

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENTNMOCD
ArtesiaFORM APPROVED
OMB NO. 1004-0135
Expires: July 31, 2010**SUNDRY NOTICES AND REPORTS ON WELLS**
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.*5. Lease Serial No.
NMNM120350

6. If Indian, Allottee or Tribe Name

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

SUBMIT IN TRIPLICATE - Other instructions on reverse side.

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.

HORNSBY 35 FEDERAL COM 7H

2. Name of Operator

CIMAREX ENERGY COMPANY

Contact: ARICKA EASTERLING

E-Mail: aeasterling@cimarex.com

9. API Well No.

30-015-42168

3a. Address

202 S. CHEYENNE AVE, SUITE 1000
TULSA, OK 74103

3b. Phone No. (include area code)

Ph: 918-560-7060

10. Field and Pool, or Exploratory
WILDCAT BONE SPRING

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Sec 35 T26S R27E SESE 290 FSL 2050FEL

11. County or Parish, and State

EDDY COUNTY, NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
☒ Notice of Intent	☐ Acidize	☐ Deepen	☐ Production (Start/Resume)	☐ Water Shut-Off
☐ Subsequent Report	☐ Alter Casing	☐ Fracture Treat	☐ Reclamation	☐ Well Integrity
☐ Final Abandonment Notice	☐ Casing Repair	☐ New Construction	☐ Recomplete	☒ Other
	☐ Change Plans	☐ Plug and Abandon	☐ Temporarily Abandon	Change to Original A
	☐ Convert to Injection	☐ Plug Back	☐ Water Disposal	PD

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the site is ready for final inspection.)

Cimarex respectfully request approval to change the original drilling plan for the above referenced well. Cimarex proposes to change the BHL there by changing the directional plan. No additional disturbance is required. Please see attached directional plan and plat.

Approved:

BHL: 330 FNL & 2020 FEL Sec 26-26S-27E

Proposed:

BHL: 330 FNL & 2590 FWL Sec 26-26S-27E

Rejected - does not match
SHL move already submitted.

NM OIL CONSERVATION
ARTESIA DISTRICT

DEC 12 2016

RECEIVED

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

Electronic Submission #357362 verified by the BLM Well Information System

For CIMAREX ENERGY COMPANY, sent to the Carlsbad

Committed to AFMSS for processing by DEBORAH MCKINNEY on 11/08/2016 ()

Name (Printed/Typed) ARICKA EASTERLING

Title REGULATORY ANALYST

Signature

(Electronic Submission)

Date 11/08/2016

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved By
[Signature]

Title

12/05/2016

Date

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.

Office

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

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

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-42168	² Pool Code	³ Pool Name Wildcat; Bone Spring
⁴ Property Code	⁵ Property Name HORNSBY 35 FEDERAL COM	⁶ Well Number 7H
⁷ OGRID No. 215099	⁸ Operator Name CIMAREX ENERGY CO.	⁹ Elevation 3240.6'

"Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
2	35	26S	27E		290	SOUTH	2050	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
C	26	26S	27E		330	NORTH	2590	WEST	EDDY

