

ATS-13-342

Form 3160-3
(March 2012)

OCD Artesia

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NM96208
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator Cimarex Energy Co.		7. If Unit or CA Agreement, Name and No.
3a. Address 600 N. Marienfeld St. Ste. 600 Midland Tx 79701		8. Lease Name and Well No. Taos Federal #4H
3b. Phone No. (include area code) 432-571-7800		9. API Well No. 30015 - 41270
4. Location of Well (Report location clearly and in accordance with any State requirements.*) At Surface 275' FSL & 630' FEL At proposed prod. Zone 330' FNL & 575' FEL Horizontal Bone Spring test		10. Field and Pool, or Exploratory WILLOW LARRO, B.S., WOST Whitcat Bone Spring
14. Distance in miles and direction from nearest town or post office* Approximately 1 mile SW of Black River Village		11. Sec., T. R. M. or Blk. and Survey or Area 24S - per Paula 1-28-13 31-25S-27E
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line if any) 275'	16. No of acres in lease 624	17. Spacing Unit dedicated to this well 160
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 130' to #3H	19. Proposed Depth 12,054' MD 7,526' TVD	20. BLM/BIA Bond No. on File NM2575; NMB000835
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3400' GR	22. Approximate date work will start* 04.01.13	23. Estimated duration 35 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 | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan | 5. Operator Certification |
| 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). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature <i>Paula Brunson</i>	Name (Printed/Typed) Paula Brunson	Date 01.22.13
---------------------------------------	---------------------------------------	------------------

Regulatory Compliance

Approved By (Signature) <i>James A. Ames</i>	Name (Printed/Typed) James A. Ames	Date APR - 5 2013
Title <i>For</i> FIELD MANAGER	Office CARLSBAD FIELD 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.

Title 18 U.S.S. 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.

(Continued on page 2)

*(Instructions on page 2)

Operator Certification Statement

Taos Federal #4H

Cimarex Energy Co.

UL: P, Sec. 31, 24S, 27E

Eddy Co., NM

Operator's Representative

Cimarex Energy Co. of Colorado


600 N. Marienfeld St., Ste. 600

Midland, TX 79701

Office Phone: (432) 571-7800

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 22nd day of January, 2013

NAME: 
Paula Brunson

TITLE: Regulatory Compliance

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

TELEPHONE: 432-571-7848

EMAIL: pbrunson@cimarex.com

Field Representative: Same as above

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240
Phone (505) 393-6161 Fax: (505) 393-0720

DISTRICT II
611 S. First St., Artesia, NM 88210
Phone (505) 746-1253 Fax: (505) 746-9720

DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone (505) 476-3480 Fax: (505) 476-3462

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 30-025-41270	Pool Code 96915	Well Name Willow Lake, BS. WBSA Wildcat Bone Spring
Property Code 39820	Property Name TAOS FEDERAL	Well Number 4H
OGRID No. 215099	Operator Name CIMAREX ENERGY CO.	Elevation 3400'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
P	31	24 S	27 E		275	SOUTH	630	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
A	31	24 S	27 E		330	NORTH	575	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

N: 429543.5 E: 570833.5 LOT 1	PROPOSED BOTTOM HOLE LOCATION Lat - N 32°10'48.47" Long - W 104°13'23.59" NMSPC- N 429283.3 E 575404.4 (NAD-83)	B.H. N: 429622.0 E: 575977.7
LOT 2		
N: 426895.9 E: 570833.9 LOT 3		
LOT 4	SURFACE LOCATION Lat - N 32°10'01.63" Long - W 104°13'24.04" NMSPC- N 424550.9 E 575370.3 (NAD-83)	S.L. N: 424278.5 E: 576001.6

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 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.

Paula Brunson 1/22/2013
Signature Date

Paula Brunson
Printed Name

pbrunson@cimarex.com
Email Address

SURVEYOR CERTIFICATION

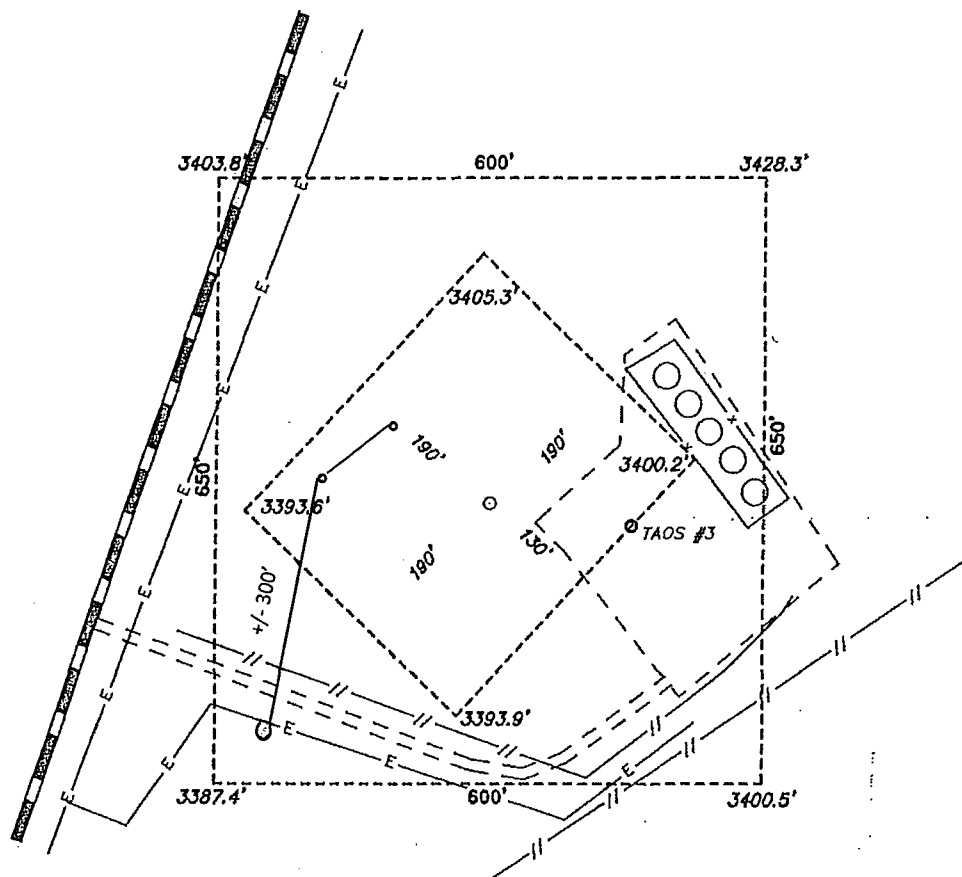
I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

Date Surveyed: 1/22/2013
Signature: [Signature]
Professional Surveyor: 7977

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

SECTION 31, TOWNSHIP 24 SOUTH, RANGE 27 EAST, N.M.P.M.,
EDDY COUNTY, NEW MEXICO.



CIMAREX ENERGY CO.
TAOS FEDERAL #4H
ELEV. - 3400'
Lat - N 32°10'01.63"
Long - W 104°13'24.04"
NAD83 - N 424550.9
E 575370.3
(NAD-83)

— Proposed Eline

MALAGA, NM IS ±10 MILES TO THE EAST-NORTHEAST OF LOCATION.
200 0 200 400 FEET
SCALE: 1" = 200'

Directions to Location:

FROM THE JUNCTION OF BLACK RIVER VILLAGE AND
JOHN D FOREHAND, GO SOUTH ON JOHN D
FOREHAND FOR 4.6 MILES TO LEASE ROAD, GO EAST
ON LEASE ROAD TO TAOS 3 AND PROPOSED
LOCATION.

BASIN SURVEYS P.O. BOX 1786 - HOBBS, NEW MEXICO

W.O. Number: 27942 Drawn By: J. SMALL

Date: 01-15-2013 Disk: JMS 27942

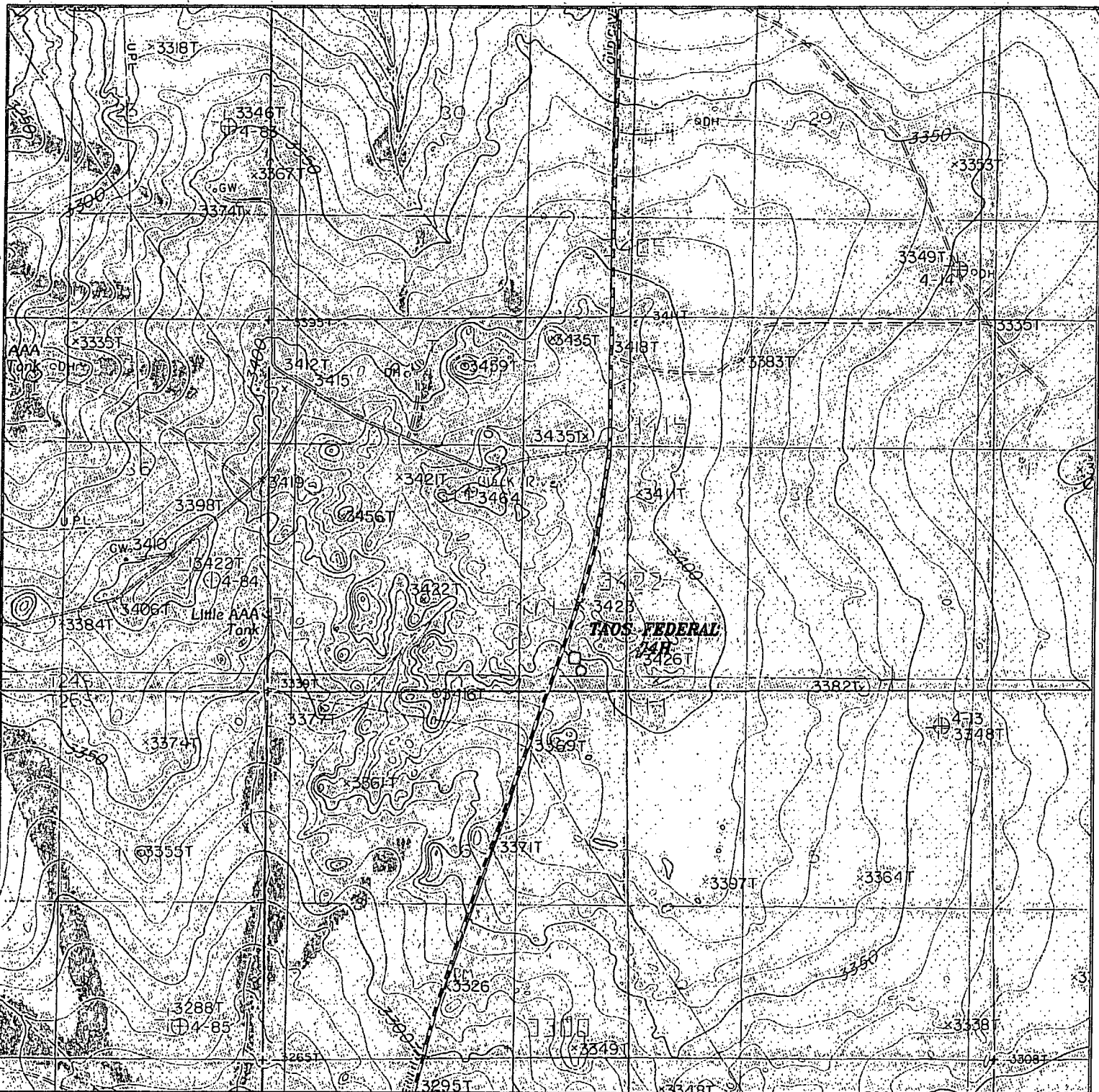
CIMAREX ENERGY CO.

