDRESS: 600 N. Marienfeld St., Ste. 600  
Midland, TX 79701

TELEPHONE: (432) 620-1959

EMAIL: tcherry@cimarex.com

Field Representative: Same as above








# **CRESCENT HALE "12" FEDERAL #1**

Located 485' FNL and 530' FWL

Section 12, Township 19 South, Range 30 East,  
N.M.P.M., Eddy County, New Mexico.

 Battery  
 Flowline  
 E-line

**basin**  
**surveys**

focused on excellence  
in the oilfield

P.O. Box 1786  
1120 N. West County Rd.  
Hobbs, New Mexico 88241  
(575) 393-7316 - Office  
(575) 392-2206 - Fax  
basinsurveys.com

W.O. Number: BJN 23362

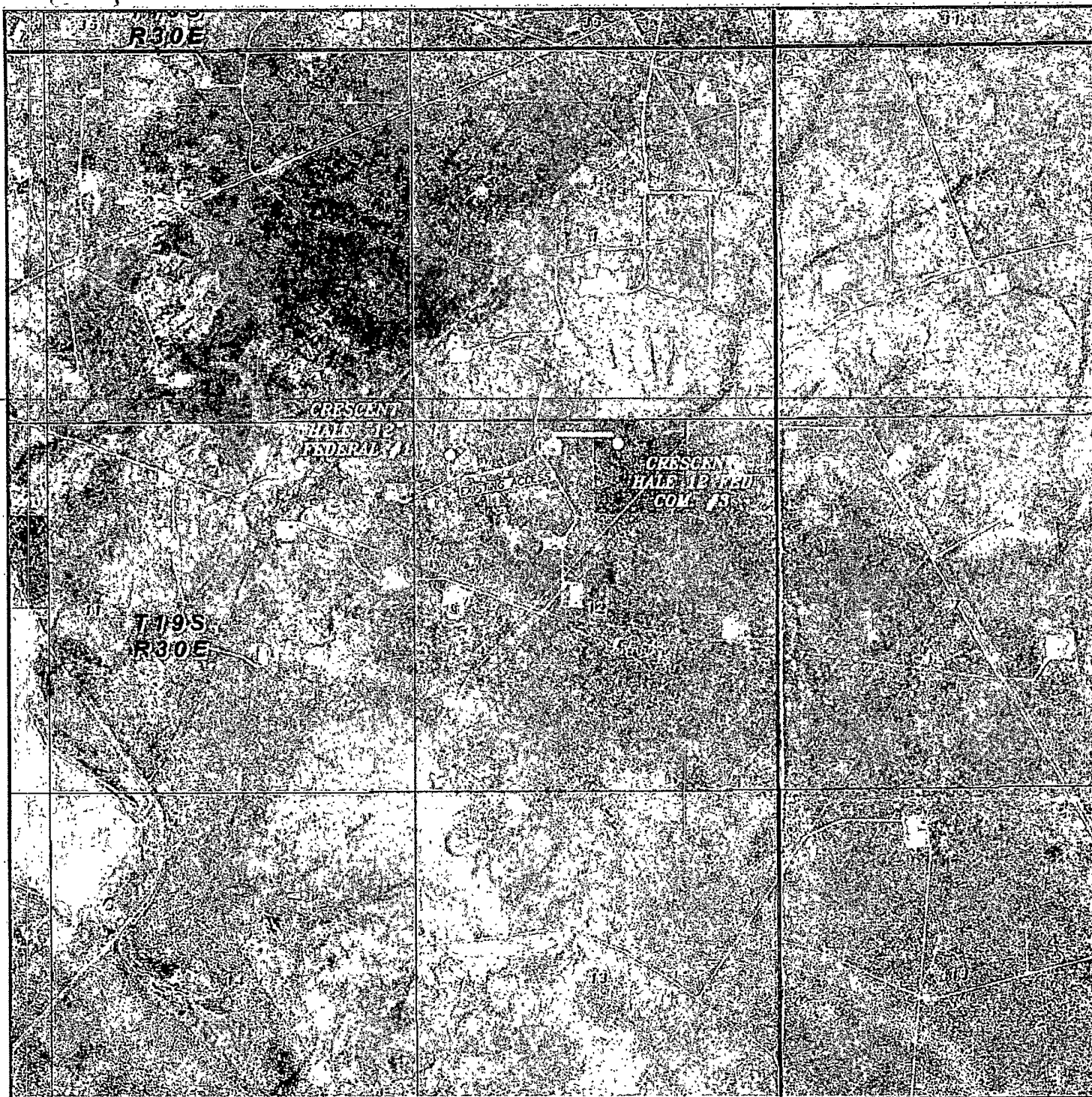
Survey Date: 09-27-2010

Scale: 1" = 2000'

Date: 10-08-2010

**CIMAREX**  
**ENERGY CO.**  
**OF COLORADO**

Exhibit C



**CRESCENT HALE "12" FEDERAL #1**  
 Located 485' FNL and 530' FWL  
 Section 12, Township 19 South, Range 30 East,  
 N.M.P.M., Eddy County, New Mexico.

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W.O. Number: BJN 23362

Scale: 1" = 2000'

YELLOW TINT - USA LAND  
 BLUE TINT - STATE LAND  
 NATURAL COLOR - FEE LAND

**CIMAREX**  
**ENERGY CO.**  
**OF COLORADO**

Application to Drill  
**Crescent Hale 12 Federal Com No. 3**  
 Cimarex Energy Co. of Colorado  
 Unit B, Section 12  
 T19S-R30E, Eddy County, NM

In response to questions asked under Section II B of Bulletin NTL-6, the following information is provided for your consideration:

- 1 Location: SHL 330 FNL & 2310 FEL  
 BHL 330 FSL & 1980 FEL
  
- 2 Elevation above sea level: 3453 GR
  
- 3 Geologic name of surface formation: Quaternary Alluvium Deposits
  
- 4 Drilling tools and associated equipment: Conventional rotary drilling rig using fluid as a circulating medium for solids removal.
  
- 5 Proposed drilling depth: MD 13076 TVD 8650
  
- 6 Estimated tops of geological markers:

Ground water per OSE	125	Delaware Sands	4170	Possible oil bearing
Rustler	475	Cherry Canyon	4080	
T. Salt	700	Brushy Canyon	5136	
B. Salt	1900	Bone Spring	6150	Possible oil bearing
Yates	2256	FBSS	7690	
7 Rivers	2470	SBSS	8420	
Queen	3082			
  
- 7 Possible mineral bearing formation:  
 Shown above

8 Proposed Mud Circulating System:

Depth	Mud Wt	Visc	Fluid Loss	Type Mud
0' to <del>500'</del> 430'	8.4 - 8.6	28	NC	FW
<del>500'</del> to 2400'	10.0	30-32	NC	Brine water
2400' to 13076'	8.4 - 9.5	30-32	NC	FW, brine

Sufficient mud materials will be kept on location at all times in order to combat lost circulation or unexpected kicks. In order to run DSTs, open hole logs, and casing, the viscosity and water loss may have to be adjusted in order to meet these needs.

Proposed drilling Plan

Drill surface and intermediate holes and set casing. Drill 7 7/8" hole to KOP @ 8173 and drill through curve to lateral TD @ 13076 MD, 8650 TVD. Set 5½" 17# P110 LTC casing from surface to 13076. Cement as shown in cementing proposal. If lost circulation is encountered, a DV tool will be set and cement will be circulated to surface by two stage cement as shown in proposal.

Application to Drill  
**Crescent Hale 12 Federal Com No. 3**  
 Cimarex Energy Co. of Colorado  
 Unit B, Section 12  
 T19S-R30E, Eddy County, NM

9 Casing & Cementing Program:

*See COA*

String	Hole Size	Depth	Casing OD	Weight	Collar	Grade
<b>Surface</b>	17½"	0' to 430500'	New 13¾"	48#	STC	H-40
<b>Intermediate</b>	12¼"	0' to 2400'	New 9¾"	40#	LTC	J-55
<b>Production</b>	8 3/4" or 7 7/8"	0' to 13076'	New 5½"	17#	LTC	P-110

10 Cementing:

**Surface**

Lead: 175 sx Premium Plus Cement + 2% CaCl + 4% Gel 13.5 ppg 1.75yield 115% excess

Tail: 200 sx Premium Plus Cement + 2% CaCl 14.8 ppg 1.34yield 10% excess

**TOC Surface**

**Intermediate**

Lead: 620 sx HLPP + 5% salt + 5 lbm gilsonite 12.9ppg 1.92yield 120% Excess

Tail: 235 sx premium Plus Cement + 1% CaCl 14.8ppg 1.34yield 0% excess

**TOC Surface**

**Production**

*Option 1*

Lead: 775 sx EconoCem - H + .5/10% HR-601 .5/10% Halad-322 11.9ppg 2.43 yield 50% Excess

Tail: 1080 sx Versacem - H + 0.5% Halad(R)-344 + 0.4% CFR-3 + 1 lbm/sk salt + 0.2% HR-601 14.5ppg 1.22 yield 25% Excess,

*Option 2*

Two Stage:

1st Stage Lead: 300 sx EconoCem - H + 0.3% HR-601 0.4% Halad-32 11.9ppg 2.43 yield 50% Excess

1st Stage Tail: 1080 sx Versacem - H + 0.5% Halad(R)-344 + 0.4% CFR-3 + 1 lbm/sk salt + 0.2% HR-601 14.5ppg 1.22 yield 25% Excess

2nd Stage Lead: 475 sx EconoCem - H + 0.3% HR-601 0.4% Halad-32 11.9ppg 2.43 yield 50% Excess

2nd Stage Tail: 100 sx Versacem - H + 0.5% Halad(R)-344 + 0.4% CFR-3 + 1 lbm/sk salt + 0.2% HR-601 14.5ppg 1.22 yield 25% Excess

Cement volumes will be adjusted depending on hole size.