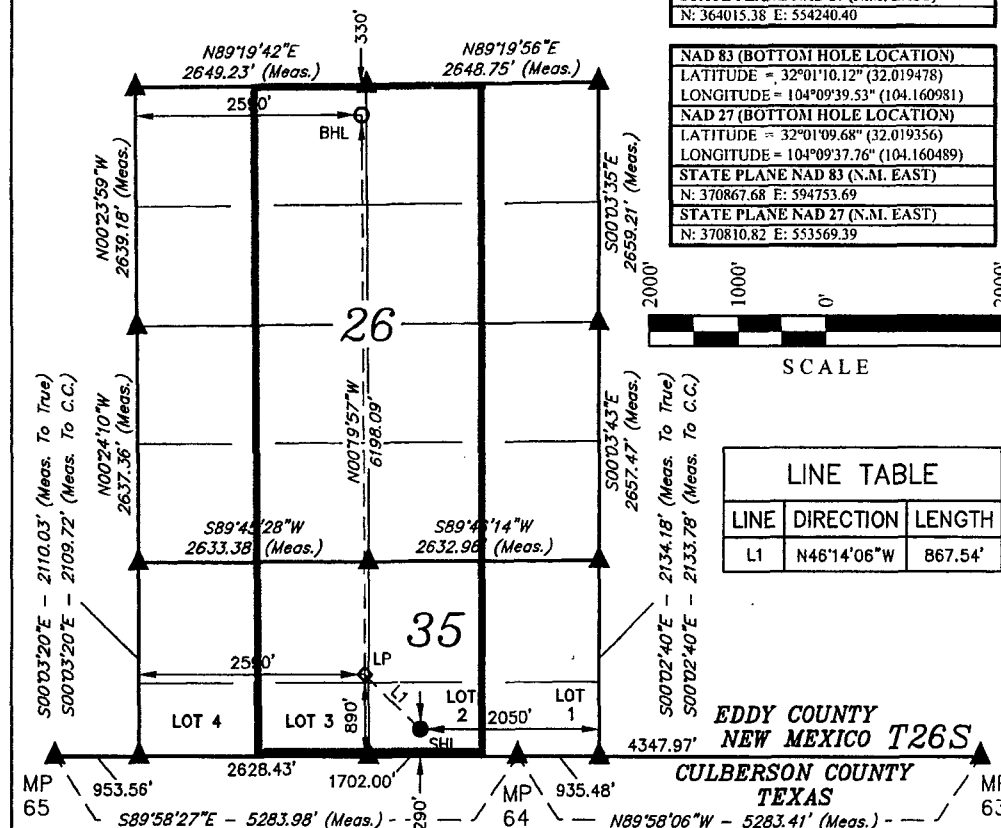
¹² Dedicated Acres 448.20	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.
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No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

- = SURFACE HOLE LOCATION
◆ = LANDING POINT
○ = BOTTOM HOLE LOCATION
▲ = SECTION CORNER LOCATED

NOTE:
Distances referenced on plat
to section lines are
perpendicular.

REV: I 10-28-16 D.P. (BHL MOVE)



**17 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.

Aricka Easterling 11/7/16
Signature Date

Aricka Easterling

Printed Name

aeasterling@cimarex.com

E-mail Address

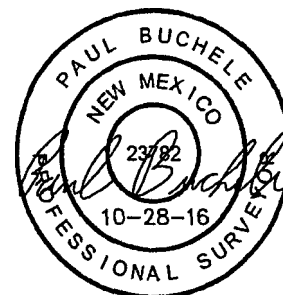
**18 SURVEYOR
CERTIFICATION**

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.