REF: TAOS FEDERAL #4H / WELL PAD TOPO

THE TAOS FEDERAL #4H LOCATED 275'

FROM THE SOUTH LINE AND 630' FROM THE EAST LINE OF
SECTION 31, TOWNSHIP 24 SOUTH, RANGE 27 EAST,
N.M.P.M., EDDY COUNTY, NEW MEXICO.

Survey Date: 09-10-212 Sheet 1 of 1 Sheets



TAOS FEDERAL #4H

Located 275' FSL and 630' FEL
 Section 31, Township 24 South, Range 27 East,
 N.M.P.M., Eddy County, New Mexico.

☐ Battery

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

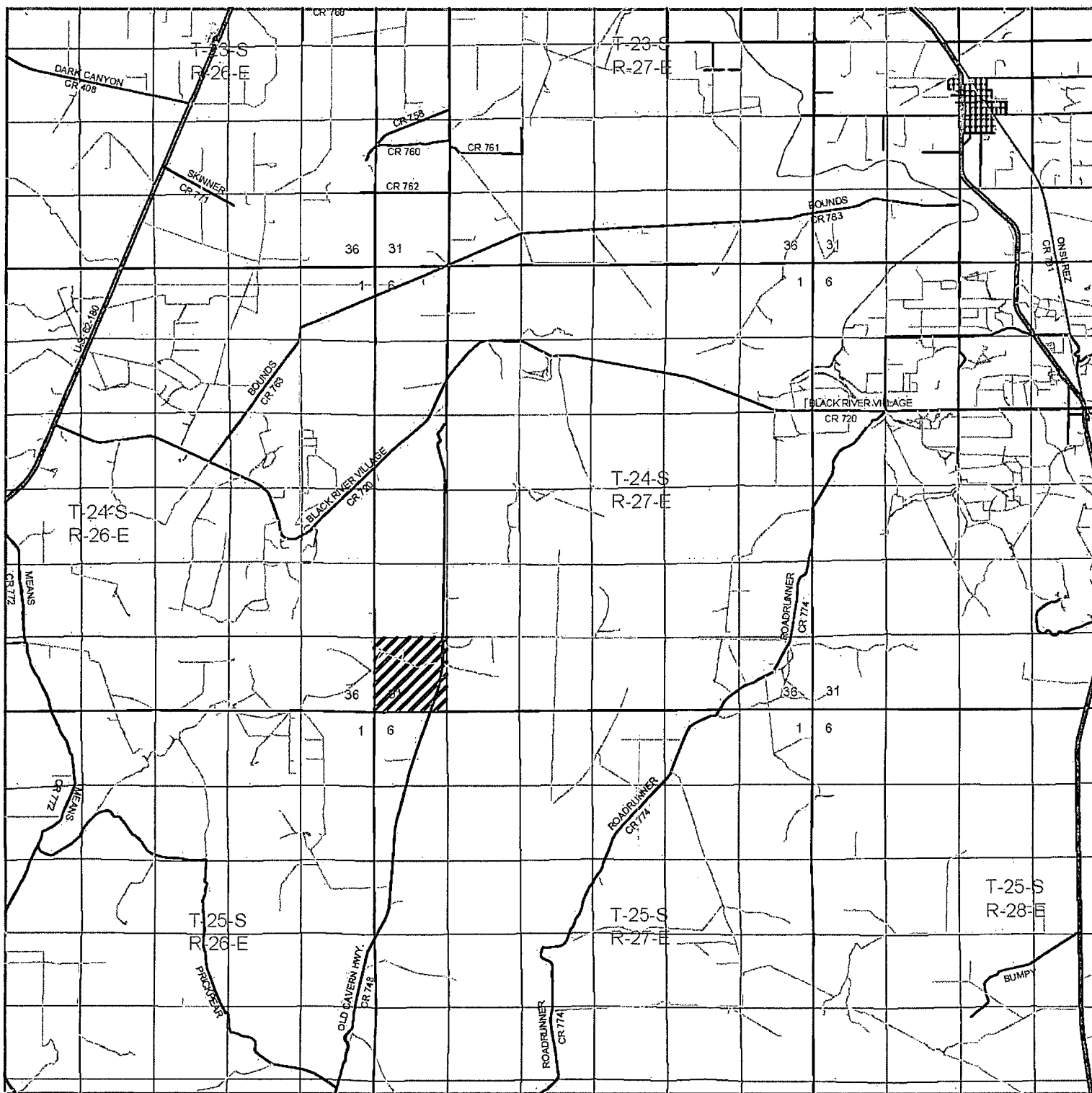
W.O. Number: JMS 27942

Survey Date: 01-11-2013

Scale: 1" = 2000'

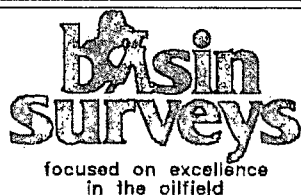
Date: 01-15-2013

CIMAREX
ENERGY CO.



TAOS FEDERAL #4H

Located 275' FSL and 630' FEL
Section 31, Township 24 South, Range 27 East,
N.M.P.M., Eddy County, New Mexico.



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1120 N. West County Rd.
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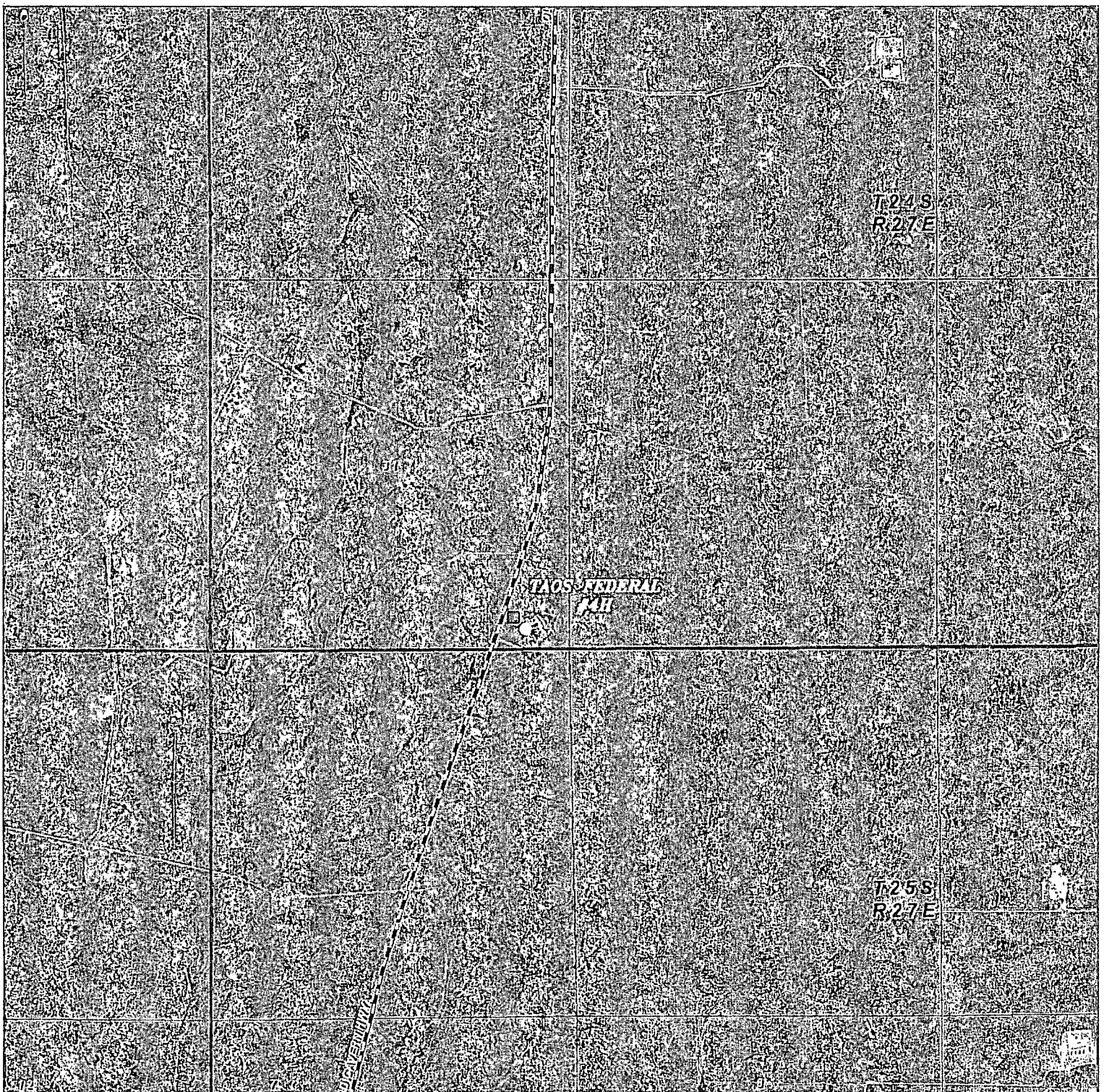
W.O. Number: JMS 27942

Survey Date: 01-11-2013

Scale: 1" = 2 Miles

Date: 01-15-2013

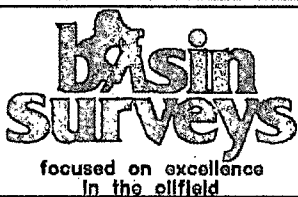
CIMAREX
ENERGY CO.



TAOS FEDERAL #4H

■ Battery

Located 275' FSL and 630' FEL
Section 31, Township 24 South, Range 27 East,
N.M.P.M., Eddy County, New Mexico.



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basinsurveys.com

W.O. Number: JMS 27942

Scale: 1" = 2000'

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

CIMAREX
ENERGY CO.