**DV Tool +/- 4170'**

**TOC Surface**

**Centralizers every 3rd joint through the curve or legal location hardline to provide adequate cement coverage every 100' unless hole conditions require greater spacing between centralizers.**

Collapse Factor

1.125

Burst Factor

1.125

Tension Factor

1.6

11 Pressure control Equipment:

Exhibit "E". A 13¾" 5000 PSI working pressure BOP, tested to 3000 psi on the surface casing and 5000 psi on the intermediate, consisting of one set of blind rams and one set of pipe rams and a 5000# annular type preventer. A choke manifold and 120 gallon accumulator with floor and remote operating stations and auxiliary power system. Rotating head as needed. A kelly cock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor.

BOP unit will be hydraulically operated. BOP will be nipped up and operated at least once a day while drilling and the blind rams will be operated when out of hole during trips. No abnormal pressure or temperature is expected while drilling.

Before drilling out of the surface casing BOPs will be tested to 250 psi low and 3000 psi high by an independent service company. Hydril will be tested to 250 psi low and 1500 psi high. Before drilling out of the intermediate casing BOPs will be tested to 250 psi low and 5000 psi high. Hydril will be tested to 250 psi low and 2500 high.

Cimarex Energy Co. of Colorado requests a variance to drill this well using a co-flex line between the BOP and choke manifold.

Certification for proposed co-flex hose is attached. The hose is not required by the manufacturer to be anchored. In the event the specific hose is not available, one of equal or higher rating will be used.

Application to Drill  
**Crescent Hale 12 Federal Com No. 3**  
Cimarex Energy Co. of Colorado  
Unit B, Section 12  
T19S-R30E, Eddy County, NM

12 Testing, Logging and Coring Program: *See COA*

- A. Mud logging program: 2 man unit from 4000' to TD
- B. Electric logging program: CNL / LDT / CAL / GR, DLL / CAL / GR from surface to TD
- C. No DSTs or cores are planned at this time.

13 Potential Hazards:

No abnormal pressures or temperatures are expected. In accordance with Onshore Order 6, Cimarex does not anticipate that there will be enough H<sub>2</sub>S from the surface to the Bone Spring formations to meet the BLM's minimum requirements for the submission of an "H<sub>2</sub>S Drilling Operation Plan" or "Public Protection Plan" for the drilling and completion of this well. Since we have an H<sub>2</sub>S Safety package on all wells, attached is an "H<sub>2</sub>S Drilling Operations Plan." Adequate flare lines will be installed off the mud / gas separator where gas may be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used.

Estimated BHP      **3834 psi**      Estimated BHT      **130°**

14 Road and location construction will begin after BLM approval of APD. Anticipated spud date as soon as approved.

Drilling expected to take      30-35 days

If production casing is run an additional 30 days will be required to complete and construct surface facilities.

15 Other Facets of Operations:

After running casing, cased hole gamma ray neutron collar logs will be run from total depth over possible pay intervals.

Bone Spring pay will be perforated and stimulated.

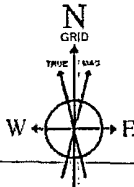
The proposed well will be tested and potentialized as      **an oil well.**

# CIMAREX

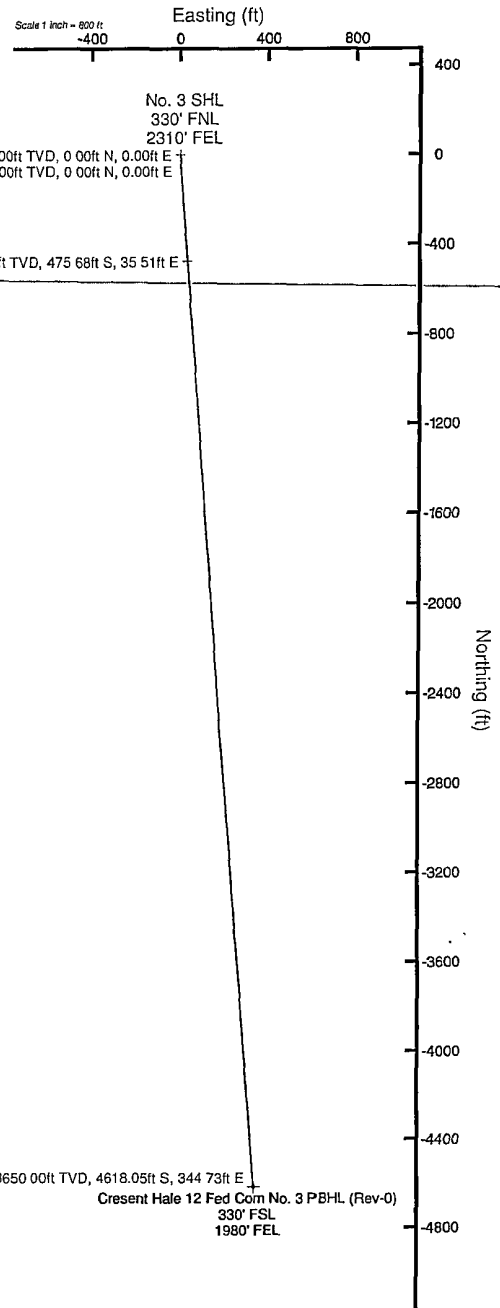
## Cimarex Energy Co.

Location: Eddy County, NM  
Field: (Crescent) Sec 12, T19S, R30E  
Facility: Crescent Hale 12 Fed Com No. 3

Slot: No. 3 SHL  
Well: No. 3  
Wellbore: No. 3 PWB

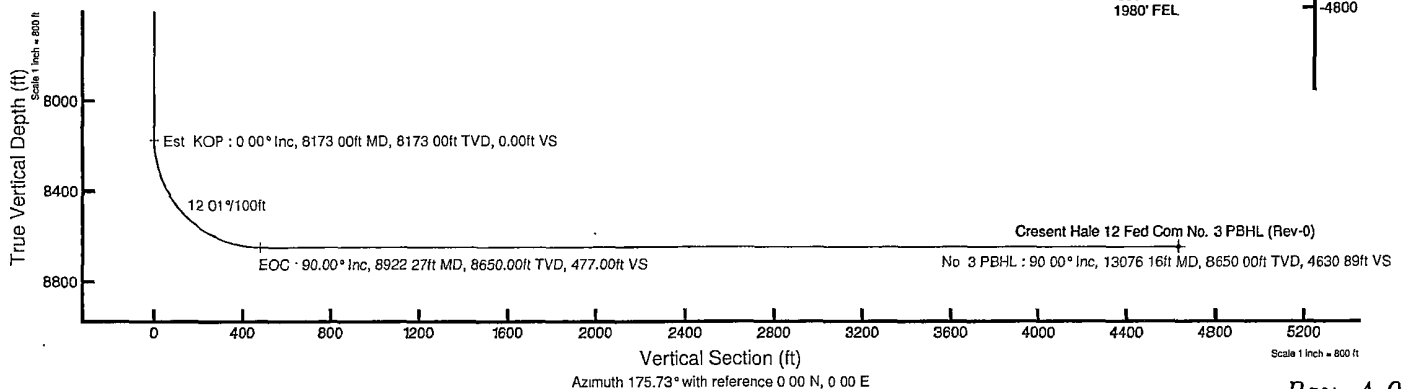


BGGM (1945 0 to 2014 0) Dip 60 49° Field 48739 6 nT  
Magnetic North is 7.75 degrees East of True North (at 7/10/2012)  
Grid North is 0 22 degrees East of True North  
To correct azimuth from True to Grid subtract 0 22 degrees  
To correct azimuth from Magnetic to Grid add 7.53 degrees  
For example if the Magnetic North Azimuth = 90 degs, then the Grid North Azimuth = 90 + 7.53 = 97.53