October 5, 2015

Date of Survey

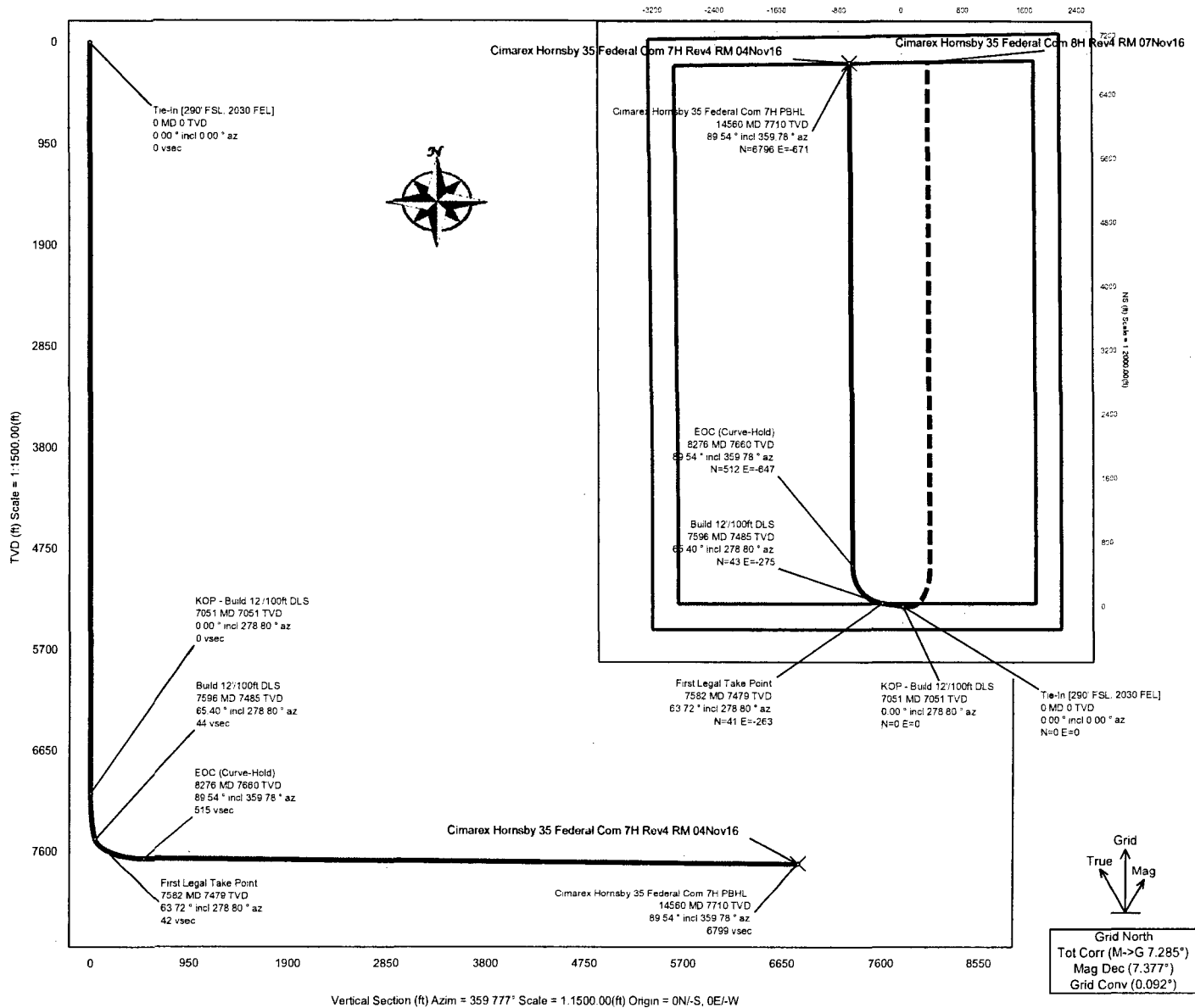
Signature and Seal of Professional Surveyor:



Certificate Number:

Borehole: Original Borehole	Well: Cimarex Hornsby 35 Federal Com 7H	Field: NM Eddy County (NAD 83)	Structure: Cimarex Hornsby 35 Federal Com 7H
Gravity & Magnetic Parameters			
Model: HDGM 2018	Dip: 59.715°	Date: 04-Nov-2016	Surface Location: NAD83 New Mexico State Plane, Eastern Zone, US Feet
MagDec: 7.377°	FS: 48047.873nT	Gravity FS: 998.428mgn (9.80665 Based)	Miscellaneous Cimarex Slot: Hornsby 35 Federal Com 7H Plan: Cimarex Hornsby 35 Federal Com 7H Rev4 RM 04Nov16
L: N 32 0 2.88		North: 364072.12NUS	Grid Conv: 0.0825°
Lon: W 104 9 31.88		East: 565424.85EUS	Scale Fact: 0.89991244
		TVD Ref: RKB(280.6R above MSL)	

EW (ft) Scale = 1:2000 (0.001)



Critical Points

Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS
Tie-In [290' FSL, 2030 FEL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
KOP - Build 12'/100ft DLS	7050.98	0.00	278.80	7050.98	0.00	0.00	0.00	0.00
First Legal Take Point	7582.00	63.72	278.80	7479.10	66.03	40.71	-262.95	12.00
Build 12'/100ft DLS	7595.98	65.40	278.80	7485.11	69.16	42.64	-275.42	12.00
EOC (Curve-Hold)	8276.11	89.54	359.78	7660.00	572.61	512.22	-647.41	12.00
Cimarex Hornsby 35 Federal Com 7H PBHL	14560.31	89.54	359.78	7710.00	6829.23	6796.17	-671.22	0.00