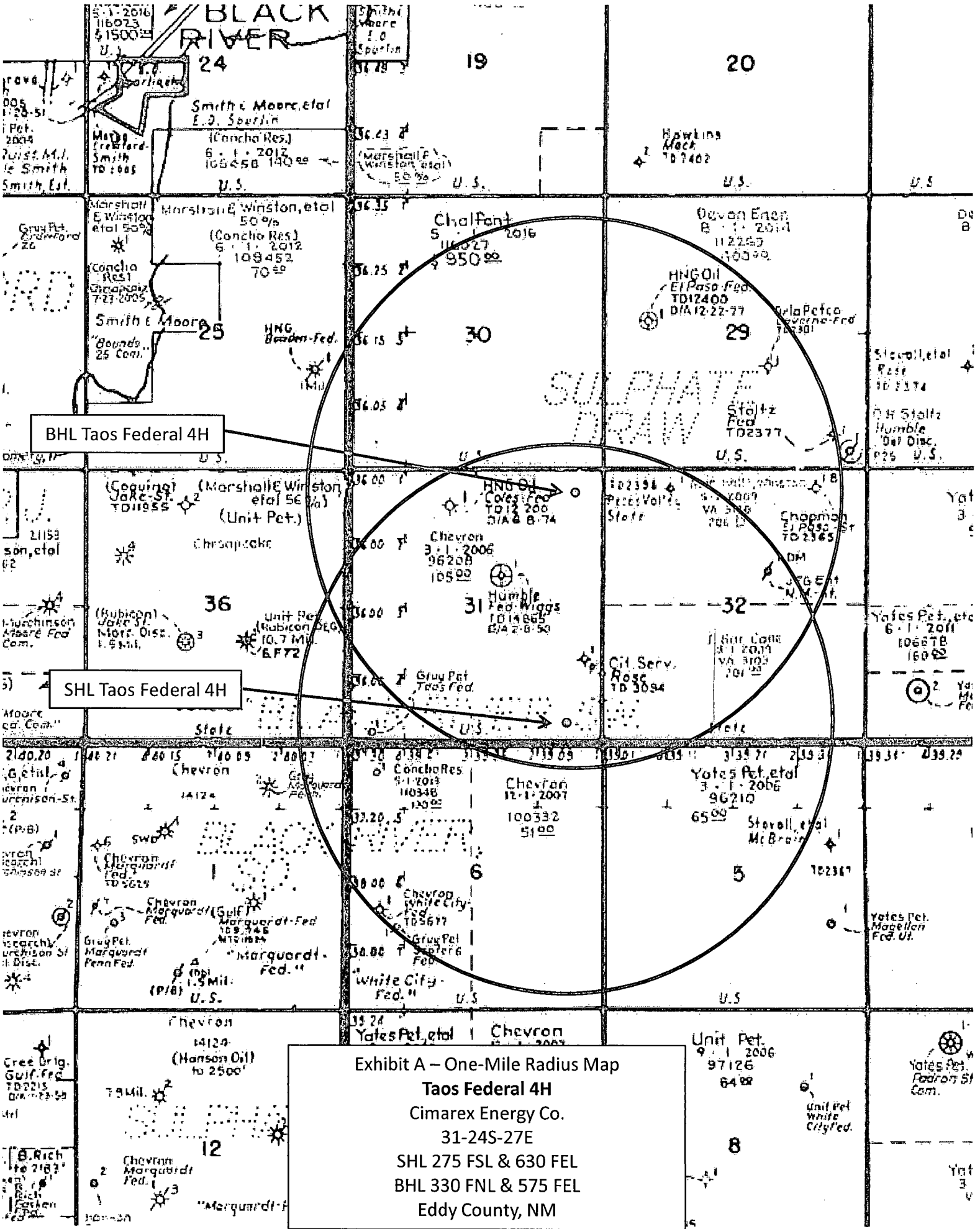


Exhibit A - One-Mile Radius Map
Taos Federal 4H
Cimarex Energy Co.
31-24S-27E
SHL 275 FSL & 630 FEL
BHL 330 FNL & 575 FEL
Eddy County, NM

Application to Drill
Taos Federal #4H
Cimarex Energy Co.
UL: P, Sec. 31, 24S, 27E
Eddy Co., 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 275' FSL & 630' FEL
BHL 330' FNL & 575' FEL
- 2 Elevation above sea level: 3400' 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: 12,054' MD 7,526' TVD
- 6 Estimated tops of geological markers:

Formation	Est. Top	Bearing
Rustler	0	NA
Ground Water (Per OSE)	75	NA
Top of Salt	1435	NA
Base of Salt	2010	NA
Bell Canyon	2192	NA
Cherry Canyon	3140	NA
Brushy Canyon	4159	NA
Brushy Canyon Lower	5424	NA
Bone Spring	5770	Hydrocarbons
Bone Spring A Shale	5878	Hydrocarbons
Bone Spring C Shale	6173	Hydrocarbons
1st Bone Spring Ss	6731	Hydrocarbons
2nd Bone Spring Ss	7222	Hydrocarbons
3rd Bone Spring Limestone	7615	Hydrocarbons

- 7 Possible mineral bearing formation:
Shown above

- 8 Casing Program:

Casing Depth From (ft)	Casing Setting Depth(ft) MID	Casing Setting Depth(ft) TVD	Open Hole Size (inches)	Casing Size (inches)	Casing Weight (lb/ft)	Casing Grade	Thread	Condition	ST Surface Pressure & BHP (inside)	Mud Weight (ppg)	Collapse SF (1.125)	Burst SF (1.125)	Cumulative Air Weight (lbs)	Tension SF (1.6)
Surface														
0'	585'	585'	17 1/2	13 3/8	48	H-40	ST&C	New	263	8.4	2.90	6.6	28080	11.5
Intermediate														
0'	2205'	2205'	12 1/4	9 5/8	36	J-55	LT&C	New	992	9	1.96	3.5	79380	7.1
Production														
0'	7048'	7048'	8 3/4	5 1/2	17	P-110	LT&C	New	1731	8.4	2.43	6.1	127942	3.5
7048'	12054'	7526'	8 3/4	5 1/2	17	P-110	BT&C	New	3387	8.4	2.28	3.1	8126	67.2

Casing Design Criteria and Casing Loading Assumptions:

Surface, Intermediate and Production Casing:

Tension: A 1.6 design factor without effects of buoyancy.

Collapse: A 1.125 design factor with full internal evacuation.

Burst: A 1.125 design with a surface pressure equal to the fracture gradient at setting depth less gas gradient to surface.

Drilling Plan
Taos Federal #4H
Cimarex Energy Co.
UL: P, Sec. 31, 24S, 27E
Eddy Co., NM

9 Cementing Program:

Surface	Sacks	Yield (cuft/sx)	Weight (ppg)	Cubic Feet	Cement Blend
Lead	230	1.75	13.5	396	Class C + Bentonite + Calcium Chloride + LCM
Tail	200	1.34	14.8	261	Class C + LCM
TOC: 0' 62% Excess Centralizers per Onshore Order 2.III.B.1f					

Intermediate	Sacks	Yield (cuft/sx)	Weight (ppg)	Cubic Feet	Cement Blend
Lead	470	1.88	12.9	882	35:65 (poz/C) + Salt + Bentonite + LCM + retarder
Tail	150	1.34	14.8	198	Class C + retarder + LCM
TOC: 0' 77% Excess					

Production	Sacks	Yield (cuft/sx)	Weight (ppg)	Cubic Feet	Cement Blend
Lead	587	2.4	11.9	1408	35:65 (poz/H) + salt + Sodium Metasilicate + Bentonite + Fluid Loss + Dispersant + LCM + Retarder
Tail	1414	1.24	14.5	1754	50:50 (poz/H) + Bentonite + Salt + Fluid Loss + Dispersant + LCM + Retarder

Cement volumes will be adjusted depending on hole size.

TOC: 2000' 25% Excess 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.

see COA

10 Pressure Control Equipment:

Exhibit "E-1". A 13 $\frac{3}{8}$ " 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 installed 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.

BOPS will be tested by an independent service company to 250 psi low and 3000 psi high on the surface casing and 250 psi low and 5000 psi high on the intermediate. Hydril will be tested to 250 psi low and 2500 psi high on the surface and intermediate casings.

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 (please see Exhibit F, F-1, F-2, F-3). 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.

see COA

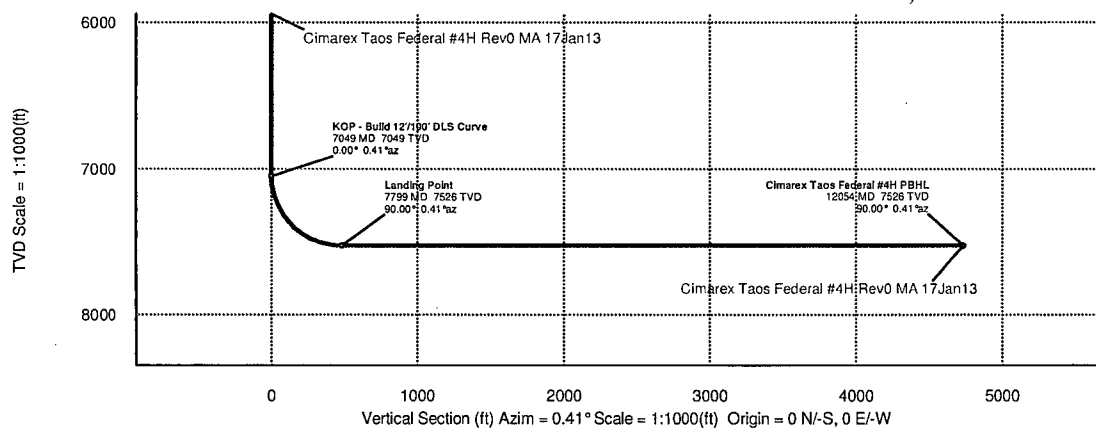
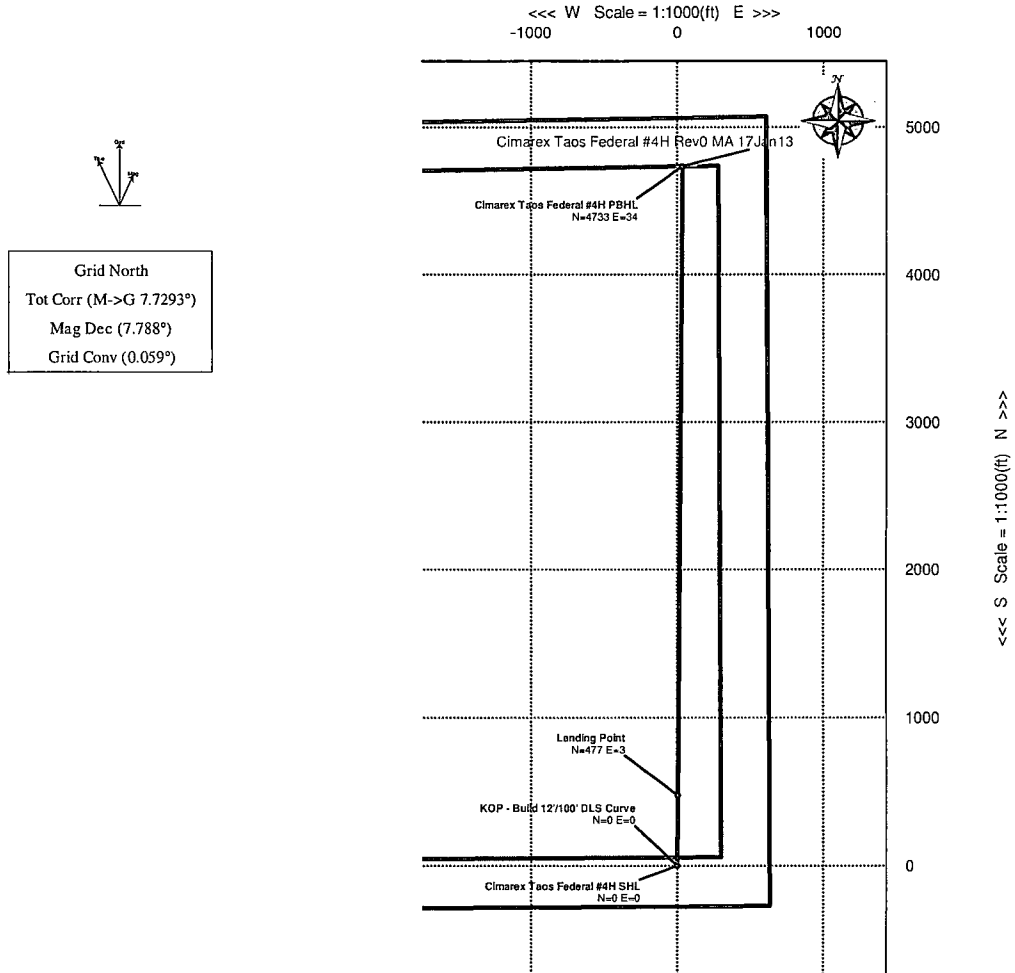
Page 3