Plot reference wellpath is Rev-A-0	
True vertical depths are referenced to Rig on No. 3 SHL (RT)	Grid System: NAD83 / TM New Mexico SP, Eastern Zone (3001), US feet
Measured depths are referenced to Rig on No. 3 SHL (RT)	North Reference: Grid north
Rig on No. 3 SHL (RT) to Mean Sea Level: 3453 feet	Scale: True distance
Mean Sea Level to Mud line (At Slot No. 3 SHL): -3453 feet	Depths are in feet
Coordinates are in feet referenced to Slot	Created by: harrkol on 7/10/2012

Well Profile Data								
Design Comment	MD (ft)	Inc (°)	Az (°)	TVD (ft)	Local N (ft)	Local E (ft)	DLS (°/100ft)	VS (ft)
Tie On	0.00	0.000	175.731	0.00	0.00	0.00	0.00	0.00
Est. KOP	8173.00	0.000	175.731	8173.00	0.00	0.00	0.00	0.00
EOC	8922.27	90.000	175.731	8650.00	-475.68	35.51	12.01	477.00
No. 3 PBHL	13076.16	90.000	175.731	8650.00	-4618.05	344.73	0.00	4630.89



Rev-A.0



# Planned Wellpath Report

Rev-A.0

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## REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 3 SHL
Area	Eddy County, NM	Well	No. 3
Field	(Crescent) Sec 12, T19S, R30E	Wellbore	No. 3 PWB
Facility	Crescent Hale 12 Fed Com No. 3		

## REPORT SETUP INFORMATION

Projection System	NAD83 / TM New Mexico SP, Eastern Zone (3001), US feet	Software System	WellArchitect® 3.0.0
North-Reference	Grid	User	Harrkol
Scale	0.999927	Report Generated	7/10/2012 at 5:53:32 PM
Convergence at slot	0.22° East	Database/Source file	WA Midland/No. 3_PWB.xml

## WELLPATH LOCATION

	Local coordinates		Grid coordinates		Geographic coordinates	
	North[ft]	East[ft]	Easting[US ft]	Northing[US ft]	Latitude	Longitude
Slot Location	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W
Facility Reference Pt			667148.40	611794.10	32°40'52.320"N	103°55'27.932"W
Field Reference Pt			667148.40	611794.10	32°40'52.320"N	103°55'27.932"W

## WELLPATH DATUM

Calculation method	Minimum curvature	Rig on No. 3 SHL (RT) to Facility Vertical Datum	0.00ft
Horizontal Reference Pt	Slot	Rig on No. 3 SHL (RT) to Mean Sea Level	3453.00ft
Vertical Reference Pt	Rig on No. 3 SHL (RT)	Rig on No. 3 SHL (RT) to Mud Line at Slot (No. 3 SHL)	0.00ft
MD Reference Pt	Rig on No. 3 SHL (RT)	Section Origin	N 0.00, E 0.00 ft
Field Vertical Reference	Mean Sea Level	Section Azimuth	175.73°



# Planned Wellpath Report

Rev-A.0  
Page 2 of 5



## REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 3 SHL
Area	Eddy County, NM	Well	No. 3
Field	(Crescent) Sec 12, T19S, R30E	Wellbore	No. 3 PWB
Facility	Crescent Hale 12 Fed Com No. 3		

## WELLPATH DATA (138 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
0.00	0.000	175.731	0.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	Tie On
100.00†	0.000	175.731	100.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
200.00†	0.000	175.731	200.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
300.00†	0.000	175.731	300.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
400.00†	0.000	175.731	400.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
500.00†	0.000	175.731	500.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
600.00†	0.000	175.731	600.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
700.00†	0.000	175.731	700.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
800.00†	0.000	175.731	800.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
900.00†	0.000	175.731	900.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
1000.00†	0.000	175.731	1000.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
1100.00†	0.000	175.731	1100.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
1200.00†	0.000	175.731	1200.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
1300.00†	0.000	175.731	1300.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
1400.00†	0.000	175.731	1400.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
1500.00†	0.000	175.731	1500.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
1600.00†	0.000	175.731	1600.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
1700.00†	0.000	175.731	1700.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
1800.00†	0.000	175.731	1800.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
1900.00†	0.000	175.731	1900.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
2000.00†	0.000	175.731	2000.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
2100.00†	0.000	175.731	2100.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
2200.00†	0.000	175.731	2200.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
2300.00†	0.000	175.731	2300.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
2400.00†	0.000	175.731	2400.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
2500.00†	0.000	175.731	2500.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
2600.00†	0.000	175.731	2600.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
2700.00†	0.000	175.731	2700.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
2800.00†	0.000	175.731	2800.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
2900.00†	0.000	175.731	2900.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
3000.00†	0.000	175.731	3000.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
3100.00†	0.000	175.731	3100.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
3200.00†	0.000	175.731	3200.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
3300.00†	0.000	175.731	3300.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
3400.00†	0.000	175.731	3400.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
3500.00†	0.000	175.731	3500.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
3600.00†	0.000	175.731	3600.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
3700.00†	0.000	175.731	3700.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
3800.00†	0.000	175.731	3800.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
3900.00†	0.000	175.731	3900.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
4000.00†	0.000	175.731	4000.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
4100.00†	0.000	175.731	4100.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
4170.00†	0.000	175.731	4170.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	Delaware Sands
4200.00†	0.000	175.731	4200.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
4300.00†	0.000	175.731	4300.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	



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## REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 3 SHL
Area	Eddy County, NM	Well	No. 3
Field	(Crescent) Sec 12, T19S, R30E	Wellbore	No. 3 PWB
Facility	Crescent Hale 12 Fed Com No. 3		

## WELLPATH DATA (138 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
4400.00†	0.000	175.731	4400.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
4500.00†	0.000	175.731	4500.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
4600.00†	0.000	175.731	4600.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
4700.00†	0.000	175.731	4700.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
4800.00†	0.000	175.731	4800.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
4900.00†	0.000	175.731	4900.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
5000.00†	0.000	175.731	5000.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
5100.00†	0.000	175.731	5100.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
5200.00†	0.000	175.731	5200.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
5300.00†	0.000	175.731	5300.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
5400.00†	0.000	175.731	5400.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
5500.00†	0.000	175.731	5500.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
5600.00†	0.000	175.731	5600.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
5700.00†	0.000	175.731	5700.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
5800.00†	0.000	175.731	5800.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
5900.00†	0.000	175.731	5900.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
6000.00†	0.000	175.731	6000.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
6100.00†	0.000	175.731	6100.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
6150.00†	0.000	175.731	6150.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	Bone Spring
6200.00†	0.000	175.731	6200.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
6300.00†	0.000	175.731	6300.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
6400.00†	0.000	175.731	6400.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
6500.00†	0.000	175.731	6500.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
6600.00†	0.000	175.731	6600.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
6700.00†	0.000	175.731	6700.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
6800.00†	0.000	175.731	6800.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
6900.00†	0.000	175.731	6900.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
7000.00†	0.000	175.731	7000.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
7100.00†	0.000	175.731	7100.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
7200.00†	0.000	175.731	7200.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
7300.00†	0.000	175.731	7300.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
7400.00†	0.000	175.731	7400.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
7500.00†	0.000	175.731	7500.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
7600.00†	0.000	175.731	7600.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
7690.00†	0.000	175.731	7690.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	1st BSS
7700.00†	0.000	175.731	7700.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
7800.00†	0.000	175.731	7800.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
7900.00†	0.000	175.731	7900.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
8000.00†	0.000	175.731	8000.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
8100.00†	0.000	175.731	8100.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	
8173.00	0.000	175.731	8173.00	0.00	0.00	0.00	667148.40	611794.10	32°40'52.320"N	103°55'27.932"W	0.00	Est. KOP
8200.00†	3.243	175.731	8199.99	0.76	-0.76	0.06	667148.46	611793.34	32°40'52.312"N	103°55'27.931"W	12.01	
8300.00†	15.255	175.731	8298.50	16.81	-16.76	1.25	667149.65	611777.34	32°40'52.154"N	103°55'27.918"W	12.01	
8400.00†	27.267	175.731	8391.53	53.00	-52.85	3.95	667152.35	611741.25	32°40'51.797"N	103°55'27.888"W	12.01	
8432.63†	31.186	175.731	8420.00	68.93	-68.74	5.13	667153.53	611725.37	32°40'51.639"N	103°55'27.875"W	12.01	2nd BSS



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## REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 3 SHL
Area	Eddy County, NM	Well	No. 3
Field	(Crescent) Sec 12, T19S, R30E	Wellbore	No. 3 PWB
Facility	Crescent Hale 12 Fed Com No. 3		