CONTROLLED	
Plan ref	Cimarex Hornsby 35 Federal Com 7H Rev4 RM 04Nov16
Drawing ref	
Copy number	of 3
Date	07-Nov-2016
1	Client
2	Client
3	Office
4	Office
Copy number for	

Cimarex Hornsby 35 Federal Com 7H Rev4 RM 04Nov16 Proposal

Geodetic Report

(Non-Def Plan)



Report Date: November 07, 2016 - 11:48 AM
Client: Cimarex
Field: NM Eddy County (NAD 83)
Structure / Slot: Cimarex Hornsby 35 Federal Com 7H / Cimarex Hornsby 35 Federal Com 7H
Well: Cimarex Hornsby 35 Federal Com 7H
Borehole: Original Borehole
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Hornsby 35 Federal Com 7H Rev4 RM 04Nov16
Survey Date: November 04, 2016
Tort / AHD / DDI / ERD Ratio: 147.016 ° / 7214.212 ft / 6.302 / 0.936
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 0' 2.85952", W 104° 9' 31.85967"
Location Grid N/E Y/X: N 364072.120 RUS, E 595424.850 RUS
CRS Grid Convergence Angle: 0.0925 °
Grid Scale Factor: 0.99991244
Version / Patch: 2.10.254.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 354.432 ° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3260.600 ft above MSL
Seabed / Ground Elevation: 3240.600 ft above MSL
Magnetic Declination: 7.377 °
Total Gravity Field Strength: 998.427mgm (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 48047.873 nT
Magnetic Dip Angle: 59.715 °
Declination Date: November 04, 2016
Magnetic Declination Model: HDGM 2016
North Reference: Grid North
Grid Convergence Used: 0.0925 °
Total Corr Mag North->Grid North: 7.2845 °
Local Coord Referenced To: Structure Reference Point