Cimarex

PATHFINDER
A Schlumberger Company

WELL				Taos Federal #4H				FIELD		NM Lea County				STRUCTURE		Taos Federal #4H			
Magnetic Parameters																			
Model:		BGGV 2012		Dip:		59.935°		Date:		January 17, 2013		Surface Location				NAD83 New Mexico State Plane, Eastern Zone, US Feet			
Mag Dec:		7.788°		Mag Dev:		7.788°		F.R.		48325.5m		Lat:		N 32 10 1.835		Northing:		424550.80 EUS	
												Long:		W 104 13 24.845		Eastng:		675270.20 EUS	
																Grid Conv:		0.059°	
																Scale Fact:		0.99991042	



Critical Point	MD	INCL	AZIM	TVD	VSEC	N(±)/S(±)	E(±)/W(±)	DLS
Cimarex Taos Federal #4H SHL	0.00	0.00	0.41	0.00	0.00	0.00	0.00	
KOP - Build 12/100' DLS Curve	7048.50	0.00	0.41	7048.50	0.00	0.00	0.00	0.00
Landing Point	7798.56	90.00	0.41	7526.00	477.50	477.49	3.45	12.00
Cimarex Taos Federal #4H PBHL	12054.01	90.00	0.41	7526.00	4732.96	4732.83	34.10	0.00



Cimarex Taos Federal #4H Rev0 MA 17Jan13 Proposal Report 100'
Interpolated
(Non-Def Plan)



Report Date: January 17, 2013 - 02:36 PM
Client: Cimarex
Field: NM Lea County (NAD 83)
Structure / Slot: Cimarex Taos Federal #4H / Cimarex Taos Federal #4H
Well: Cimarex Taos Federal #4H
Borehole: Original Borehole
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Taos Federal #4H Rev0 MA 17Jan13
Survey Date: January 17, 2013
Tort / AHD / DDI / ERD Ratio: 90.003 ° / 4732.958 ft / 5.834 / 0.629
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 10' 1.63453", W 104° 13' 24.04540"
Location Grid N/E Y/X: N 424550.900 ftUS, E 575370.300 ftUS
CRS Grid Convergence Angle: 0.0586 °
Grid Scale Factor: 0.99991042

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 0.413 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: Ground Level
TVD Reference Elevation: 3400.000 ft above MSL
Seabed / Ground Elevation: 3400.000 ft above MSL
Magnetic Declination: 7.788 °
Total Gravity Field Strength: 998.4829mgn (9.80665 Based)
Total Magnetic Field Strength: 48325.018 nT
Magnetic Dip Angle: 59.935 °
Declination Date: January 17, 2013
Magnetic Declination Model: BGGM 2012
North Reference: Grid North
Grid Convergence Used: 0.0586 °
Total Corr Mag North->Grid North: 7.7293 °
Local Coord Referenced To: Structure Reference Point

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)
Cimarex Taos Federal #4H SHL	0.00	0.00	0.41	0.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	N/A
	100.00	0.00	0.41	100.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	200.00	0.00	0.41	200.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	300.00	0.00	0.41	300.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	400.00	0.00	0.41	400.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	500.00	0.00	0.41	500.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	600.00	0.00	0.41	600.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	700.00	0.00	0.41	700.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	800.00	0.00	0.41	800.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	900.00	0.00	0.41	900.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	1000.00	0.00	0.41	1000.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	1100.00	0.00	0.41	1100.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	1200.00	0.00	0.41	1200.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	1300.00	0.00	0.41	1300.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	1400.00	0.00	0.41	1400.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	1500.00	0.00	0.41	1500.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	1600.00	0.00	0.41	1600.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	1700.00	0.00	0.41	1700.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	1800.00	0.00	0.41	1800.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	1900.00	0.00	0.41	1900.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	2000.00	0.00	0.41	2000.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	2100.00	0.00	0.41	2100.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	2200.00	0.00	0.41	2200.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	2300.00	0.00	0.41	2300.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	2400.00	0.00	0.41	2400.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	2500.00	0.00	0.41	2500.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	2600.00	0.00	0.41	2600.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	2700.00	0.00	0.41	2700.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	2800.00	0.00	0.41	2800.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	2900.00	0.00	0.41	2900.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")	Closure (ft)	Closure Azimuth (°)	DLS ("/100ft)
	3000.00	0.00	0.41	3000.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	3100.00	0.00	0.41	3100.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	3200.00	0.00	0.41	3200.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	3300.00	0.00	0.41	3300.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	3400.00	0.00	0.41	3400.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	3500.00	0.00	0.41	3500.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	3600.00	0.00	0.41	3600.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	3700.00	0.00	0.41	3700.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	3800.00	0.00	0.41	3800.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	3900.00	0.00	0.41	3900.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	4000.00	0.00	0.41	4000.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	4100.00	0.00	0.41	4100.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	4200.00	0.00	0.41	4200.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	4300.00	0.00	0.41	4300.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	4400.00	0.00	0.41	4400.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	4500.00	0.00	0.41	4500.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	4600.00	0.00	0.41	4600.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	4700.00	0.00	0.41	4700.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	4800.00	0.00	0.41	4800.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	4900.00	0.00	0.41	4900.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	5000.00	0.00	0.41	5000.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	5100.00	0.00	0.41	5100.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	5200.00	0.00	0.41	5200.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	5300.00	0.00	0.41	5300.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	5400.00	0.00	0.41	5400.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	5500.00	0.00	0.41	5500.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	5600.00	0.00	0.41	5600.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	5700.00	0.00	0.41	5700.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	5800.00	0.00	0.41	5800.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	5900.00	0.00	0.41	5900.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	6000.00	0.00	0.41	6000.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	6100.00	0.00	0.41	6100.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	6200.00	0.00	0.41	6200.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	6300.00	0.00	0.41	6300.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	6400.00	0.00	0.41	6400.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	6500.00	0.00	0.41	6500.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	6600.00	0.00	0.41	6600.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	6700.00	0.00	0.41	6700.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	6800.00	0.00	0.41	6800.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	6900.00	0.00	0.41	6900.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
	7000.00	0.00	0.41	7000.00	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
KOP - Build 12'/100'	7048.50	0.00	0.41	7048.50	0.00	0.00	0.00	424550.90	575370.30	N 32 10 1.63	W 104 13 24.05	0.00	0.00	0.00
DLS Curve	7100.00	6.18	0.41	7099.90	2.77	2.77	0.02	424553.67	575370.32	N 32 10 1.66	W 104 13 24.05	2.77	0.41	12.00
	7200.00	18.18	0.41	7197.47	23.83	23.83	0.17	424574.73	575370.47	N 32 10 1.87	W 104 13 24.04	23.83	0.41	12.00
	7300.00	30.18	0.41	7288.53	64.72	64.71	0.47	424615.61	575370.77	N 32 10 2.27	W 104 13 24.04	64.72	0.41	12.00
	7400.00	42.18	0.41	7369.10	123.64	123.63	0.89	424674.52	575371.19	N 32 10 2.86	W 104 13 24.03	123.64	0.41	12.00
	7500.00	54.18	0.41	7435.67	198.02	198.02	1.43	424748.90	575371.73	N 32 10 3.59	W 104 13 24.03	198.02	0.41	12.00
	7600.00	66.18	0.41	7485.31	284.62	284.61	2.06	424835.48	575372.36	N 32 10 4.45	W 104 13 24.02	284.62	0.41	12.00
	7700.00	78.17	0.41	7515.87	379.64	379.63	2.74	424930.50	575373.04	N 32 10 5.39	W 104 13 24.01	379.64	0.41	12.00
Landing Point	7798.56	90.00	0.41	7526.00	477.50	477.49	3.45	425028.34	575373.75	N 32 10 6.36	W 104 13 24.00	477.50	0.41	12.00
	7800.00	90.00	0.41	7526.00	478.94	478.93	3.46	425029.79	575373.76	N 32 10 6.37	W 104 13 24.00	478.94	0.41	0.00
	7900.00	90.00	0.41	7526.00	578.94	578.93	4.18	425129.78	575374.48	N 32 10 7.36	W 104 13 23.99	578.94	0.41	0.00
	8000.00	90.00	0.41	7526.00	678.94	678.93	4.91	425229.76	575375.21	N 32 10 8.35	W 104 13 23.98	678.94	0.41	0.00
	8100.00	90.00	0.41	7526.00	778.94	778.92	5.63	425329.75	575375.93	N 32 10 9.34	W 104 13 23.97	778.94	0.41	0.00