## WELLPATH DATA (138 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
8500.00†	39.278	175.731	8474.98	107.76	-107.46	8.02	667156.42	611686.64	32°40'51.256"N	103°55'27.843"W	12.01	
8600.00†	51.290	175.731	8545.21	178.69	-178.20	13.30	667161.70	611615.92	32°40'50.556"N	103°55'27.784"W	12.01	
8700.00†	63.302	175.731	8599.14	262.69	-261.96	19.55	667167.95	611532.16	32°40'49.727"N	103°55'27.715"W	12.01	
8800.00†	75.313	175.731	8634.41	356.06	-355.08	26.51	667174.90	611439.05	32°40'48.805"N	103°55'27.638"W	12.01	
8900.00†	87.325	175.731	8649.48	454.74	-453.48	33.85	667182.25	611340.66	32°40'47.832"N	103°55'27.556"W	12.01	
8922.27	90.000	175.731	8650.00	477.00	-475.68	35.51	667183.91	611318.46	32°40'47.612"N	103°55'27.538"W	12.01	EOC
9000.00†	90.000	175.731	8650.00	554.73	-553.19	41.29	667189.69	611240.95	32°40'46.845"N	103°55'27.474"W	0.00	
9100.00†	90.000	175.731	8650.00	654.73	-652.91	48.74	667197.13	611141.24	32°40'45.858"N	103°55'27.391"W	0.00	
9200.00†	90.000	175.731	8650.00	754.73	-752.64	56.18	667204.58	611041.52	32°40'44.871"N	103°55'27.308"W	0.00	
9300.00†	90.000	175.731	8650.00	854.73	-852.36	63.63	667212.02	610941.81	32°40'43.884"N	103°55'27.226"W	0.00	
9400.00†	90.000	175.731	8650.00	954.73	-952.08	71.07	667219.47	610842.09	32°40'42.897"N	103°55'27.143"W	0.00	
9500.00†	90.000	175.731	8650.00	1054.73	-1051.80	78.51	667226.91	610742.37	32°40'41.910"N	103°55'27.061"W	0.00	
9600.00†	90.000	175.731	8650.00	1154.73	-1151.53	85.96	667234.35	610642.66	32°40'40.923"N	103°55'26.978"W	0.00	
9700.00†	90.000	175.731	8650.00	1254.73	-1251.25	93.40	667241.80	610542.94	32°40'39.936"N	103°55'26.895"W	0.00	
9800.00†	90.000	175.731	8650.00	1354.73	-1350.97	100.85	667249.24	610443.23	32°40'38.949"N	103°55'26.813"W	0.00	
9900.00†	90.000	175.731	8650.00	1454.73	-1450.69	108.29	667256.68	610343.51	32°40'37.962"N	103°55'26.730"W	0.00	
10000.00†	90.000	175.731	8650.00	1554.73	-1550.42	115.73	667264.13	610243.80	32°40'36.975"N	103°55'26.648"W	0.00	
10100.00†	90.000	175.731	8650.00	1654.73	-1650.14	123.18	667271.57	610144.08	32°40'35.988"N	103°55'26.565"W	0.00	
10200.00†	90.000	175.731	8650.00	1754.73	-1749.86	130.62	667279.01	610044.37	32°40'35.001"N	103°55'26.483"W	0.00	
10300.00†	90.000	175.731	8650.00	1854.73	-1849.58	138.07	667286.46	609944.65	32°40'34.014"N	103°55'26.400"W	0.00	
10400.00†	90.000	175.731	8650.00	1954.73	-1949.31	145.51	667293.90	609844.94	32°40'33.027"N	103°55'26.317"W	0.00	
10500.00†	90.000	175.731	8650.00	2054.73	-2049.03	152.96	667301.34	609745.22	32°40'32.040"N	103°55'26.235"W	0.00	
10600.00†	90.000	175.731	8650.00	2154.73	-2148.75	160.40	667308.79	609645.51	32°40'31.053"N	103°55'26.152"W	0.00	
10700.00†	90.000	175.731	8650.00	2254.73	-2248.47	167.84	667316.23	609545.79	32°40'30.066"N	103°55'26.070"W	0.00	
10800.00†	90.000	175.731	8650.00	2354.73	-2348.20	175.29	667323.67	609446.08	32°40'29.079"N	103°55'25.987"W	0.00	
10900.00†	90.000	175.731	8650.00	2454.73	-2447.92	182.73	667331.12	609346.36	32°40'28.092"N	103°55'25.904"W	0.00	
11000.00†	90.000	175.731	8650.00	2554.73	-2547.64	190.18	667338.56	609246.65	32°40'27.105"N	103°55'25.822"W	0.00	
11100.00†	90.000	175.731	8650.00	2654.73	-2647.36	197.62	667346.00	609146.93	32°40'26.118"N	103°55'25.739"W	0.00	
11200.00†	90.000	175.731	8650.00	2754.73	-2747.09	205.06	667353.45	609047.22	32°40'25.131"N	103°55'25.657"W	0.00	
11300.00†	90.000	175.731	8650.00	2854.73	-2846.81	212.51	667360.89	608947.50	32°40'24.144"N	103°55'25.574"W	0.00	
11400.00†	90.000	175.731	8650.00	2954.73	-2946.53	219.95	667368.33	608847.79	32°40'23.157"N	103°55'25.491"W	0.00	
11500.00†	90.000	175.731	8650.00	3054.73	-3046.25	227.40	667375.78	608748.07	32°40'22.170"N	103°55'25.409"W	0.00	
11600.00†	90.000	175.731	8650.00	3154.73	-3145.98	234.84	667383.22	608648.36	32°40'21.183"N	103°55'25.326"W	0.00	
11700.00†	90.000	175.731	8650.00	3254.73	-3245.70	242.28	667390.67	608548.64	32°40'20.196"N	103°55'25.244"W	0.00	
11800.00†	90.000	175.731	8650.00	3354.73	-3345.42	249.73	667398.11	608448.93	32°40'19.209"N	103°55'25.161"W	0.00	
11900.00†	90.000	175.731	8650.00	3454.73	-3445.14	257.17	667405.55	608349.21	32°40'18.222"N	103°55'25.079"W	0.00	
12000.00†	90.000	175.731	8650.00	3554.73	-3544.87	264.62	667413.00	608249.50	32°40'17.235"N	103°55'24.996"W	0.00	
12100.00†	90.000	175.731	8650.00	3654.73	-3644.59	272.06	667420.44	608149.78	32°40'16.248"N	103°55'24.913"W	0.00	
12200.00†	90.000	175.731	8650.00	3754.73	-3744.31	279.50	667427.88	608050.07	32°40'15.261"N	103°55'24.831"W	0.00	
12300.00†	90.000	175.731	8650.00	3854.73	-3844.04	286.95	667435.33	607950.35	32°40'14.275"N	103°55'24.748"W	0.00	
12400.00†	90.000	175.731	8650.00	3954.73	-3943.76	294.39	667442.77	607850.64	32°40'13.288"N	103°55'24.666"W	0.00	
12500.00†	90.000	175.731	8650.00	4054.73	-4043.48	301.84	667450.21	607750.92	32°40'12.301"N	103°55'24.583"W	0.00	
12600.00†	90.000	175.731	8650.00	4154.73	-4143.20	309.28	667457.66	607651.21	32°40'11.314"N	103°55'24.501"W	0.00	
12700.00†	90.000	175.731	8650.00	4254.73	-4242.93	316.72	667465.10	607551.49	32°40'10.327"N	103°55'24.418"W	0.00	
12800.00†	90.000	175.731	8650.00	4354.73	-4342.65	324.17	667472.54	607451.78	32°40'09.340"N	103°55'24.335"W	0.00	



# Planned Wellpath Report

Rev-A.0  
Page 5 of 5



## REFERENCE WELLPATH IDENTIFICATION

Operator	Cimarex Energy Co.	Slot	No. 3 SHL
Area	Eddy County, NM	Well	No. 3
Field	(Crescent) Sec 12, T19S, R30E	Wellbore	No. 3 PWB
Facility	Crescent Hale 12 Fed Com No. 3		

## WELLPATH DATA (138 stations) † = interpolated/extrapolated station

MD [ft]	Inclination [°]	Azimuth [°]	TVD [ft]	Vert Sect [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	DLS [°/100ft]	Comments
12900.00†	90.000	175.731	8650.00	4454.73	-4442.37	331.61	667479.99	607352.06	32°40'08.353"N	103°55'24.253"W	0.00	
13000.00†	90.000	175.731	8650.00	4554.73	-4542.09	339.06	667487.43	607252.35	32°40'07.366"N	103°55'24.170"W	0.00	
13076.16	90.000	175.731	8650.00†	4630.89	-4618.05	344.73	667493.10	607176.40	32°40'06.614"N	103°55'24.107"W	0.00	No. 3 PBHL

## TARGETS

Name	MD [ft]	TVD [ft]	North [ft]	East [ft]	Grid East [US ft]	Grid North [US ft]	Latitude	Longitude	Shape
1) Crescent Hale 12 Fed Com No. 3 PBHL (Rev-0)	13076.16	8650.00	-4618.05	344.73	667493.10	607176.40	32°40'06.614"N	103°55'24.107"W	point