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (RUS)	Easting (RUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
Tie-In [290' FSL, 2030 FEL]	0.00											
	100.00	0.00	278.80	100.00	0.00	0.00	0.00	N/A	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	
	200.00	0.00	278.80	200.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	
	300.00	0.00	278.80	300.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	
	400.00	0.00	278.80	400.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	
	500.00	0.00	278.80	500.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	
	600.00	0.00	278.80	600.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	
	700.00	0.00	278.80	700.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	
	800.00	0.00	278.80	800.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	
	900.00	0.00	278.80	900.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	
	1000.00	0.00	278.80	1000.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	
	1100.00	0.00	278.80	1100.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	
	1200.00	0.00	278.80	1200.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	
	1300.00	0.00	278.80	1300.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	
	1400.00	0.00	278.80	1400.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	
	1500.00	0.00	278.80	1500.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	
	1600.00	0.00	278.80	1600.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	
	1700.00	0.00	278.80	1700.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	
	1800.00	0.00	278.80	1800.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	
	1900.00	0.00	278.80	1900.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	
	2000.00	0.00	278.80	2000.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	
	2100.00	0.00	278.80	2100.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	
	2200.00	0.00	278.80	2200.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	
	2300.00	0.00	278.80	2300.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	
	2400.00	0.00	278.80	2400.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	
	2500.00	0.00	278.80	2500.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	2600.00	0.00	278.80	2600.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	2700.00	0.00	278.80	2700.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	2800.00	0.00	278.80	2800.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	2900.00	0.00	278.80	2900.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	3000.00	0.00	278.80	3000.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	3100.00	0.00	278.80	3100.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	3200.00	0.00	278.80	3200.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	3300.00	0.00	278.80	3300.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	3400.00	0.00	278.80	3400.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	3500.00	0.00	278.80	3500.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	3600.00	0.00	278.80	3600.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	3700.00	0.00	278.80	3700.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	3800.00	0.00	278.80	3800.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	3900.00	0.00	278.80	3900.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	4000.00	0.00	278.80	4000.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	4100.00	0.00	278.80	4100.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	4200.00	0.00	278.80	4200.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	4300.00	0.00	278.80	4300.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	4400.00	0.00	278.80	4400.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	4500.00	0.00	278.80	4500.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	4600.00	0.00	278.80	4600.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	4700.00	0.00	278.80	4700.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	4800.00	0.00	278.80	4800.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	4900.00	0.00	278.80	4900.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	5000.00	0.00	278.80	5000.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	5100.00	0.00	278.80	5100.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	5200.00	0.00	278.80	5200.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	5300.00	0.00	278.80	5300.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	5400.00	0.00	278.80	5400.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	5500.00	0.00	278.80	5500.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	5600.00	0.00	278.80	5600.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	5700.00	0.00	278.80	5700.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	5800.00	0.00	278.80	5800.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	5900.00	0.00	278.80	5900.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	6000.00	0.00	278.80	6000.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	6100.00	0.00	278.80	6100.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	6200.00	0.00	278.80	6200.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	6300.00	0.00	278.80	6300.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	6400.00	0.00	278.80	6400.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	6500.00	0.00	278.80	6500.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	6600.00	0.00	278.80	6600.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	6700.00	0.00	278.80	6700.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	6800.00	0.00	278.80	6800.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	6900.00	0.00	278.80	6900.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	7000.00	0.00	278.80	7000.00	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
KOP - Build 12/100ft DLS	7050.98	0.00	278.80	7050.98	0.00	0.00	0.00	0.00	364072.12	595424.85	N 32 0 2.86 W 104 9 31.86	9 31.86
	7100.00	5.88	278.80	7099.91	0.62	0.38	-2.48	12.00	364072.50	595422.37	N 32 0 2.86 W 104 9 31.89	9 31.89
	7200.00	17.88	278.80	7197.59	5.72	3.53	-22.80	12.00	364075.65	595402.06	N 32 0 2.89 W 104 9 32.12	9 32.12
	7300.00	29.88	278.80	7288.86	15.75	9.71	-62.73	12.00	364081.83	595362.12	N 32 0 2.96 W 104 9 32.59	9 32.59
	7400.00	41.88	278.80	7389.74	30.27	18.66	-120.55	12.00	364090.78	595304.31	N 32 0 3.05 W 104 9 33.26	9 33.26
	7500.00	53.88	278.80	7436.68	48.64	29.99	-193.72	12.00	364102.11	595231.15	N 32 0 3.16 W 104 9 34.11	9 34.11
First Legal Take Point Build 12/100ft DLS	7582.00	63.72	278.80	7479.10	66.03	40.71	-262.95	12.00	364112.82	595161.92	N 32 0 3.27 W 104 9 34.91	9 34.91
	7595.98	65.40	278.80	7485.11	69.16	42.64	-275.42	12.00	364114.75	595149.45	N 32 0 3.29 W 104 9 35.06	9 35.06
	7600.00	65.43	279.33	7486.78	70.08	43.21	-279.03	12.00	364115.33	595145.84	N 32 0 3.29 W 104 9 35.10	9 35.10
	7700.00	66.74	292.38	7527.47	103.43	68.17	-366.70	12.00	364140.28	595058.18	N 32 0 3.54 W 104 9 36.12	9 36.12
	7800.00	69.10	305.09	7565.19	155.58	112.67	-447.69	12.00	364184.78	594977.20	N 32 0 3.98 W 104 9 37.06	9 37.06