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")	Closure (ft)	Closure Azimuth (°)	DLS ("/100ft)
	8200.00	90.00	0.41	7526.00	878.94	878.92	6.35	425429.74	575376.65	N 32 10 10.33	W 104 13 23.96	878.94	0.41	0.00
	8300.00	90.00	0.41	7526.00	978.94	978.92	7.07	425529.73	575377.37	N 32 10 11.32	W 104 13 23.95	978.94	0.41	0.00
	8400.00	90.00	0.41	7526.00	1078.94	1078.92	7.79	425629.72	575378.09	N 32 10 12.31	W 104 13 23.94	1078.94	0.41	0.00
	8500.00	90.00	0.41	7526.00	1178.94	1178.91	8.52	425729.71	575378.82	N 32 10 13.30	W 104 13 23.93	1178.94	0.41	0.00
	8600.00	90.00	0.41	7526.00	1278.94	1278.91	9.24	425829.69	575379.54	N 32 10 14.29	W 104 13 23.92	1278.94	0.41	0.00
	8700.00	90.00	0.41	7526.00	1378.94	1378.91	9.96	425929.68	575380.26	N 32 10 15.28	W 104 13 23.91	1378.94	0.41	0.00
	8800.00	90.00	0.41	7526.00	1478.94	1478.91	10.68	426029.67	575380.98	N 32 10 16.27	W 104 13 23.90	1478.94	0.41	0.00
	8900.00	90.00	0.41	7526.00	1578.94	1578.90	11.40	426129.66	575381.70	N 32 10 17.26	W 104 13 23.89	1578.94	0.41	0.00
	9000.00	90.00	0.41	7526.00	1678.94	1678.90	12.12	426229.65	575382.42	N 32 10 18.25	W 104 13 23.88	1678.94	0.41	0.00
	9100.00	90.00	0.41	7526.00	1778.94	1778.90	12.85	426329.64	575383.14	N 32 10 19.24	W 104 13 23.87	1778.94	0.41	0.00
	9200.00	90.00	0.41	7526.00	1878.94	1878.90	13.57	426429.62	575383.86	N 32 10 20.23	W 104 13 23.87	1878.94	0.41	0.00
	9300.00	90.00	0.41	7526.00	1978.94	1978.89	14.29	426529.61	575384.59	N 32 10 21.22	W 104 13 23.86	1978.94	0.41	0.00
	9400.00	90.00	0.41	7526.00	2078.94	2078.89	15.01	426629.60	575385.31	N 32 10 22.21	W 104 13 23.85	2078.94	0.41	0.00
	9500.00	90.00	0.41	7526.00	2178.94	2178.89	15.73	426729.59	575386.03	N 32 10 23.19	W 104 13 23.84	2178.94	0.41	0.00
	9600.00	90.00	0.41	7526.00	2278.94	2278.89	16.45	426829.58	575386.75	N 32 10 24.18	W 104 13 23.83	2278.94	0.41	0.00
	9700.00	90.00	0.41	7526.00	2378.94	2378.88	17.17	426929.56	575387.47	N 32 10 25.17	W 104 13 23.82	2378.94	0.41	0.00
	9800.00	90.00	0.41	7526.00	2478.94	2478.88	17.89	427029.55	575388.19	N 32 10 26.16	W 104 13 23.81	2478.94	0.41	0.00
	9900.00	90.00	0.41	7526.00	2578.94	2578.88	18.61	427129.54	575388.91	N 32 10 27.15	W 104 13 23.80	2578.94	0.41	0.00
	10000.00	90.00	0.41	7526.00	2678.94	2678.88	19.33	427229.53	575389.63	N 32 10 28.14	W 104 13 23.79	2678.94	0.41	0.00
	10100.00	90.00	0.41	7526.00	2778.94	2778.87	20.05	427329.52	575390.35	N 32 10 29.13	W 104 13 23.78	2778.94	0.41	0.00
	10200.00	90.00	0.41	7526.00	2878.94	2878.87	20.77	427429.51	575391.07	N 32 10 30.12	W 104 13 23.77	2878.94	0.41	0.00
	10300.00	90.00	0.41	7526.00	2978.94	2978.87	21.49	427529.49	575391.79	N 32 10 31.11	W 104 13 23.76	2978.94	0.41	0.00
	10400.00	90.00	0.41	7526.00	3078.94	3078.86	22.21	427629.48	575392.51	N 32 10 32.10	W 104 13 23.75	3078.94	0.41	0.00
	10500.00	90.00	0.41	7526.00	3178.94	3178.86	22.93	427729.47	575393.23	N 32 10 33.09	W 104 13 23.74	3178.94	0.41	0.00
	10600.00	90.00	0.41	7526.00	3278.94	3278.86	23.65	427829.46	575393.95	N 32 10 34.08	W 104 13 23.73	3278.94	0.41	0.00
	10700.00	90.00	0.41	7526.00	3378.94	3378.86	24.37	427929.45	575394.67	N 32 10 35.07	W 104 13 23.72	3378.94	0.41	0.00
	10800.00	90.00	0.41	7526.00	3478.94	3478.85	25.09	428029.44	575395.39	N 32 10 36.06	W 104 13 23.71	3478.94	0.41	0.00
	10900.00	90.00	0.41	7526.00	3578.94	3578.85	25.81	428129.42	575396.11	N 32 10 37.05	W 104 13 23.70	3578.94	0.41	0.00
	11000.00	90.00	0.41	7526.00	3678.94	3678.85	26.53	428229.41	575396.83	N 32 10 38.04	W 104 13 23.69	3678.94	0.41	0.00
	11100.00	90.00	0.41	7526.00	3778.94	3778.85	27.25	428329.40	575397.55	N 32 10 39.03	W 104 13 23.68	3778.94	0.41	0.00
	11200.00	90.00	0.41	7526.00	3878.94	3878.84	27.97	428429.39	575398.26	N 32 10 40.02	W 104 13 23.67	3878.94	0.41	0.00
	11300.00	90.00	0.41	7526.00	3978.94	3978.84	28.69	428529.38	575398.98	N 32 10 41.01	W 104 13 23.66	3978.94	0.41	0.00
	11400.00	90.00	0.41	7526.00	4078.94	4078.84	29.40	428629.37	575399.70	N 32 10 42.00	W 104 13 23.65	4078.94	0.41	0.00
	11500.00	90.00	0.41	7526.00	4178.94	4178.84	30.12	428729.35	575400.42	N 32 10 42.98	W 104 13 23.65	4178.94	0.41	0.00
	11600.00	90.00	0.41	7526.00	4278.94	4278.83	30.84	428829.34	575401.14	N 32 10 43.97	W 104 13 23.64	4278.94	0.41	0.00
	11700.00	90.00	0.41	7526.00	4378.94	4378.83	31.56	428929.33	575401.86	N 32 10 44.96	W 104 13 23.63	4378.94	0.41	0.00
	11800.00	90.00	0.41	7526.00	4478.94	4478.83	32.28	429029.32	575402.58	N 32 10 45.95	W 104 13 23.62	4478.94	0.41	0.00
	11900.00	90.00	0.41	7526.00	4578.94	4578.83	33.00	429129.31	575403.29	N 32 10 46.94	W 104 13 23.61	4578.94	0.41	0.00
	12000.00	90.00	0.41	7526.00	4678.94	4678.82	33.72	429229.29	575404.01	N 32 10 47.93	W 104 13 23.60	4678.94	0.41	0.00
Cimarex Taos Federal #4H PBHL	12054.01	90.00	0.41	7526.00	4732.96	4732.83	34.10	429283.30	575404.40	N 32 10 48.47	W 104 13 23.59	4732.96	0.41	0.00

Survey Type: Non-Def Plan

Survey Error Model: ISCWSA Rev 0 *** 3-D 95.000% Confidence 2.7955 sigma
Survey Program:

Description	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	0.000	12054.012	1/100.000	30.000	30.000	SLB_MWD-STD	Original Borehole / Cimarex Taos Federal #4H Rev0 MA 17Jan13

Drilling 12-1/4" hole
below 13 3/8" Casing

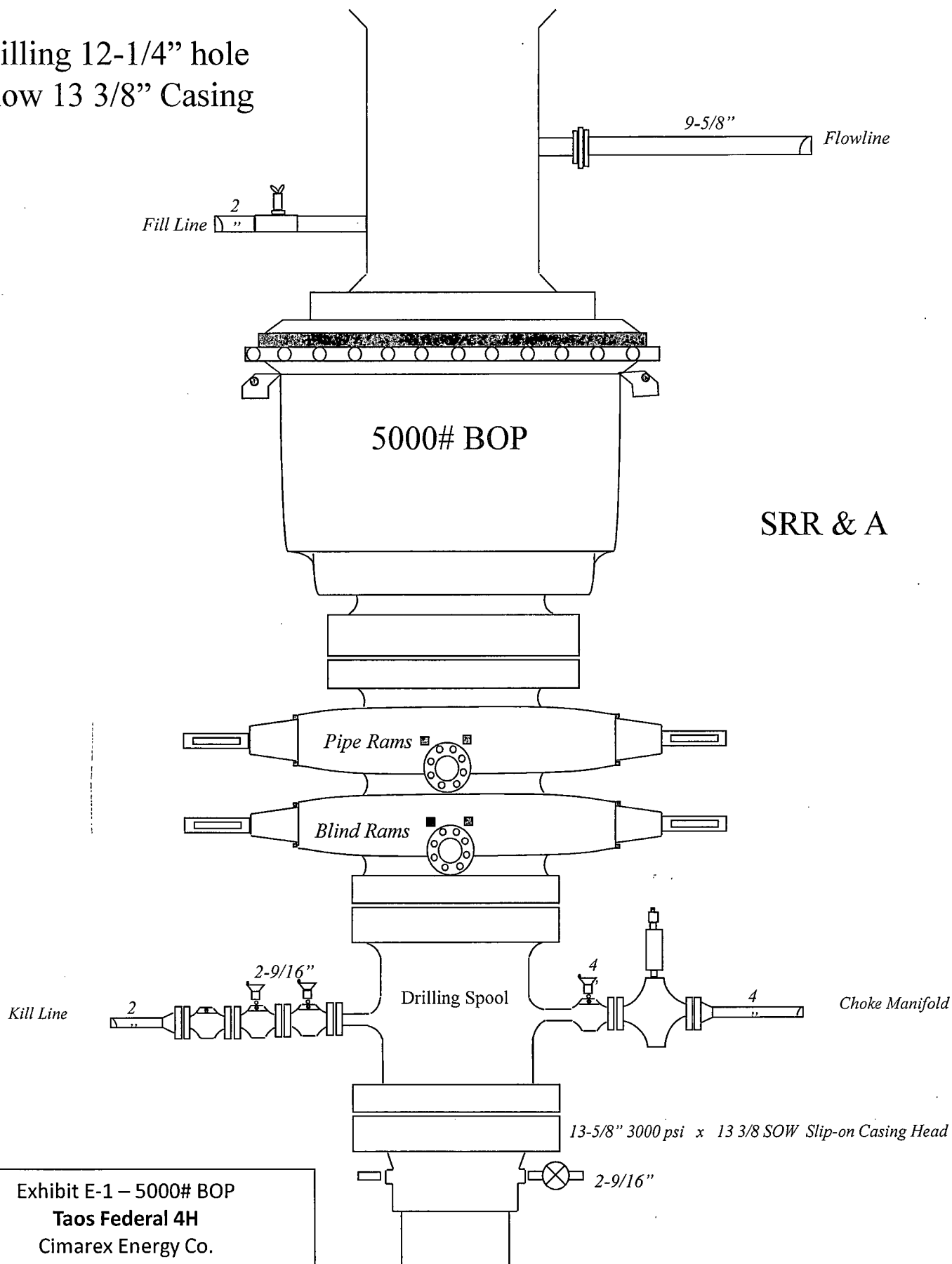
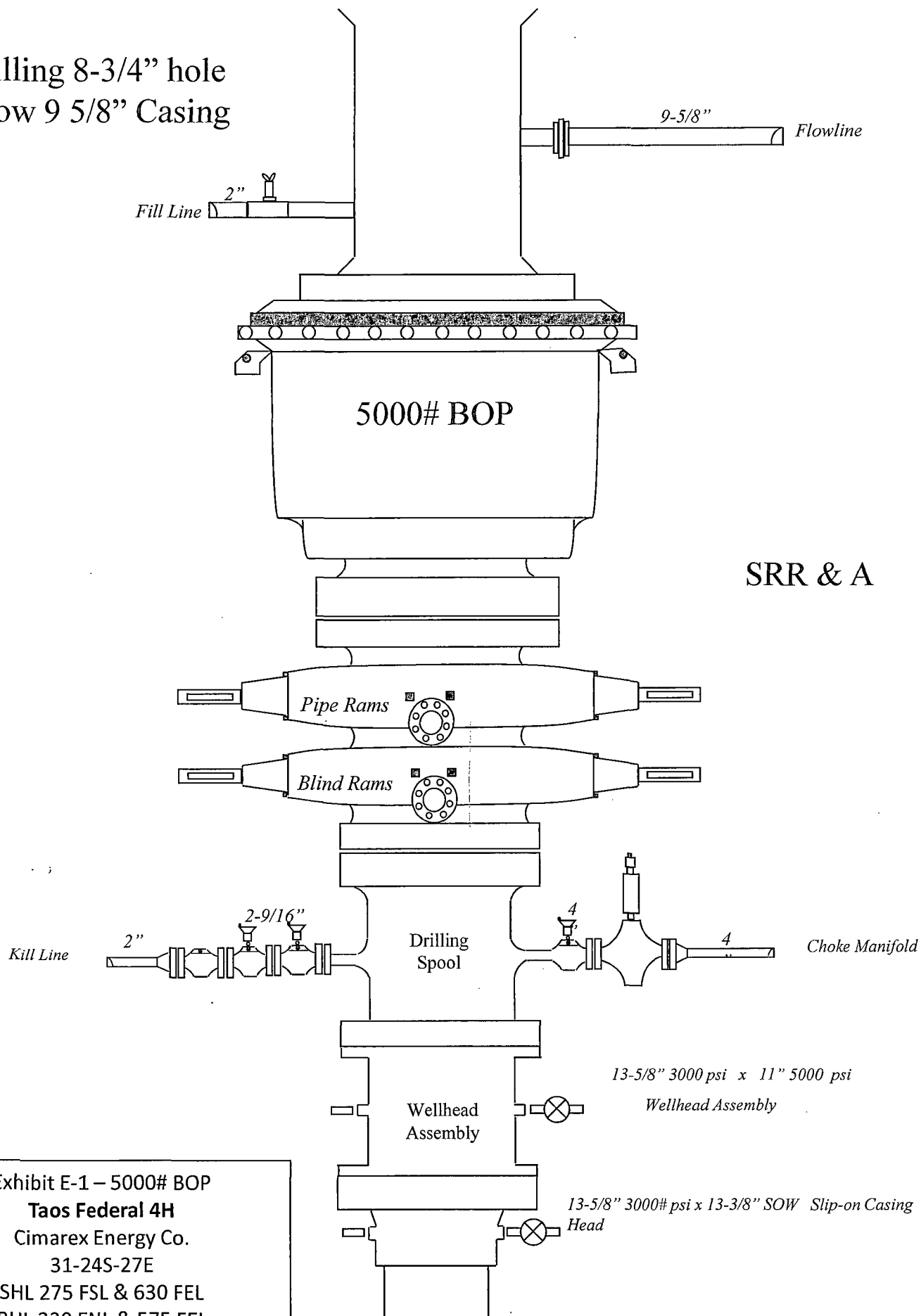