## SURVEY PROGRAM - Ref Wellbore: No. 3 PWB Ref Wellpath: Rev-A.0

Start MD [ft]	End MD [ft]	Positional Uncertainty Model	Log Name/Comment	Wellbore
0.00	13076.16	NaviTrak (Standard)		No. 3 PWB

SR & A

Fill Line 2"

9-5/8"

Flowline

5000# BOP

Pipe Rams

Blind Rams

Drilling Spool

Kill Line 2"

2-9/16"

4"

Choke Manifold 4"

Wellhead Assembly

13 5/8" 3000# psi x 11" 5000# psi  
Wellhead Assembly

11 3/4" SOW X 13 5/8" 3000# psi

Casing Head

Exhibit E – 5M BOP  
Crescent Hale 12 Federal Com 3  
Cimarex Energy Co.  
12-19S-30E  
SHL 330 FNL & 2310 FEL  
BHL 330 FSL & 1980 FEL  
Eddy County, NM

# Drilling Operations Choke Manifold 5M Service

Exhibit E-1 – Choke Manifold Diagram

Crescent Hale 12 Federal Com 3

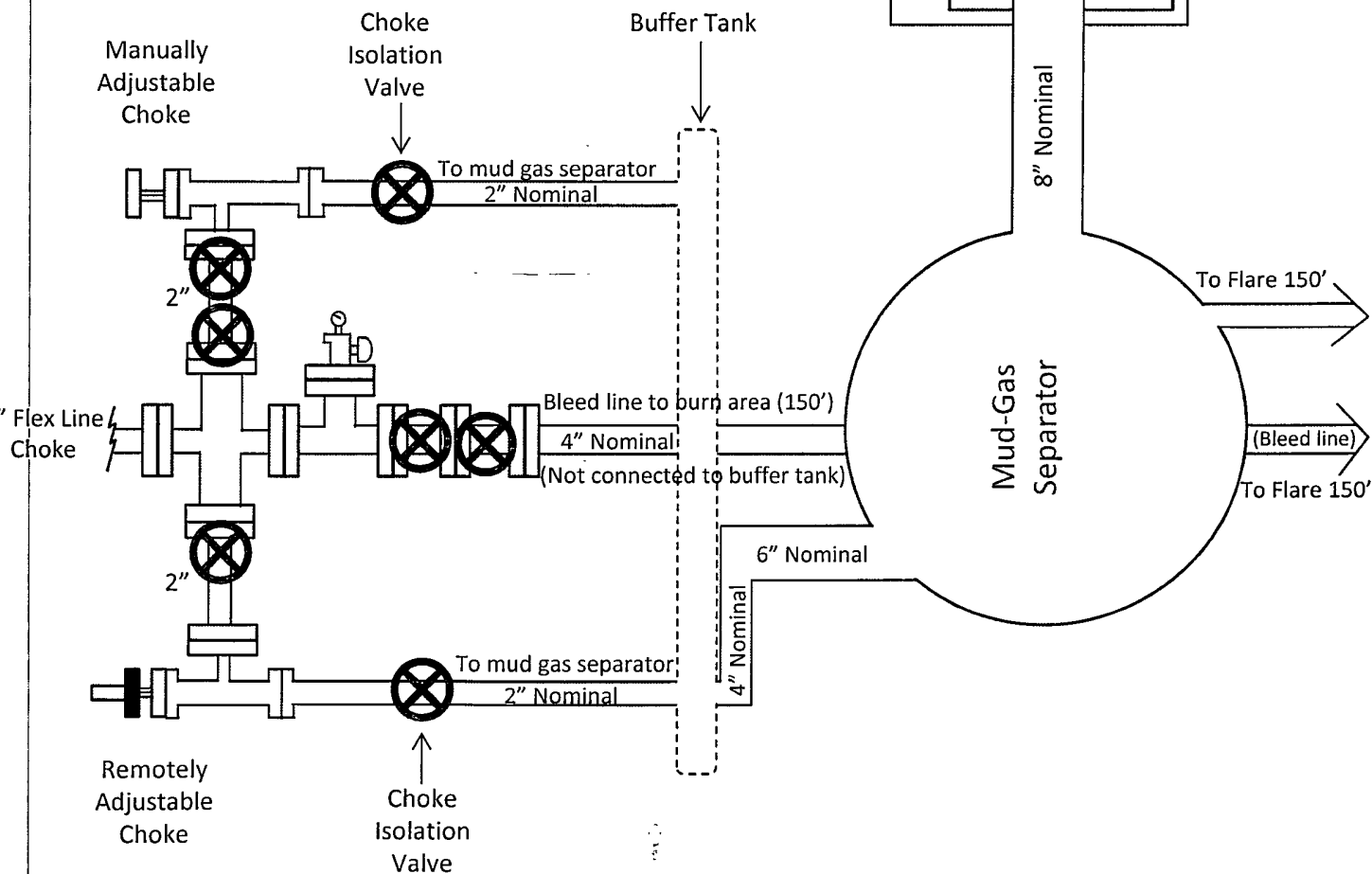
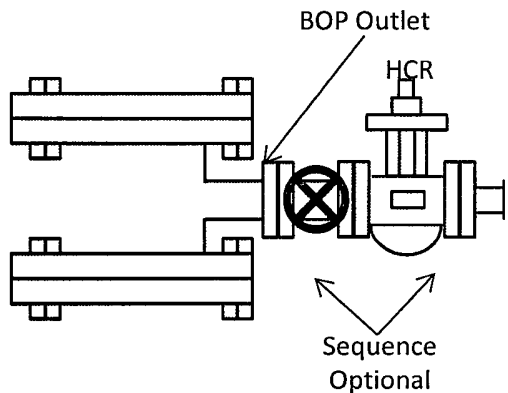
Cimarex Energy Co.

12-19S-30E

SHL 330 FNL & 2310 FEL

BHL 330 FSL & 1980 FEL

Eddy County, NM





Midwest Hose  
& Specialty, Inc.

INTERNAL HYDROSTATIC TEST REPORT			
Customer: Oderco Inc		P.O. Number: odyd-271	
HOSE SPECIFICATIONS			
Type: Stainless Steel Armor Choke & Kill Hose		Hose Length: 45'ft.	
I.D. 4 INCHES		O.D. 9 INCHES	
WORKING PRESSURE 10,000 PSI	TEST PRESSURE 15,000 PSI		BURST PRESSURE 0 PSI
COUPLINGS			
Stem Part No. OKC OKC		Ferrule No. OKC OKC	
Type of Coupling: Swage-It			
PROCEDURE			
<i>Hose assembly pressure tested with water at ambient temperature.</i>			
TIME HELD AT TEST PRESSURE 15 MIN.		ACTUAL BURST PRESSURE: 0 PSI	
Hose Assembly Serial Number: 79793		Hose Serial Number: OKC	
Comments:			
Date: 3/8/2011	Tested: <i>A. James Jones</i>		Approved: <i>[Signature]</i>



Midwest Hose  
& Specialty, Inc.

**Certificate of Conformity**

**Customer:**

DEM

**PO**

ODYD-271

**SPECIFICATIONS**

**Sales Order**

79793

**Dated:**

3/8/2011

We hereby certify that the material supplied  
for the referenced purchase order to be true  
according to the requirements of the purchase  
order and current industry standards

Supplier:  
Midwest Hose & Specialty, Inc.  
10640 Tanner Road  
Houston, Texas 77041