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
EOC (Curve-Hold)	7900.00	72.36	317.32	7598.30	224.26	174.78	-518.48	12.00	364246.88	594906.42	N 32 0 4.60 W 104 9 37.88	9 37.88
	8000.00	76.35	329.08	7625.35	306.47	251.78	-575.95	12.00	364323.87	594848.95	N 32 0 5.36 W 104 9 38.54	9 38.54
	8100.00	80.87	340.43	7645.16	398.61	340.30	-617.61	12.00	364412.39	594807.30	N 32 0 6.24 W 104 9 39.03	9 39.03
	8200.00	85.73	351.48	7656.86	496.66	436.47	-641.63	12.00	364508.55	594783.28	N 32 0 7.19 W 104 9 39.30	9 39.30
	8276.11	89.54	359.78	7660.00	572.61	512.22	-647.41	12.00	364584.29	594777.50	N 32 0 7.94 W 104 9 39.37	9 39.37
	8300.00	89.54	359.78	7660.19	596.40	536.11	-647.50	0.00	364608.18	594777.41	N 32 0 8.17 W 104 9 39.37	9 39.37
	8400.00	89.54	359.78	7660.99	695.96	636.10	-647.88	0.00	364708.16	594777.03	N 32 0 9.16 W 104 9 39.37	9 39.37
	8500.00	89.54	359.78	7661.78	795.52	736.10	-648.26	0.00	364808.15	594776.65	N 32 0 10.15 W 104 9 39.37	9 39.37
	8600.00	89.54	359.78	7662.58	895.08	836.09	-648.63	0.00	364908.14	594776.27	N 32 0 11.14 W 104 9 39.38	9 39.38
	8700.00	89.54	359.78	7663.37	994.64	936.09	-649.01	0.00	365008.13	594775.89	N 32 0 12.13 W 104 9 39.38	9 39.38
	8800.00	89.54	359.78	7664.17	1094.20	1036.09	-649.39	0.00	365108.11	594775.52	N 32 0 13.12 W 104 9 39.38	9 39.38
	8900.00	89.54	359.78	7664.96	1193.76	1136.08	-649.77	0.00	365208.10	594775.14	N 32 0 14.11 W 104 9 39.38	9 39.38
	9000.00	89.54	359.78	7665.76	1293.33	1236.08	-650.15	0.00	365308.09	594774.76	N 32 0 15.10 W 104 9 39.39	9 39.39
	9100.00	89.54	359.78	7666.56	1392.89	1336.07	-650.53	0.00	365408.07	594774.38	N 32 0 16.09 W 104 9 39.39	9 39.39
	9200.00	89.54	359.78	7667.35	1492.45	1436.07	-650.91	0.00	365508.06	594774.00	N 32 0 17.08 W 104 9 39.39	9 39.39
	9300.00	89.54	359.78	7668.15	1592.01	1536.07	-651.29	0.00	365608.05	594773.62	N 32 0 18.07 W 104 9 39.39	9 39.39
	9400.00	89.54	359.78	7668.94	1691.57	1636.06	-651.67	0.00	365708.04	594773.24	N 32 0 19.06 W 104 9 39.40	9 39.40
	9500.00	89.54	359.78	7669.74	1791.13	1736.06	-652.05	0.00	365808.02	594772.86	N 32 0 20.05 W 104 9 39.40	9 39.40
	9600.00	89.54	359.78	7670.53	1890.69	1836.05	-652.42	0.00	365908.01	594772.48	N 32 0 21.04 W 104 9 39.40	9 39.40
	9700.00	89.54	359.78	7671.33	1990.25	1936.05	-652.80	0.00	366008.00	594772.11	N 32 0 22.03 W 104 9 39.40	9 39.40
	9800.00	89.54	359.78	7672.13	2089.81	2036.05	-653.18	0.00	366107.98	594771.73	N 32 0 23.02 W 104 9 39.41	9 39.41
	9900.00	89.54	359.78	7672.92	2189.38	2136.04	-653.56	0.00	366207.97	594771.35	N 32 0 24.01 W 104 9 39.41	9 39.41
	10000.00	89.54	359.78	7673.72	2288.94	2236.04	-653.94	0.00	366307.96	594770.97	N 32 0 25.00 W 104 9 39.41	9 39.41
	10100.00	89.54	359.78	7674.51	2388.50	2336.04	-654.32	0.00	366407.95	594770.59	N 32 0 25.99 W 104 9 39.41	9 39.41
	10200.00	89.54	359.78	7675.31	2488.06	2436.03	-654.70	0.00	366507.93	594770.21	N 32 0 26.98 W 104 9 39.42	9 39.42
	10300.00	89.54	359.78	7676.10	2587.62	2536.03	-655.08	0.00	366607.92	594769.83	N 32 0 27.97 W 104 9 39.42	9 39.42
	10400.00	89.54	359.78	7676.90	2687.18	2636.02	-655.46	0.00	366707.91	594769.45	N 32 0 28.95 W 104 9 39.42	9 39.42
	10500.00	89.54	359.78	7677.69	2786.74	2736.02	-655.83	0.00	366807.89	594769.07	N 32 0 29.94 W 104 9 39.42	9 39.42
	10600.00	89.54	359.78	7678.49	2886.30	2836.02	-656.21	0.00	366907.88	594768.70	N 32 0 30.93 W 104 9 39.43	9 39.43