Exhibit E-1 – 5000# BOP
Taos Federal 4H
Cimarex Energy Co.
31-24S-27E
SHL 275 FSL & 630 FEL
BHL 330 FNL & 575 FEL
Eddy County, NM

Drilling 8-3/4" hole
below 9 5/8" Casing

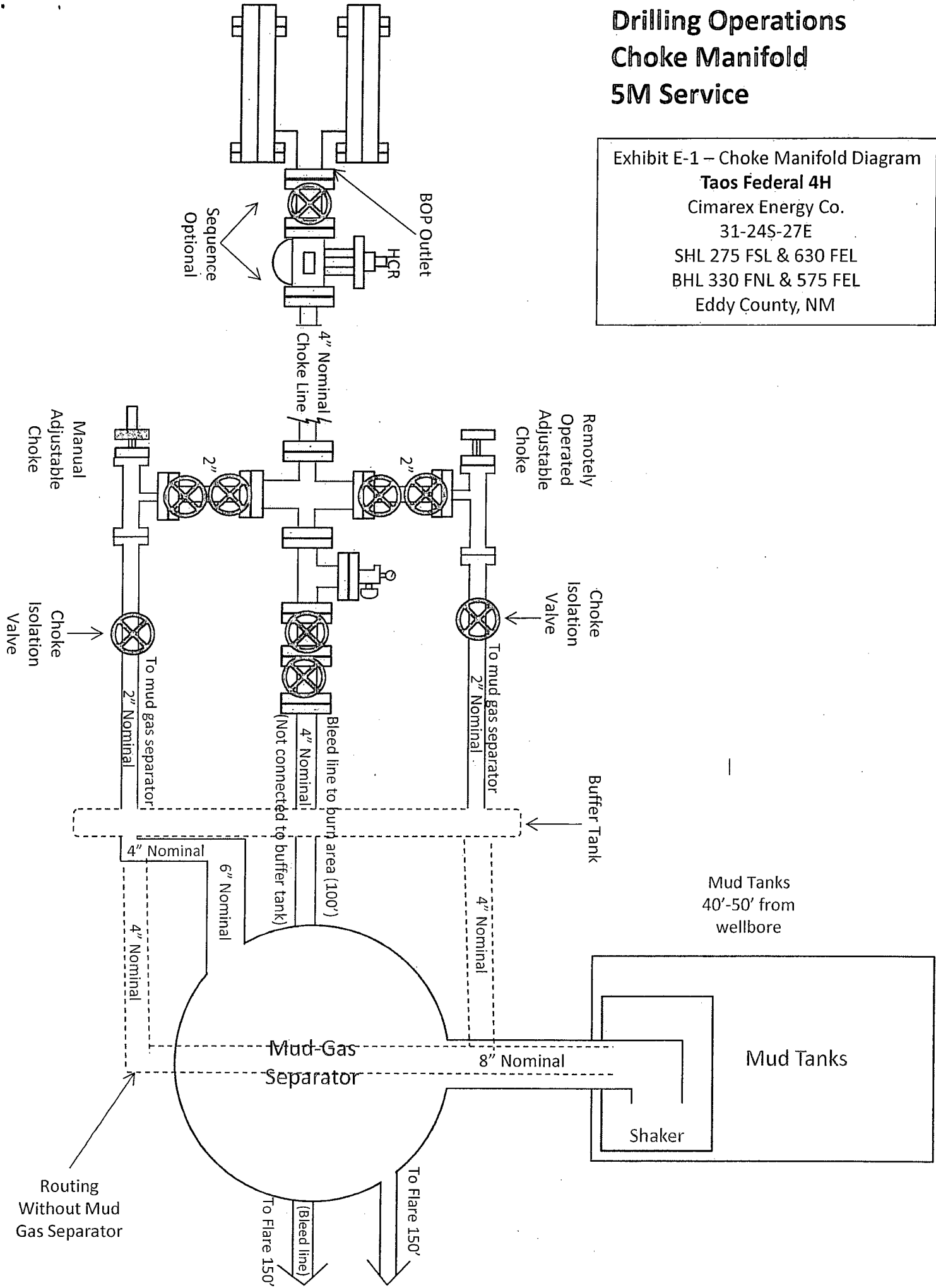


SRR & A

Exhibit E-1 – 5000# BOP
Taos Federal 4H
Cimarex Energy Co.
31-24S-27E
SHL 275 FSL & 630 FEL
BHL 330 FNL & 575 FEL
Eddy County, NM

Drilling Operations
Choke Manifold
5M Service

Exhibit E-1 – Choke Manifold Diagram
Taos Federal 4H
Cimarex Energy Co.
31-24S-27E
SHL 275 FSL & 630 FEL
BHL 330 FNL & 575 FEL
Eddy County, NM





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:

James H. Houser

Date:

3/8/2011



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			
<u>Hose assembly pressure tested with water at ambient temperature.</u>			
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. Jaine</i>		Approved: <i>[Signature]</i>



Midwest Hose
& Specialty, Inc.

Internal Hydrostatic Test Graph

March 3, 2011

Customer: Houston

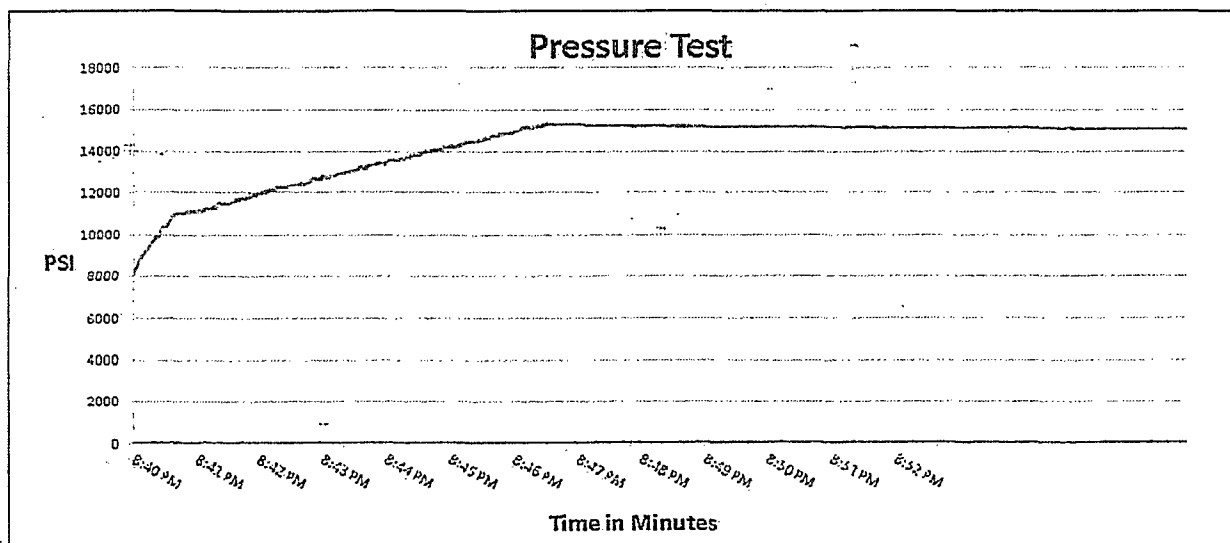
Pick Ticket #: 94260

Hose Specifications

<u>Hose Type</u>	<u>Length</u>
C & K	45'
<u>I.D.</u>	<u>O.D.</u>
4"	6.09"
<u>Working Pressure</u>	<u>Burst Pressure</u>
10000 PSI	Standard Safety Multiplier Applies

Verification

<u>Type of Fitting</u>	<u>Coupling Method</u>
41/16 10K	Swage
<u>Die Size</u>	<u>Final O.D.</u>
6.38"	6.25"
<u>Hose Serial #</u>	<u>Hose Assembly Serial #</u>
5544	79793



Test Pressure
15000 PSI

Time Held at Test Pressure
11 Minutes

Actual Burst Pressure

Peak Pressure
15483 PSI

Comments: Hose assembly pressure tested with water at ambient temperature.