**Comments:**

**Approved:**

*Samuel Garcia*

**Date:**

3/8/2011



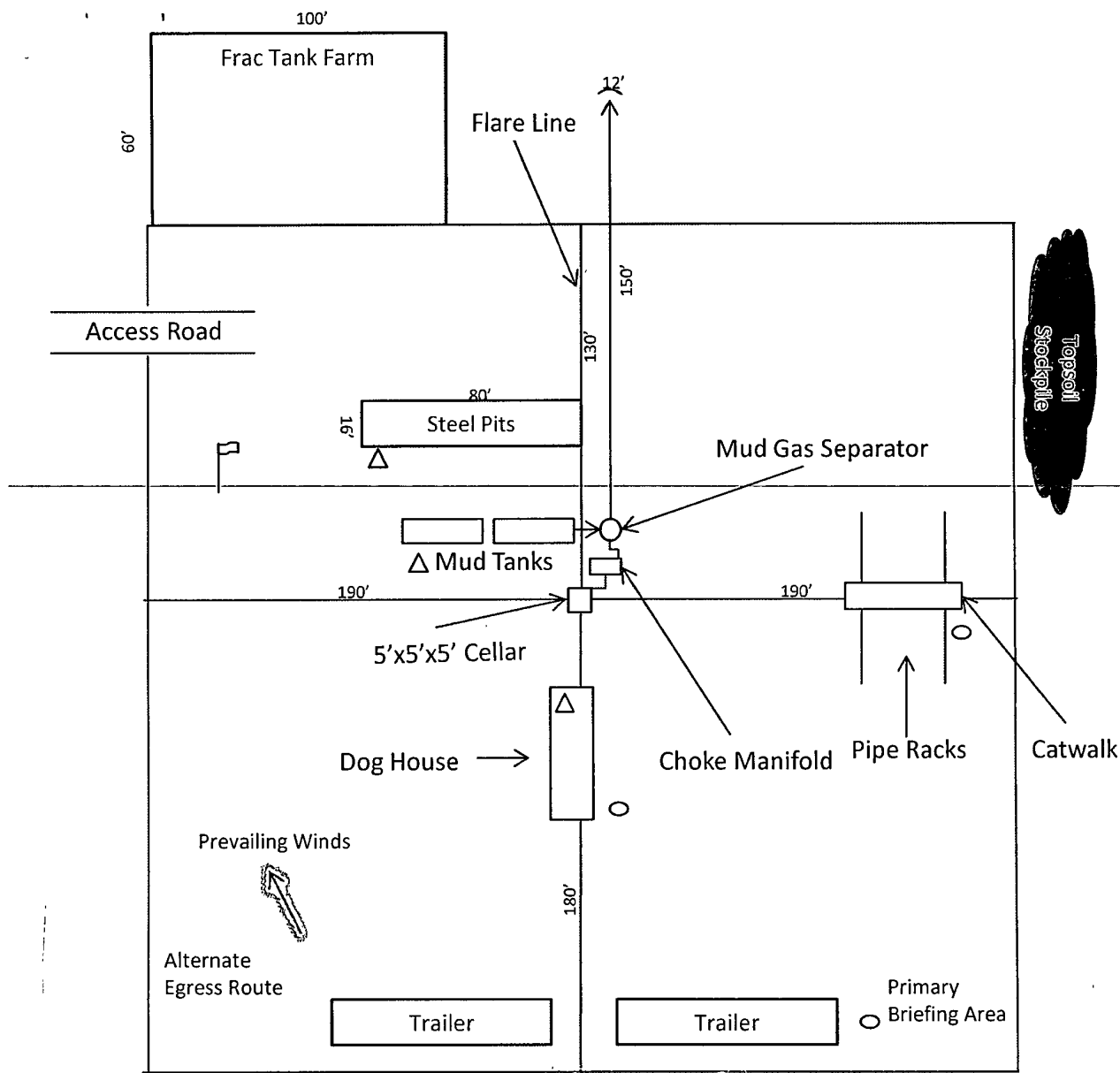
Midwest Hose  
& Specialty, Inc.

## Specification Sheet Choke & Kill Hose

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The Midwest Hose & Specialty Choke & Kill hose is manufactured with only premium components. The reinforcement cables, inner liner and cover are made of the highest quality material to handle the tough drilling applications of today's industry. The end connections are available with API flanges, API male threads, hubs, hammer unions or other special fittings upon request. Hose assembly is manufactured to API 7K. This assembly is wrapped with fire resistant vermiculite coated fiberglass insulation, rated at 2000 degrees with stainless steel armor cover.

<b>Working Pressure:</b>	5,000 or 10,000 psi working pressure
<b>Test Pressure:</b>	10,000 or 15,000 psi test pressure
<b>Reinforcement:</b>	Multiple steel cables
<b>Cover:</b>	Stainless Steel Armor
<b>Inner Tube:</b>	Petroleum resistant, Abrasion resistant
<b>End Fitting:</b>	API flanges, API male threads, threaded or butt weld hammer unions, unbolt and other special connections
<b>Maximum Length:</b>	110 Feet
<b>ID:</b>	2-1/2", 3", 3-1/2", 4"
<b>Operating Temperature:</b>	-22 deg F to +180 deg F (-30 deg C to +82 deg C)






-  Wind Direction Indicators (wind sock or streamers)
-  H2S Monitors (alarms at bell nipple and shale shaker)
-  Briefing Areas



Exhibit D – Rig Diagram  
**Crescent Hale 12 Federal Com 3**  
 Cimarex Energy Co.  
 12-19S-30E  
 SHL 330 FNL & 2310 FEL  
 BHL 330 FSL & 1980 FEL  
 Eddy County, NM

Hydrogen Sulfide Drilling Operations Plan  
**Crescent Hale 12 Federal Com No. 3**  
Cimarex Energy Co. of Colorado  
Unit B, Section 12  
T19S-R30E, Eddy County, NM

- 1 All Company and Contract personnel admitted on location must be trained by a qualified H<sub>2</sub>S safety instructor to the following:
  - A. Characteristics of H<sub>2</sub>S
  - B. Physical effects and hazards
  - C. Proper use of safety equipment and life support systems.
  - D. Principle and operation of H<sub>2</sub>S detectors, warning system and briefing areas.
  - E. Evacuation procedure, routes and first aid.
  - F. Proper use of 30 minute pressure demand air pack.
- 2 H<sub>2</sub>S Detection and Alarm Systems:
  - A. H<sub>2</sub>S detectors and audio alarm system to be located at bell nipple, end of flow line (mud pit) and on derrick floor or doghouse.
- 3 Windsock and/or wind streamers:
  - A. Windsock at mudpit area should be high enough to be visible.
  - B. Windsock at briefing area should be high enough to be visible.
- 4 Condition Flags and Signs:
  - A. Warning sign on access road to location.
  - B. Flags to be displayed on sign at entrance to location. Green flag indicates normal safe condition. Yellow flag indicates potential pressure and danger. Red flag indicates danger (H<sub>2</sub>S present in dangerous concentration). Only emergency personnel admitted to location.
- 5 Well control equipment:
  - A. See exhibit "E"
- 6 Communication:
  - A. While working under masks chalkboards will be used for communication.
  - B. Hand signals will be used where chalk board is inappropriate.
  - C. Two way radio will be used to communicate off location in case of emergency help is required. In most cases cellular telephones will be available at most drilling foreman's trailer or living quarters.
- 7 Drillstem Testing:

No DSTs or cores are planned at this time.
- 8 Drilling contractor supervisor will be required to be familiar with the effects H<sub>2</sub>S has on tubular goods and other mechanical equipment.
- 9 If H<sub>2</sub>S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with H<sub>2</sub>S scavengers if necessary.

H<sub>2</sub>S Contingency Plan  
**Crescent Hale 12 Federal Com No. 3**  
Cimarex Energy Co. of Colorado  
Unit B, Section 12  
T19S-R30E, Eddy County, NM

**Emergency Procedures**

In the event of a release of gas containing H<sub>2</sub>S, the first responder(s) must:

- ★ Isolate the area and prevent entry by other persons into the 100 ppm ROE.
- ★ Evacuate any public places encompassed by the 100 ppm ROE.
- ★ Be equipped with H<sub>2</sub>S monitors and air packs in order to control the release.
- ★ Use the "buddy system" to ensure no injuries occur during the response.
- ★ Take precautions to avoid personal injury during this operation.
- ★ Contact operator and/or local officials to aid in operation. See list of phone numbers attached.
- ★ Have received training in the:
  - ◆ Detection of H<sub>2</sub>S, and
  - ◆ Measures for protection against the gas,
  - ◆ Equipment used for protection and emergency response.

**Ignition of Gas Source**

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO<sub>2</sub>). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally, the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas.

**Characteristics of H<sub>2</sub>S and SO<sub>2</sub>**

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H <sub>2</sub> S	1.189 Air=1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO <sub>2</sub>	2.21 Air=1	2 ppm	N/A	1000 ppm

**Contacting Authorities**

Cimarex Energy Co. of Colorado's personnel must liaise with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available including directions to site. The following call list of essential and potential responders has been prepared for use during a release. Cimarex Energy Co. of Colorado's response must be in coordination with the State of New Mexico's "Hazardous Materials Emergency Response Plan" (HMER).