	10700.00	89.54	359.78	7679.29	2985.86	2936.01	-656.59	0.00	367007.87	594768.32	N 32 0 31.92 W 104 9 39.43	9 39.43
	10800.00	89.54	359.78	7680.08	3085.43	3036.01	-656.97	0.00	367107.86	594767.94	N 32 0 32.91 W 104 9 39.43	9 39.43
	10900.00	89.54	359.78	7680.88	3184.99	3136.00	-657.35	0.00	367207.84	594767.56	N 32 0 33.90 W 104 9 39.43	9 39.43
	11000.00	89.54	359.78	7681.67	3284.55	3236.00	-657.73	0.00	367307.83	594767.18	N 32 0 34.89 W 104 9 39.44	9 39.44
	11100.00	89.54	359.78	7682.47	3384.11	3336.00	-658.11	0.00	367407.82	594766.80	N 32 0 35.88 W 104 9 39.44	9 39.44
	11200.00	89.54	359.78	7683.26	3483.67	3435.99	-658.49	0.00	367507.80	594766.42	N 32 0 36.87 W 104 9 39.44	9 39.44
	11300.00	89.54	359.78	7684.06	3583.23	3535.99	-658.87	0.00	367607.79	594766.04	N 32 0 37.86 W 104 9 39.45	9 39.45
	11400.00	89.54	359.78	7684.86	3682.79	3635.98	-659.24	0.00	367707.78	594765.66	N 32 0 38.85 W 104 9 39.45	9 39.45
	11500.00	89.54	359.78	7685.65	3782.35	3735.98	-659.62	0.00	367807.77	594765.29	N 32 0 39.84 W 104 9 39.45	9 39.45
	11600.00	89.54	359.78	7686.45	3881.91	3835.98	-660.00	0.00	367907.75	594764.91	N 32 0 40.83 W 104 9 39.45	9 39.45
	11700.00	89.54	359.78	7687.24	3981.48	3935.97	-660.38	0.00	368007.74	594764.53	N 32 0 41.82 W 104 9 39.46	9 39.46
	11800.00	89.54	359.78	7688.04	4081.04	4035.97	-660.76	0.00	368107.73	594764.15	N 32 0 42.81 W 104 9 39.46	9 39.46
	11900.00	89.54	359.78	7688.83	4180.60	4135.97	-661.14	0.00	368207.71	594763.77	N 32 0 43.80 W 104 9 39.46	9 39.46
	12000.00	89.54	359.78	7689.63	4280.16	4235.96	-661.52	0.00	368307.70	594763.39	N 32 0 44.79 W 104 9 39.46	9 39.46
	12100.00	89.54	359.78	7690.42	4379.72	4335.96	-661.90	0.00	368407.69	594763.01	N 32 0 45.78 W 104 9 39.47	9 39.47
	12200.00	89.54	359.78	7691.22	4479.28	4435.95	-662.28	0.00	368507.68	594762.63	N 32 0 46.77 W 104 9 39.47	9 39.47
	12300.00	89.54	359.78	7692.02	4578.84	4535.95	-662.66	0.00	368607.66	594762.25	N 32 0 47.76 W 104 9 39.47	9 39.47
	12400.00	89.54	359.78	7692.81	4678.40	4635.95	-663.03	0.00	368707.65	594761.88	N 32 0 48.74 W 104 9 39.47	9 39.47
	12500.00	89.54	359.78	7693.61	4777.96	4735.94	-663.41	0.00	368807.64	594761.50	N 32 0 49.73 W 104 9 39.48	9 39.48
	12600.00	89.54	359.78	7694.40	4877.53	4835.94	-663.79	0.00	368907.63	594761.12	N 32 0 50.72 W 104 9 39.48	9 39.48
	12700.00	89.54	359.78	7695.20	4977.09	4935.93	-664.17	0.00	369007.61	594760.74	N 32 0 51.71 W 104 9 39.48	9 39.48
	12800.00	89.54	359.78	7695.99	5076.65	5035.93	-664.55	0.00	369107.60	594760.36	N 32 0 52.70 W 104 9 39.48	9 39.48
	12900.00	89.54	359.78	7696.79	5176.21	5135.93	-664.93	0.00	369207.59	594759.98	N 32 0 53.69 W 104 9 39.49	9 39.49
	13000.00	89.54	359.78	7697.59	5275.77	5235.92	-665.31	0.00	369307.57	594759.60	N 32 0 54.68 W 104 9 39.49	9 39.49
	13100.00	89.54	359.78	7698.38	5375.33	5335.92	-665.69	0.00	369407.56	594759.22	N 32 0 55.67 W 104 9 39.49	9 39.49
	13200.00	89.54	359.78	7699.18	5474.89	5435.91	-666.07	0.00	369507.55	594758.84	N 32 0 56.66 W 104 9 39.49	9 39.49
	13300.00	89.54	359.78	7699.97	5574.45	5535.91	-666.44	0.00	369607.54	594758.47	N 32 0 57.65 W 104 9 39.50	9 39.50
	13400.00	89.54	359.78	7700.77	5674.01	5635.91	-666.82	0.00	369707.52	594758.09	N 32 0 58.64 W 104 9 39.50	9 39.50
	13500.00	89.54	359.78	7701.56	5773.58	5735.90	-667.20	0.00	369807.51	594757.71	N 32 0 59.63 W 104 9 39.50	9 39.50

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	13600.00	89.54	359.78	7702.36	5873.14	5835.90	-667.58	0.00	369907.50	594757.33	N 32 1 0.62 W 104	9 39.50
	13700.00	89.54	359.78	7703.16	5972.70	5935.90	-667.96	0.00	370007.48	594756.95	N 32 1 1.61 W 104	9 39.51
	13800.00	89.54	359.78	7703.95	6072.26	6035.89	-668.34	0.00	370107.47	594756.57	N 32 1 2.60 W 104	9 39.51
	13900.00	89.54	359.78	7704.75	6171.82	6135.89	-668.72	0.00	370207.46	594756.19	N 32 1 3.59 W 104	9 39.51
	14000.00	89.54	359.78	7705.54	6271.38	6235.88	-669.10	0.00	370307.45	594755.81	N 32 1 4.58 W 104	9 39.51
	14100.00	89.54	359.78	7706.34	6370.94	6335.88	-669.48	0.00	370407.43	594755.43	N 32 1 5.57 W 104	9 39.52
	14200.00	89.54	359.78	7707.13	6470.50	6435.88	-669.85	0.00	370507.42	594755.06	N 32 1 6.56 W 104	9 39.52
	14300.00	89.54	359.78	7707.93	6570.06	6535.87	-670.23	0.00	370607.41	594754.68	N 32 1 7.55 W 104	9 39.52
	14400.00	89.54	359.78	7708.72	6669.63	6635.87	-670.61	0.00	370707.39	594754.30	N 32 1 8.54 W 104	9 39.52
	14500.00	89.54	359.78	7709.52	6769.19	6735.86	-670.99	0.00	370807.38	594753.92	N 32 1 9.52 W 104	9 39.53
Cimarex Hornsby 35 Federal Com 7H PBHL	14560.31	89.54	359.78	7710.00	6829.23	6796.17	-671.22	0.00	370867.68	594753.69	N 32 1 10.12 W 104	9 39.53

Survey Type: Non-Def Plan

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

Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	20.000	1/100.000	30.000	30.000		NAL_MWD_PLUS_0.5_DEG- Depth Only	Original Borehole / Cimarex Hornsby 35 Federal Com 7H Rev4 RM 04Nov16
	1	20.000	14560.307	1/100.000	30.000	30.000		NAL_MWD_PLUS_0.5_DEG	Original Borehole / Cimarex Hornsby 35 Federal Com 7H