Tested By: Zac McConnell

[Signature]

Approved By: Kim Thomas

[Signature]

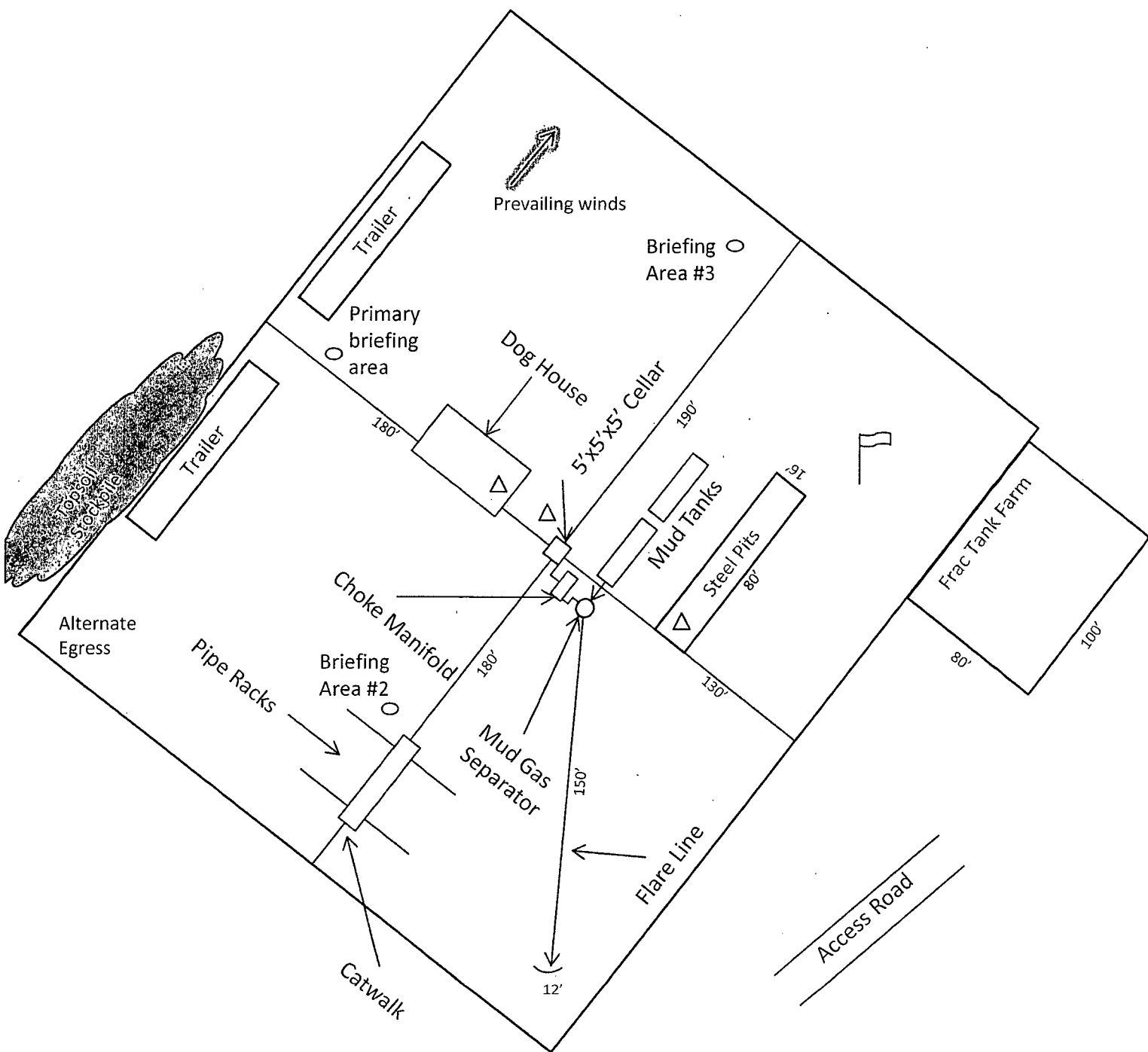


Midwest Hose
& Specialty, Inc.

Specification Sheet Choke & Kill Hose

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.

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

Taos Federal 4H

Cimarex Energy Co.

31-24S-27E

SHL 275 FSL & 630 FEL

BHL 330 FNL & 575 FEL

Eddy County, NM

- 1 All Company and Contract personnel admitted on location must be trained by a qualified H₂S safety instructor to the following:
 - A. Characteristics of H₂S
 - B. Physical effects and hazards
 - C. Principal and operation of H₂S detectors, warning system and briefing areas.
 - D. Evacuation procedure, routes and first aid.
 - E. Proper use of safety equipment & life support systems
 - F. Essential personnel meeting Medical Evaluation criteria will receive additional training on the proper use of 30 minute pressure demand air packs.
- 2 H₂S Detection and Alarm Systems:
 - A. H₂S sensors/detectors to be located on the drilling rig floor, in the base of the sub structure/cellar area, on the mud pits in the shale shaker area. Additional H₂S detectors may be placed as deemed necessary.
 - B. An audio alarm system will be installed on the derrick floor and in the top doghouse.
- 3 Windsock and/or wind streamers:
 - A. Windsock at mudpit area should be high enough to be visible.
 - B. Windsock on the rig floor and / or top doghouse 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 (H₂S present in dangerous concentration). Only H₂S trained and certified personnel admitted to location.
- 5 Well control equipment:
 - A. See exhibit "E-1"
- 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 H₂S has on tubular goods and other mechanical equipment.
- 9 If H₂S 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 H₂S scavengers if necessary.

H₂S Contingency Plan
Taos Federal #4H
Cimarex Energy Co.
UL: P, Sec. 31, 24S, 27E
Eddy Co., NM

Emergency Procedures

In the event of a release of gas containing H₂S, 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 H₂S 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 H₂S, 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 (SO₂). 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 H₂S and SO₂

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H ₂ S	1.189 Air=1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO ₂	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).

H₂S Contingency Plan Emergency Contacts

Taos Federal #4H
Cimarex Energy Co.
UL: P, Sec. 31, 24S, 27E
Eddy Co., NM

Company Office

Cimarex Energy Co. of Colorado	800-969-4789
Co. Office and After-Hours Menu	

Key Personnel

Name	Title	Office	Mobile
Larry Seigrist	Drilling Manager	432-620-1934	580-243-8485
Doug McQuitty	Drilling Superintendent	432-620-1933	806-640-2605
Scott Lucas	Drilling Superintendent	432-620-1989	432-894-5572
Conner Cromeens	Construction Foreman		432-270-0313
Roy Shirley	Construction Superintendent		432-634-2136

Artesia

Ambulance	911
State Police	575-746-2703
City Police	575-746-2703
Sheriff's Office	575-746-9888
Fire Department	575-746-2701
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
Fire Department	575-887-3798
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		

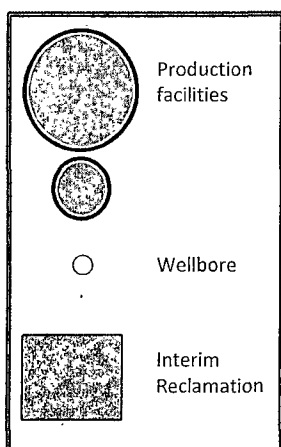
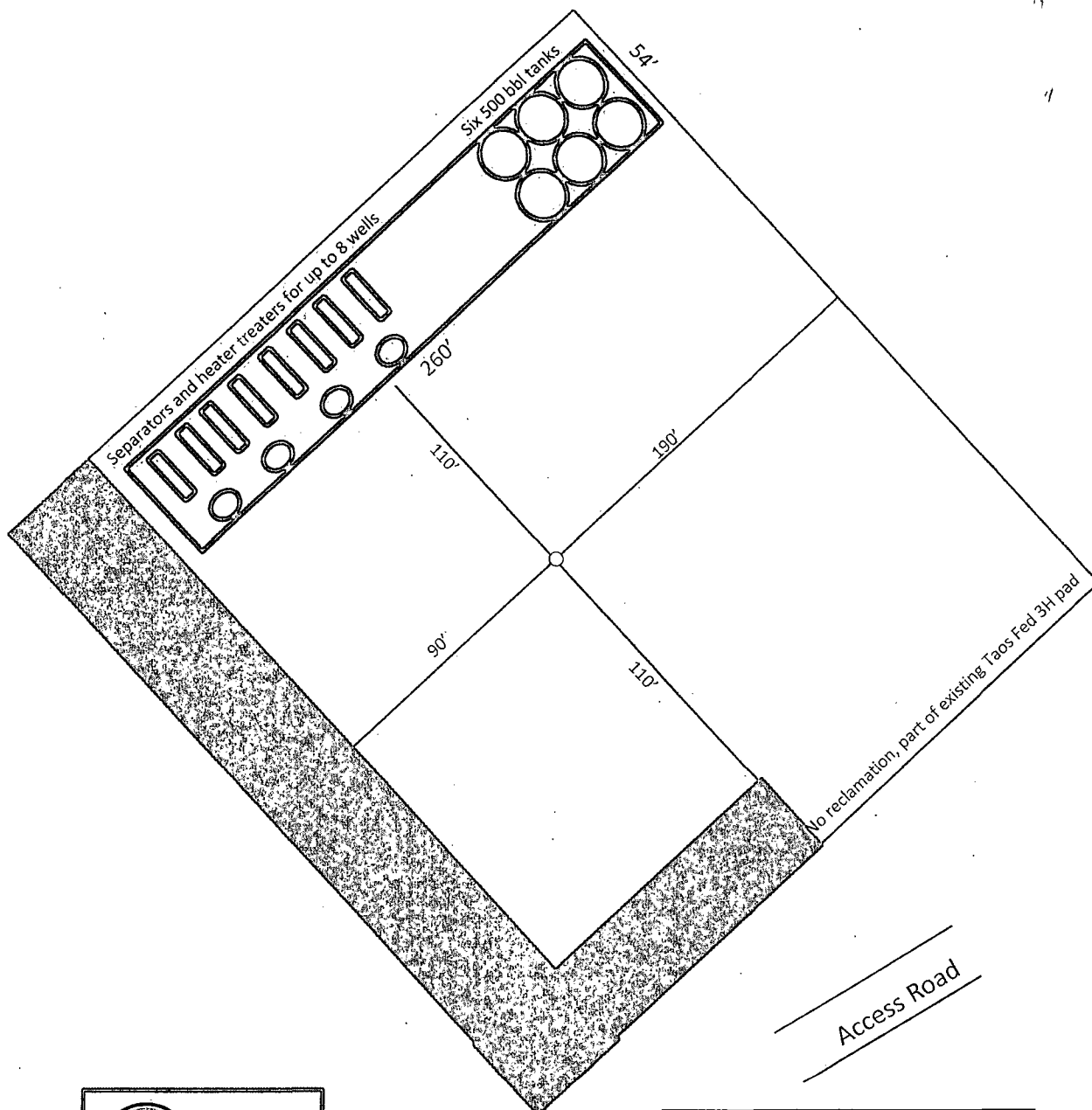


Exhibit D-1
 Production Facilities and
 Interim Reclamation Diagram
Taos Federal 4H
 Cimarex Energy Co.
 31-24S-27E
 SHL 275 FSL & 630 FEL
 BHL 330 FNL & 575 FEL
 Eddy County, NM

Surface Use Plan
Taos Federal #4H
Cimarex Energy Co.
UL: P, Sec. 31, 24S, 27E
Eddy Co., NM

1. **Existing Roads:** Area maps, Exhibit "A" shows the proposed well site as staked. Exhibit "B" is a reproduction of Eddy Co. General Highway Map. Exhibit "C" is a reproduction of a USGS Topographic Map, and Exhibit "C-1" is a well site layout map, showing proposed road to location and existing road. Existing road shown on Exhibits "C," "C-1," will be maintained in a condition equal to or better than current conditions.

- A. The maximum width of the driving surface will be 15.' The road will be crowned and ditched with a 2% slope from the tip of the crown to the edge of the driving surface. The ditches will be 1' deep with 3:1 slopes. The driving surface will be made of 6" rolled and compacted caliche.
- B. From the Junction of Black River Village and John D. Forehand, go South on John D. Forehand for 4.6 miles to lease road, go East on lease road to Taos Federal #3H and proposed location.

2. **Planned Access Roads:** No new planned access road.

3. **Planned Electric Line:** Approximately 300' of 480 volt, 4 wire, 3 phase, 2 spans of 40' poles, raptor spec E-line will be constructed to connect to existing eline as shown on Exhibit C-1.

4. **Location of Existing Wells in a One-Mile Radius - Exhibit A**

- A. Water wells - None known
- B. Disposal wells - None known
- C. Drilling wells - None known
- D. Producing wells - As shown on Exhibits "A"
- E. Abandoned wells - As shown on Exhibits "A"

5. **Location of Proposed Production Facilities:**

If on completion this well is a producer, a tank battery will be used and the necessary production equipment will be installed at the wellsite. Any changes to the facility or off site facilities will be accompanied by a sundry notice.

5. **Location and Type of Water Supply:**

Water will be purchased locally from a commercial source and trucked over the access roads.

6. **Source of Construction Material:**

If possible, native caliche will be obtained from the excavation of drill site. Topsoil will be pushed back from the drill site and existing caliche will be ripped and compacted. Then topsoil will be stockpiled on location as depicted on Exhibit "D" (rig layout). If additional material is needed, it will be purchased from a BLM-approved pit as near as possible to the well location.

7. Ancillary Facilities:

- A. No camps or airstrips to be constructed.

8. Well Site Layout:

- A. Exhibit "D" shows location and rig layout.
- B. Mud pits in the closed circulation system will be steel pits and the cuttings will be stored in steel containment pits.
- C. Cuttings will be stored in steel pits until they are hauled to a state-approved disposal facility.
- D. If the well is a producer, those areas of the location not essential to production facilities will be reclaimed and seeded per BLM requirements.

9. Plans for Restoration of Surface:

Rehabilitation of the location will start in a timely manner after all drilling operations cease. The type of reclamation will depend on whether the well is a producer or a dry hole.

Drainage systems, if any, will be reshaped to the original configuration with provisions made to alleviate erosion. These may need to be modified in certain circumstances to prevent inundation of the location's pad and surface facilities. After the area has been shaped and contoured, topsoil from the spoil pile will be placed over the disturbed area to the extent possible. Revegetation procedures will comply with BLM standards.

If the well is a dry hole, the pad and road area will be recountoured to match the existing terrain. Topsoil will be spread to the extent possible. Revegetation will comply with BLM standards.

Should the well be producer, those areas of the location not essential to production facilities and operations will be reclaimed and seeded per BLM requirements. Please see Production Facilities Layout Diagram, exhibit D-1

10 Other Information

- A. Topography consists of a sloping plane with loose tan sands. Vegetation is mainly yucca, mesquite and shin oak.
- B. The wellsite is on surface owned by Department of the Interior, Bureau of Land Management. The land is used mainly for farming, cattle ranching, recreational use, and oil and gas production.
- C. In lieu of an archaeological survey report, Cimarex will be submitting an MOA application for this well pad and access road since they are within the MOA boundary.
- D. There are no known dwellings within 1½ miles of this location.

11. On Site Notes and Information:

On January 11, 2013, A BLM onsite meeting was held with Barry Hunt, Cimarex representative, Legion Brumley with the BLM, and Basin Suveys. The permitted location was approved. The Taos Federal #4H was moved 25' North and 55' West in order to be 130' off the Taos Fed #3H wellbore and to square with the Taos Fed #3H well pad. V-door Southwest. Top soil West. Interim Reclamation: S, SW, SE, and W. Battery an L Shape at the NW corner of pad. Frac farm 60 X 60 on E SE. No New road required - access from Taos Fed #3H.

PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Cimarex Energy Co. of Colorado
LEASE NO.:	NMNM-96208
WELL NAME & NO.:	Taos Federal 4H
SURFACE HOLE FOOTAGE:	0275' FSL & 0630' FEL
BOTTOM HOLE FOOTAGE:	0330' FNL & 0575' FEL
LOCATION:	Section 31, T. 24 S., R 27 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**
- ☐ **Construction**
 - Notification
 - Topsoil
 - Closed Loop System
 - Federal Mineral Material Pits
 - Well Pads
 - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
 - Medium Cave/Karst
 - Logging Requirements
 - Waste Material and Fluids
- ☐ **Production (Post Drilling)**
 - Well Structures & Facilities
 - 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)

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) 234-5909 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-five (25) 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

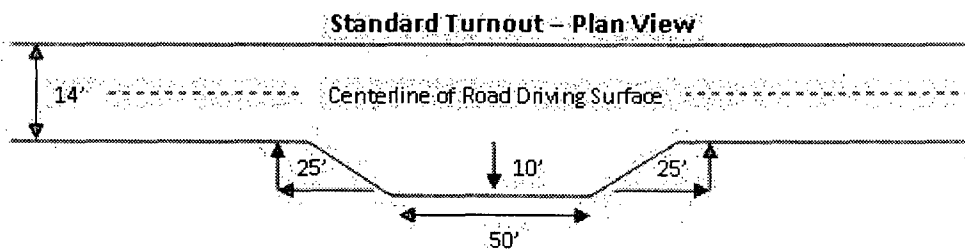
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

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:

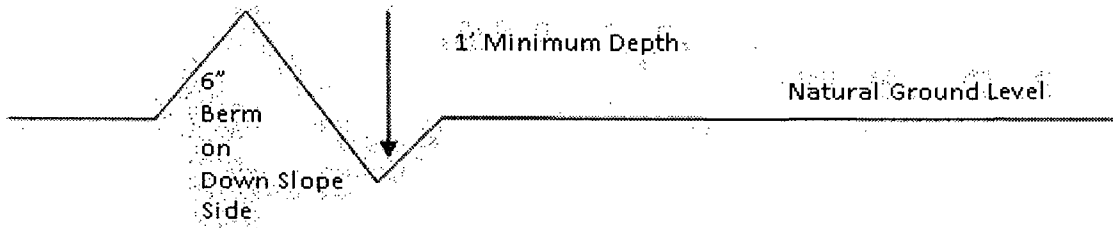


Drainage

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping 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.

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$400 \text{ foot road with } 4\% \text{ road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

Culvert Installations

Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

Cattleguards

An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations.

A gate shall be constructed and fastened securely to H-braces.

Fence Requirement

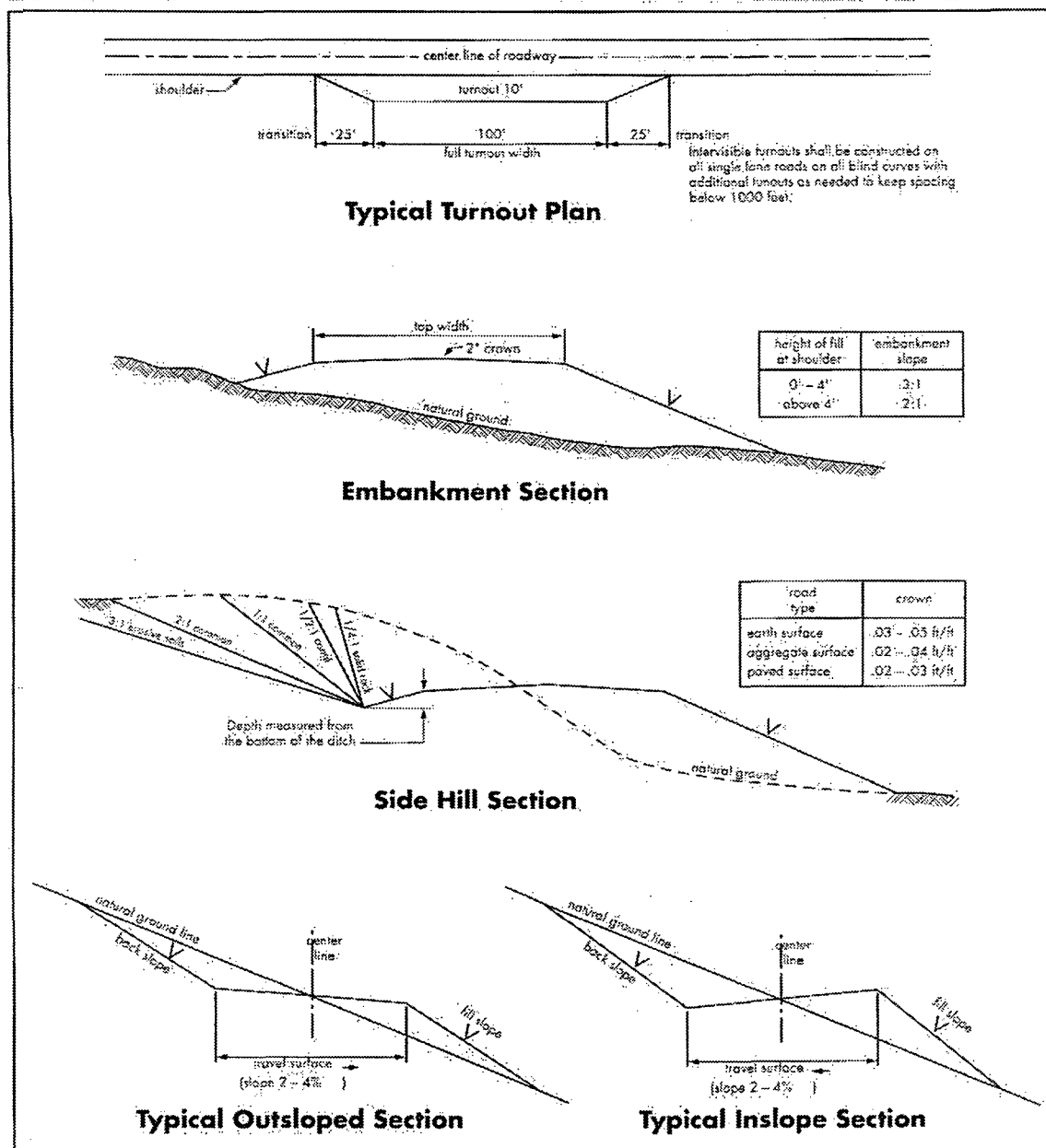
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

Public Access

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

Figure 1 – Cross Sections and Plans For Typical Road Sections



VII. DRILLING

A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)

☒ **Eddy County**

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,
(575) 361-2822

1. **Although there are no measured amounts of Hydrogen Sulfide reported, it is always a potential hazard. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.**
2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a “Major” violation.**
3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.
4. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The top and bottom of Salt are to be recorded on the Completion Report.**

B. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). 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.

Medium Cave/Karst

Possibility of lost circulation in the Castile and Delaware Groups.

Abnormal Pressures may be encountered in the Wolfcamp.

1. The 13-3/8 inch surface casing shall be set at approximately 585 feet and cemented to the surface. **If salt is encountered, set casing at least 25 feet above the salt.**
 - 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 cave/karst.

If 75% or greater lost circulation occurs while drilling the intermediate casing hole, the cement on the production casing must come to surface.

Formation below the 9-5/8" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

Centralization for production casing is approved as written.

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

☒ Cement should tie-back at least 200 feet into previous casing string. Operator shall provide method of verification.

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. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. **Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor..** If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).

3. 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**.

a. **For surface casing only:** If the BOP/BOPE is to be tested against casing, the wait on cement (WOC) time for that casing is to be met (see WOC statement at start of casing section). Independent service company required.

4. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 9-5/8 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.**
5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
 - a. In a water basin, 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. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
 - 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) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
 - c. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock.
 - d. The results of the test shall be reported to the appropriate BLM office.
 - e. 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.**
 - f. 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. This test shall be performed prior to the test at full stack pressure.

- g. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

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 from the BLM Standard Environmental Color Chart (CC-001: June 2008).

B. PIPELINES (no pipelines were applied for in the APD)

C. ELECTRIC LINES

STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES

A copy of the approved application 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 with native soil from the removed poles.

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 1, for Loamy 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 regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (small/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>
Plains lovegrass (<i>Eragrostis intermedia</i>)	0.5
Sand dropseed (<i>Sporobolus cryptandrus</i>)	1.0
Sideoats grama (<i>Bouteloua curtipendula</i>)	5.0
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