**H<sub>2</sub>S Contingency Plan Emergency Contacts**

**Crescent Hale 12 Federal Com No. 3**

Cimarex Energy Co. of Colorado

Unit B, Section 12

T19S-R30E, Eddy County, NM

**Company Office**

Cimarex Energy Co. of Colorado  
Co. Office and After-Hours Menu

800-969-4789

**Key Personnel**

<b>Name</b>	<b>Title</b>	<b>Office</b>	<b>Mobile</b>
Larry Seigrist	Drilling Manager	432-620-1934	580-243-8285
Scott Lucas	Drilling Superintendent		432-894-5572
Roy Shirley	Field Superintendent		432-634-2136

**Artesia**

Ambulance	911
State Police	575-746-2703
City Police	575-746-2703
Sheriff's Office	575-746-9888
<b>Fire Department</b>	<b>575-746-2701</b>
Local Emergency Planning Committee	575-746-2122
New Mexico Oil Conservation Division	575-748-1283

**Carlsbad**

Ambulance	911
State Police	575-885-3137
City Police	575-885-2111
Sheriff's Office	575-887-7551
<b>Fire Department</b>	<b>575-887-3798</b>
Local Emergency Planning Committee	575-887-6544
US Bureau of Land Management	575-887-6544

**Santa Fe**

New Mexico Emergency Response Commission (Santa Fe)	505-476-9600
New Mexico Emergency Response Commission (Santa Fe) 24 Hrs	505-827-9126
New Mexico State Emergency Operations Center	505-476-9635

**National**

National Emergency Response Center (Washington, D.C.)	800-424-8802
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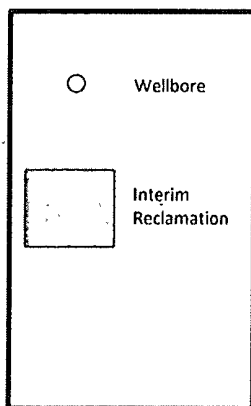
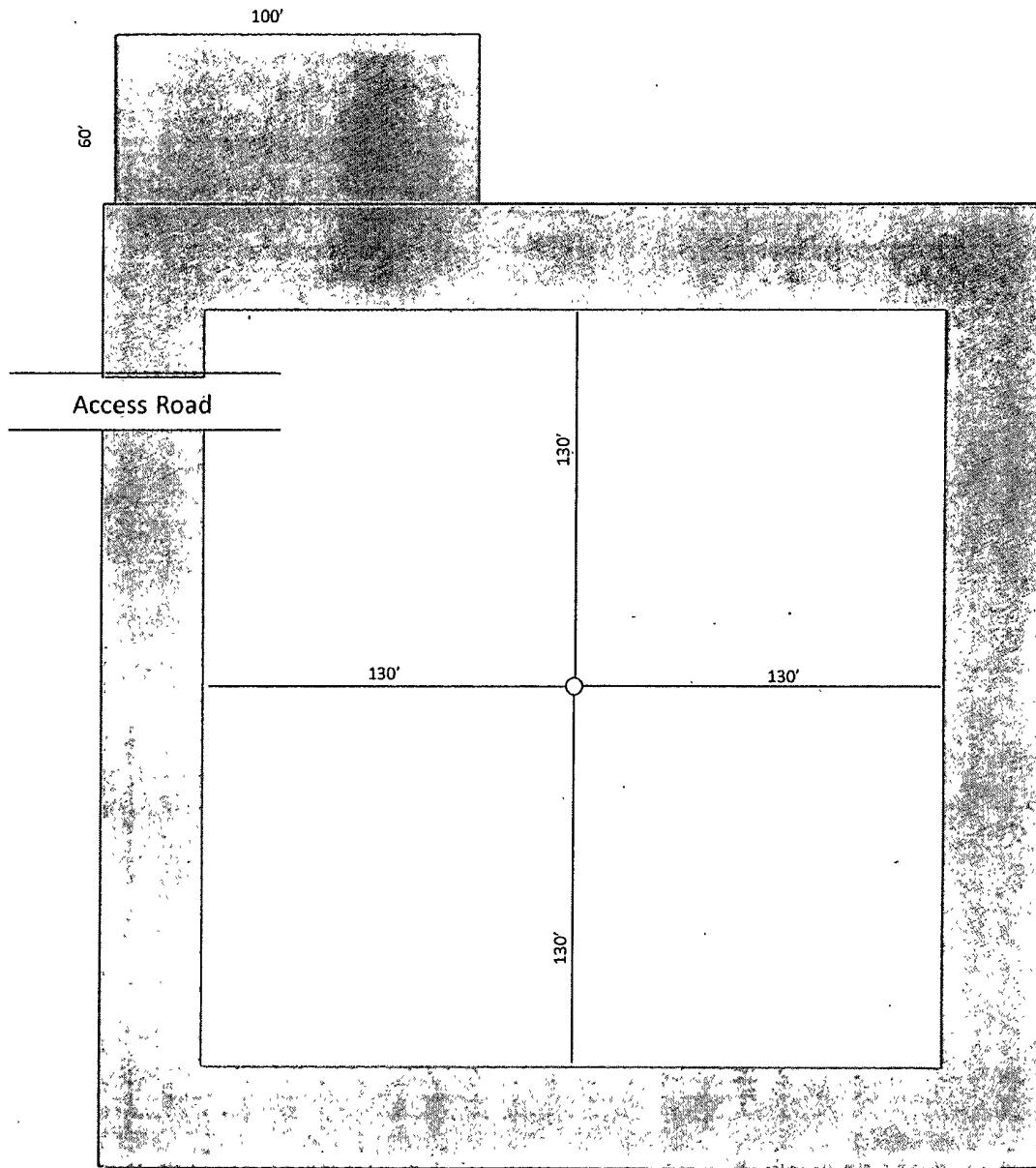
**Medical**

Flight for Life - 4000 24th St.; Lubbock, TX	806-743-9911
Aerocare - R3, Box 49F; Lubbock, TX	806-747-8923
Med Flight Air Amb - 2301 Yale Blvd S.E., #D3; Albuquerque, NM	505-842-4433
SB Air Med Service - 2505 Clark Carr Loop S.E.; Albuquerque, NM	505-842-4949

**Other**

Boots & Coots IWC	800-256-9688	or	281-931-8884
Cudd Pressure Control	432-699-0139	or	432-563-3356
Halliburton	575-746-2757		
B.J. Services	575-746-3569		

Received 9-18-12 JLF



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Exhibit D-1  
Interim Reclamation Diagram-  
Crescent Hale 12 Federal Com 3  
Cimarex Energy Co.  
12-19S-30E  
SHL 330 FNL & 2310 FEL  
BHL 330 FSL & 1980 FEL  
Eddy County, NM

# PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Cimarex Energy Co of Colorado
LEASE NO.:	NM0560353
WELL NAME & NO.:	3 Crescent Hale 12 Federal Com
SURFACE HOLE FOOTAGE:	330' FNL & 2310' FEL
BOTTOM HOLE FOOTAGE:	330' FSL & 1980' FEL
LOCATION:	Section 12, T.19 S., R.30 E., NMPM
COUNTY:	Eddy County, New Mexico

## TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

- ☐ **General Provisions**
- ☐ **Permit Expiration**
- ☐ **Archaeology, Paleontology, and Historical Sites**
- ☐ **Noxious Weeds**
- ☒ **Special Requirements**
  - Berming**
  - Hackberry Lake Special Recreation Management Area**
  - Communitization Agreement
- ☐ **Construction**
  - Notification
  - Topsoil
  - Closed Loop System
  - Federal Mineral Material Pits
  - Well Pads
  - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
  - H<sub>2</sub>S – Onshore Order #6
  - R-111-P Potash
  - Logging requirements
  - Waste Material and Fluids
- ☐ **Production (Post Drilling)**
  - Well Structures & Facilities
  - Pipelines
  - Electric Lines
- ☐ **Interim Reclamation**
- ☐ **Final Abandonment & Reclamation**

## **I. GENERAL PROVISIONS**

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

## **II. PERMIT EXPIRATION**

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

## **III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES**

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

## **IV. NOXIOUS WEEDS**

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

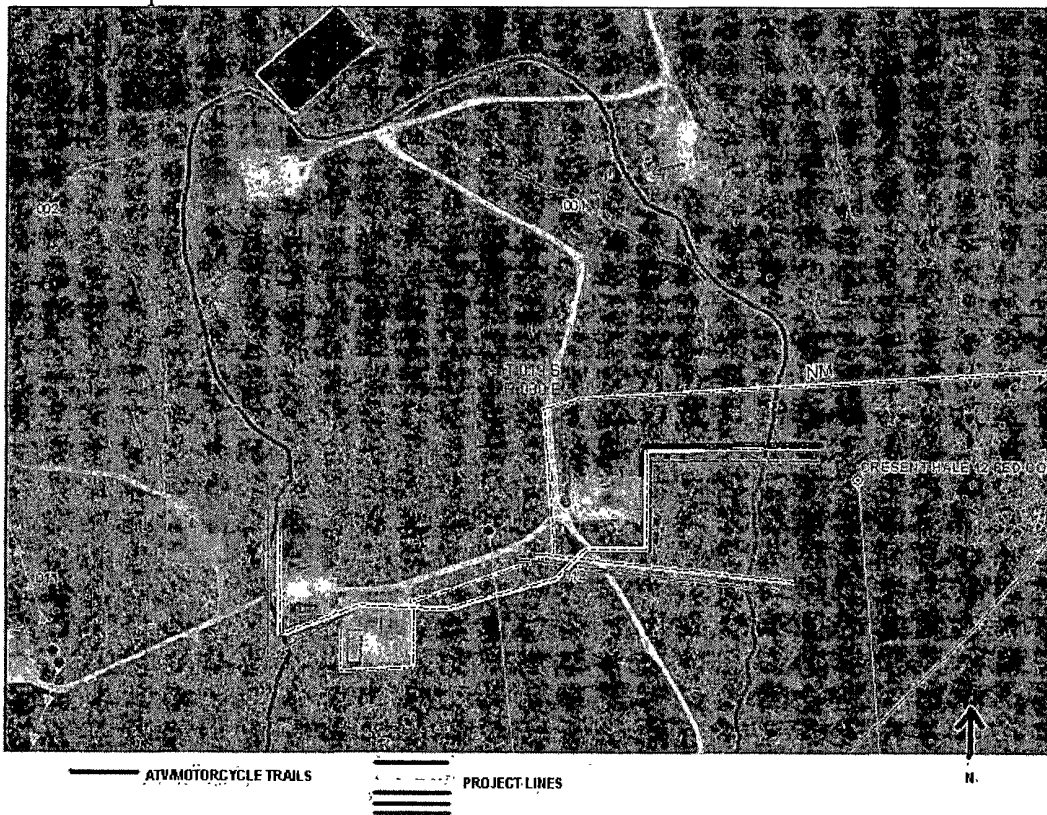
## V. SPECIAL REQUIREMENT(S)

### Berming

Well pad will be bermed to prevent contaminants from leaving the well pad and entering the playa to the northeast.

### Hackberry Lake OHV Special Recreation Management Area (SRMA)

Pipelines (including temporary surface lines) shall be buried a minimum of 24 inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. Power poles and associated ground structures (poles, guy wires) will not be placed within 20 feet of recreation trails. Guy wires must be equipped with a sleeve, tape or other industry approved apparatus that is highly visible during the day and reflective at night. During ALL phases of construction, open ditches, holes, materials storage or other trail modifications must have proper signage notifying trail users of potential hazards. Upon completion of construction, roads/trails shall be returned to pre-construction condition with no bumps or dips. Power line poles will be spaced to avoid pole placement within 20-feet of trails and "two tracks." All vehicle and equipment operators will observe speed limits and practice responsible defensive driving habits. If trail route modifications are required due to development, proposed changes shall be approved by BLM. The requesting party will absorb all expenses incurred as the result of requested modifications.



**Communitization Agreement**

A Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales.

## **VI. CONSTRUCTION**

### **A. NOTIFICATION**

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-6235 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

### **B. TOPSOIL**

The operator shall stockpile the topsoil in a low profile manner in order to prevent wind/water erosion of the topsoil. The topsoil to be stripped is approximately 4 inches in depth. The topsoil will be used for interim and final reclamation.

### **C. CLOSED LOOP SYSTEM**

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

### **D. FEDERAL MINERAL MATERIALS PIT**

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

### **E. WELL PAD SURFACING**

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

### **F. ON LEASE ACCESS ROADS**

#### **Road Width**

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty (20) feet.

### **Surfacing**

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

### **Crowning**

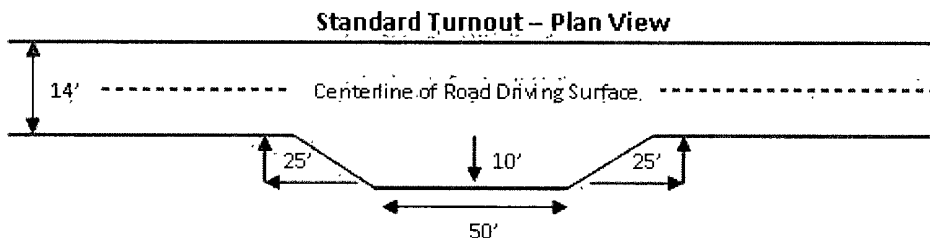
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

### **Ditching**

Ditching shall be required on both sides of the road.

### **Turnouts**

Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:



### **Drainage**

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outslowing and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.).

**Centralizers required on surface casing per Onshore Order 2.III.B.1.f.**

**Wait on cement (WOC) time prior to drilling out for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.**

**No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.**

#### **R-111-P Potash**

**Possible brine and water flows in the Artesia and Salado Groups.**

**Possible lost circulation in the Capitan Reef (if encountered) and the Artesia Group.**

1. The 13-3/8 inch surface casing shall be set at **approximately 430 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt)** and cemented to the surface.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - b. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.**
  - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing is:

☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to potash.**

**Centralizers required on horizontal leg, must be type for horizontal service and a minimum of one every third joint unless lateral doglegs require greater spacing between centralizers.**

3. The minimum required fill of cement behind the **5-1/2** inch production casing is:

**Option 1:** Single stage job.

☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Additional cement may be required – excess calculates to -4%.**

**Option 2:** Two stage job.

a. First stage to DV tool:

☒ Cement to circulate. If cement does not circulate, contact the appropriate BLM office before proceeding with second stage cement job. Operator should have plans as to how they will achieve circulation on the next stage. **Additional cement may be required – excess calculates to -9%.**

b. Second stage above DV tool:

☒ Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Additional cement may be required – excess calculates to 19%.**

4. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

## **C. PRESSURE CONTROL**

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **3000 (3M)** psi. **Operator installing a 5M but testing as a 3M.**

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** inch intermediate casing shoe shall be **5000 (5M) psi. 5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.**
4. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time.
  - b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (18 hours) or potash (24 hours) prior to initiating the test.
  - c. The results of the test shall be reported to the appropriate BLM office.
  - d. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**
  - e. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.

#### **D. DRILL STEM TEST**

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

#### **E. WASTE MATERIAL AND FLUIDS**

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion 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.

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## **VIII. PRODUCTION (POST DRILLING)**

### **A. WELL STRUCTURES & FACILITIES**

#### **Placement of Production Facilities**

Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

#### **Containment Structures**

The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

#### **Painting Requirement**

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color  
Shale Green, Munsell Soil Color Chart # 5Y 4/2

### **B. PIPELINES**

#### **STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES**

**A copy of the APD and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.**

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to activity of the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. The holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. The holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipe rupture, fire, or spills caused or substantially aggravated by any of the following within the right-of-way or permit area:

a. Activities of the holder including, but not limited to construction, operation, maintenance, and termination of the facility.

b. Activities of other parties including, but not limited to:

- (1) Land clearing.
- (2) Earth-disturbing and earth-moving work.
- (3) Blasting.
- (4) Vandalism and sabotage.

c. Acts of God.

The maximum limitation for such strict liability damages shall not exceed one million dollars (\$1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.

This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil, salt water, or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full

expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any responsibility as provided herein.

6. All construction and maintenance activity will be confined to the authorized right-of-way width of 20 feet.

7. No blading or clearing of any vegetation will be allowed unless approved in writing by the Authorized Officer.

8. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky or dune areas, the pipeline will be "snaked" around hummocks and dunes rather than suspended across these features.

9. The pipeline shall be buried with a minimum of 24 inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.

10. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. Excluding the pipe, all above-ground structures not subject to safety requirement shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.

13. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.

14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline

route is not used as a roadway.

15. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.

### C. ELECTRIC LINES

#### STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES

**A copy of the grant and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.**

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.
3. The holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of

the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. There will be no clearing or blading of the right-of-way unless otherwise agreed to in writing by the Authorized Officer.

5. Power lines shall be constructed in accordance to standards outlined in "Suggested Practices for Raptor Protection on Power lines, " Raptor Research Foundation, Inc., 1981. The holder shall assume the burden and expense of proving that pole designs not shown in the above publication are "raptor safe." Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all powerline structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States.

6. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

7. The BLM serial number assigned to this authorization shall be posted in a permanent, conspicuous manner where the power line crosses roads and at all serviced facilities. Numbers will be at least two inches high and will be affixed to the pole nearest the road crossing and at the facilities served.

8. Upon cancellation, relinquishment, or expiration of this grant, the holder shall comply with those abandonment procedures as prescribed by the Authorized Officer.

9. All surface structures (poles, lines, transformers, etc.) shall be removed within 180 days of abandonment, relinquishment, or termination of use of the serviced facility or facilities or within 180 days of abandonment, relinquishment, cancellation, or expiration of this grant, whichever comes first. This will not apply where the power line extends service to an active, adjoining facility or facilities.

10. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate actions to prevent the loss of significant cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

11. Special Stipulations:

- For reclamation remove poles, lines, transformer, etc. and dispose of properly. Fill in any holes from the poles removed.

## **IX. INTERIM RECLAMATION**

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

## **X. FINAL ABANDONMENT & RECLAMATION**

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

#### Seed Mixture 2, for Sandy Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)\* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law (s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed\* per acre:

<u>Species</u>	<u>lb/acre</u>
Sand dropseed ( <i>Sporobolus cryptandrus</i> )	1.0
Sand love grass ( <i>Eragrostis trichodes</i> )	1.0
Plains bristlegrass ( <i>Setaria macrostachya</i> )	2.0

\*Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed