

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
NM OIL CONSERVATION
ARTESIA DISTRICTOCD Artesia
FORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018**SUNDRY NOTICES AND REPORTS ON WELLS**
Do not use this form for proposals to drill or to re-enter an abandoned well. Use form 3160-3 (APD) for such proposals.
DEC 02 2016
v75. Lease Serial No.
NMNM130859

6. If Indian, Allottee or Tribe Name

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

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

8. Well Name and No.

HACKBERRY 26 FEDERAL COM 2H

2. Name of Operator

CIMAREX ENERGY COMPANY OF CO

Contact: ARICKA EASTERLING

E-Mail: aeasterling@cimarex.com

9. API Well No.

30-015-43857-00-X1

3a. Address

202 S CHEYENNE AVE SUITE 1000
TULSA, OK 74103.4346

3b. Phone No. (include area code)

Ph: 918-560-7060

10. Field and Pool or Exploratory Area
WILDCAT

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

Sec 26 T19S R30E SENE 2022FNL 730FEL

11. County or Parish, State

EDDY COUNTY, NM

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

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

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

Cimarex 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: 1950 FNL & 330 FWL Sec 27-19S-30E

Proposed:

BHL: 1980 FNL & 990 FEL Sec 27-19S-30E

All previous COAs still apply.

Additional cement maybe required for the production casing. Excess cement calculates to 5%.

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

Electronic Submission #357359 verified by the BLM Well Information System
For CIMAREX ENERGY COMPANY OF CO, sent to the Carlsbad
Committed to AFMSS for processing by DEBORAH MCKINNEY on 11/08/2016 (17DLM0220SE)

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 CHARLES NIMMER

Title PETROLEUM ENGINEER

Date 11/29/2016

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

Office Carlsbad

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

(Instructions on page 2)

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

NM OIL CONSERVATION

ARTESIA DISTRICT

Form C-102

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio 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

DEC 02 2016

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

RECEIVED

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-015-43857	² Pool Code 97020	³ Pool Name Hackberry; Bone Spring, NM
⁴ Property Code 316496	⁵ Property Name HACKBERRY 26 FEDERAL COM	⁶ Well Number #2H
⁷ OGRID No. 215099	⁸ Operator Name CIMAREX ENERGY CO.	⁹ Elevation 3264.3'

Surface Location

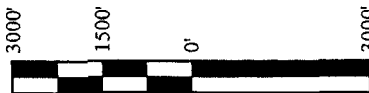
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	26	19S	30E		2022	NORTH	730	EAST	EDDY

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
H	28	19S	30E		1980	NORTH	990	EAST	EDDY
¹² Dedicated Acres 360	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.						

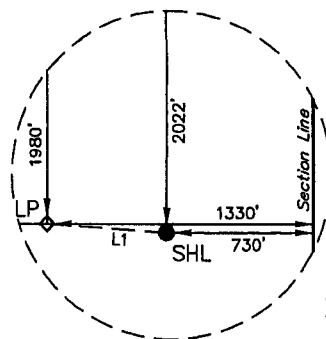
No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

- ¹⁶ ▲ = SECTION CORNERS LOCATED.
△ = SECTION CORNERS RE-ESTABLISHED.
(Not Set on Ground.)
● = SURFACE HOLE LOCATION
○ = BOTTOM HOLE LOCATION
◇ = LANDING POINT

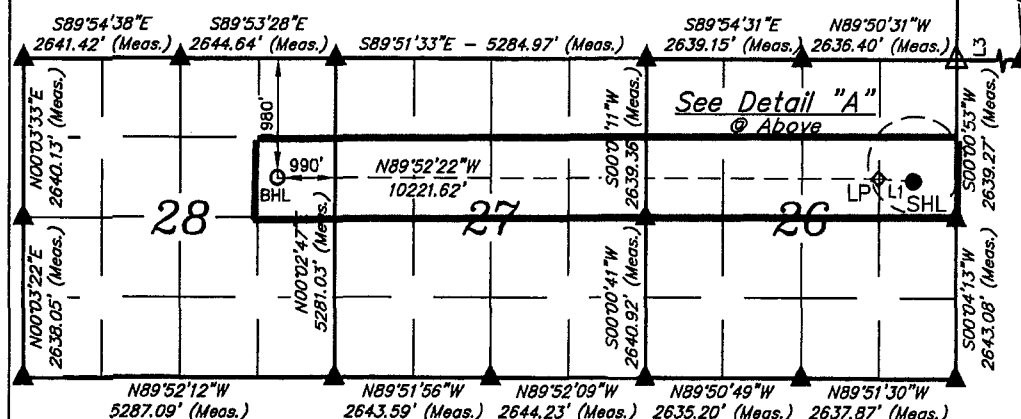


SCALE
REVISED: 10-31-16 J.J.

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



Detail "A"
No Scale



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.

Signature: Aricka Easterling Date: 11/7/16

Printed Name: Aricka Easterling

aeasterling@cimarex.com

E-mail 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.

OCTOBER 27, 2016

Date of Survey

Signature and Seal of Professional Surveyor:



Certificate Number:

NAD 83 (SURFACE LOCATION)	NAD 83 (TARGET BOTTOM HOLE)
LATITUDE = 32°37'58.88" (32.633022)	LATITUDE = 32°37'59.49" (32.633192)
LONGITUDE = 103°56'11.30" (103.936472)	LONGITUDE = 103°58'17.82" (103.971617)
NAD 27 (SURFACE LOCATION)	NAD 27 (TARGET BOTTOM HOLE)
LATITUDE = 32°37'58.45" (32.632903)	LATITUDE = 32°37'59.06" (32.633072)
LONGITUDE = 103°56'09.49" (103.935969)	LONGITUDE = 103°58'16.01" (103.971114)
STATE PLANE NAD 83 (N.M. EAST)	STATE PLANE NAD 83 (N.M. EAST)
N: 594252.73 E: 663507.73	N: 594275.60 E: 652688.16
STATE PLANE NAD 27 (N.M. EAST)	STATE PLANE NAD 27 (N.M. EAST)
N: 594190.27 E: 622327.92	N: 594213.29 E: 611508.22

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STATE PLANE NAD 27 (N.M. EAST)	STATE PLANE NAD 27 (N.M. EAST)
N: 594190.27 E: 622327.92	N: 594213.29 E: 611508.22

LINE	DIRECTION	LENGTH
L1	N85°51'44"W	601.73'
L2	N00°03'13"E	2639.27'
L3	N89°57'41"E	2640.37'

Cimarex Hackberry 26 Federal Com 2H Rev2 RM 03Nov16 Proposal

Geodetic Report

(Non-Def Plan)



NM OIL CONSERVATION
ARTESIA DISTRICT

DEC 02 2016

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Report Date: November 03, 2016 - 02:57 PM
Client: Cimarex
Field: NM Eddy County (NAD 83)
Structure / Stot: Cimarex Hackberry 26 Federal Com 2H / Cimarex Hackberry 26 Federal Com 2H
Well: Hackberry 26 Federal Com 2H
Borehole: Original Borehole
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Hackberry 26 Federal Com 2H Rev2 RM 03Nov16
Survey Date: November 02, 2015
Tort / AHD / DDI / ERD Ratio: 90.659' / 10821.837 ft / 6.342 / 1.266
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 37' 58.88215", W 103° 56' 11.29618"
Location Grid N/E Y/X: N 594252.730 ftUS, E 663507.730 ftUS
CRS Grid Convergence Angle: 0.2140°
Grid Scale Factor: 0.99992618
Version / Patch: 2.10.254.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 270.121° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3289.300 ft above MSL
Seabed / Ground Elevation: 3284.300 ft above MSL
Magnetic Declination: 7.519°
Total Gravity Field Strength: 998.5160mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 48378.166 nT
Magnetic Dip Angle: 60.546°
Declination Date: November 03, 2016
Magnetic Declination Model: HDGM 2015
North Reference: Grid North
Grid Convergence Used: 0.2140°
Total Corr Mag North->Grid North: 7.3054°
Local Coord Referenced To: Structure Reference Point

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 ° ' ")
SHL Cimarex Hackberry 26 Federal Com 2H [2022' FNL, 730' FEL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	594252.73	663507.73	N 32 37 58.88 W 103 56 11.30	
	100.00	0.00	274.44	100.00	0.00	0.00	0.00	0.00	594252.73	663507.73	N 32 37 58.88 W 103 56 11.30	
	200.00	0.00	274.44	200.00	0.00	0.00	0.00	0.00	594252.73	663507.73	N 32 37 58.88 W 103 56 11.30	
	300.00	0.00	274.44	300.00	0.00	0.00	0.00	0.00	594252.73	663507.73	N 32 37 58.88 W 103 56 11.30	
	400.00	0.00	274.44	400.00	0.00	0.00	0.00	0.00	594252.73	663507.73	N 32 37 58.88 W 103 56 11.30	
	500.00	0.00	274.44	500.00	0.00	0.00	0.00	0.00	594252.73	663507.73	N 32 37 58.88 W 103 56 11.30	
	600.00	0.00	274.44	600.00	0.00	0.00	0.00	0.00	594252.73	663507.73	N 32 37 58.88 W 103 56 11.30	
	700.00	0.00	274.44	700.00	0.00	0.00	0.00	0.00	594252.73	663507.73	N 32 37 58.88 W 103 56 11.30	
	800.00	0.00	274.44	800.00	0.00	0.00	0.00	0.00	594252.73	663507.73	N 32 37 58.88 W 103 56 11.30	
	900.00	0.00	274.44	900.00	0.00	0.00	0.00	0.00	594252.73	663507.73	N 32 37 58.88 W 103 56 11.30	
	1000.00	0.00	274.44	1000.00	0.00	0.00	0.00	0.00	594252.73	663507.73	N 32 37 58.88 W 103 56 11.30	
	1100.00	0.00	274.44	1100.00	0.00	0.00	0.00	0.00	594252.73	663507.73	N 32 37 58.88 W 103 56 11.30	
	1200.00	0.00	274.44	1200.00	0.00	0.00	0.00	0.00	594252.73	663507.73	N 32 37 58.88 W 103 56 11.30	
	1300.00	0.00	274.44	1300.00	0.00	0.00	0.00	0.00	594252.73	663507.73	N 32 37 58.88 W 103 56 11.30	
	1400.00	0.00	274.44	1400.00	0.00	0.00	0.00	0.00	594252.73	663507.73	N 32 37 58.88 W 103 56 11.30	
	1500.00	0.00	274.44	1500.00	0.00	0.00	0.00	0.00	594252.73	663507.73	N 32 37 58.88 W 103 56 11.30	
	1600.00	0.00	274.44	1600.00	0.00	0.00	0.00	0.00	594252.73	663507.73	N 32 37 58.88 W 103 56 11.30	
	1700.00	0.00	274.44	1700.00	0.00	0.00	0.00	0.00	594252.73	663507.73	N 32 37 58.88 W 103 56 11.30	
	1800.00	0.00	274.44	1800.00	0.00	0.00	0.00	0.00	594252.73	663507.73	N 32 37 58.88 W 103 56 11.30	
	1900.00	0.00	274.44	1900.00	0.00	0.00	0.00	0.00	594252.73	663507.73	N 32 37 58.88 W 103 56 11.30	
	2000.00	0.00	274.44	2000.00	0.00	0.00	0.00	0.00	594252.73	663507.73	N 32 37 58.88 W 103 56 11.30	
	2100.00	0.00	274.44	2100.00	0.00	0.00	0.00	0.00	594252.73	663507.73	N 32 37 58.88 W 103 56 11.30	
	2200.00	0.00	274.44	2200.00	0.00	0.00	0.00	0.00	594252.73	663507.73	N 32 37 58.88 W 103 56 11.30	

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 ° ' '')
KOP - Build 12°/100'	8037.83	0.00	274.44	8037.83	0.00	0.00	0.00	0.00	594252.73	663507.73	N 32 37 58.88 W 103 56 11.30	
	8100.00	7.46	274.44	8099.82	4.03	0.31	-4.03	12.00	594253.04	663503.70	N 32 37 58.89 W 103 56 11.34	
	8200.00	19.46	274.44	8196.90	27.20	2.11	-27.19	12.00	594254.84	663480.54	N 32 37 58.90 W 103 56 11.61	
	8300.00	31.46	274.44	8287.02	69.99	5.43	-69.98	12.00	594258.16	663437.76	N 32 37 58.94 W 103 56 12.11	
	8400.00	43.46	274.44	8366.26	130.53	10.13	-130.50	12.00	594262.86	663377.24	N 32 37 58.99 W 103 56 12.82	
	8500.00	55.46	274.44	8431.13	206.17	16.01	-206.13	12.00	594268.73	663301.61	N 32 37 59.02 W 103 56 13.71	
	8600.00	67.46	274.44	8478.82	293.61	22.79	-293.56	12.00	594275.52	663214.19	N 32 37 59.12 W 103 56 14.73	
Build 4°/100'	8662.83	75.00	274.44	8499.03	352.88	27.40	-352.83	12.00	594280.12	663154.93	N 32 37 59.17 W 103 56 15.42	
	8700.00	76.42	273.99	8508.20	388.81	30.04	-388.75	4.00	594282.77	663119.01	N 32 37 59.19 W 103 56 15.84	
	8800.00	80.25	272.81	8528.41	486.57	35.84	-486.49	4.00	594288.57	663021.28	N 32 37 59.25 W 103 56 16.98	
	8900.00	84.08	271.65	8542.04	585.54	39.69	-585.46	4.00	594292.42	662922.31	N 32 37 59.30 W 103 56 18.14	
	9000.00	87.92	270.51	8549.02	685.27	41.57	-685.18	4.00	594294.29	662876.60	N 32 37 59.32 W 103 56 19.31	
Landing Point	9054.30	90.00	269.89	8550.00	739.56	41.76	-739.47	4.00	594294.48	662768.31	N 32 37 59.32 W 103 56 19.94	
	9100.00	90.00	269.89	8550.00	785.25	41.67	-785.17	0.00	594294.40	662722.62	N 32 37 59.32 W 103 56 20.48	
	9200.00	90.00	269.89	8550.00	885.25	41.48	-885.17	0.00	594294.21	662622.63	N 32 37 59.33 W 103 56 21.64	
	9300.00	90.00	269.89	8550.00	985.25	41.30	-985.17	0.00	594294.02	662522.64	N 32 37 59.33 W 103 56 22.81	
	9400.00	90.00	269.89	8550.00	1085.25	41.11	-1085.17	0.00	594293.84	662422.64	N 32 37 59.33 W 103 56 23.98	
	9500.00	90.00	269.89	8550.00	1185.25	40.92	-1185.17	0.00	594293.65	662322.65	N 32 37 59.33 W 103 56 25.15	
	9600.00	90.00	269.89	8550.00	1285.25	40.73	-1285.17	0.00	594293.46	662222.66	N 32 37 59.33 W 103 56 26.32	
	9700.00	90.00	269.89	8550.00	1385.25	40.55	-1385.17	0.00	594293.27	662122.67	N 32 37 59.33 W 103 56 27.49	
	9800.00	90.00	269.89	8550.00	1485.25	40.36	-1485.17	0.00	594293.09	662022.68	N 32 37 59.34 W 103 56 28.66	
	9900.00	90.00	269.89	8550.00	1585.25	40.17	-1585.17	0.00	594292.90	661922.68	N 32 37 59.34 W 103 56 31.00	
	10000.00	90.00	269.89	8550.00	1685.25	39.98	-1685.17	0.00	594292.71	661822.69	N 32 37 59.34 W 103 56 31.00	
	10100.00	90.00	269.89	8550.00	1785.25	39.80	-1785.17	0.00	594292.52	661722.70	N 32 37 59.34 W 103 56 32.17	
	10200.00	90.00	269.89	8550.00	1885.25	39.61	-1885.17	0.00	594292.34	661622.71	N 32 37 59.34 W 103 56 33.34	
	10300.00	90.00	269.89	8550.00	1985.24	39.42	-1985.17	0.00	594292.15	661522.71	N 32 37 59.34 W 103 56 34.51	
	10400.00	90.00	269.89	8550.00	2085.24	39.23	-2085.17	0.00	594291.96	661422.72	N 32 37 59.35 W 103 56 35.68	
	10500.00	90.00	269.89	8550.00	2185.24	39.05	-2185.17	0.00	594291.77	661322.73	N 32 37 59.35 W 103 56 36.85	
	10600.00	90.00	269.89	8550.00	2285.24	38.86	-2285.17	0.00	594291.59	661222.74	N 32 37 59.35 W 103 56 38.02	
	10700.00	90.00	269.89	8550.00	2385.24	38.67	-2385.17	0.00	594291.40	661122.75	N 32 37 59.35 W 103 56 39.18	
	10800.00	90.00	269.89	8550.00	2485.24	38.49	-2485.17	0.00	594291.21	661022.75	N 32 37 59.35 W 103 56 40.35	
	10900.00	90.00	269.89	8550.00	2585.24	38.30	-2585.16	0.00	594291.03	660922.76	N 32 37 59.36 W 103 56 41.52	
	11000.00	90.00	269.89	8550.00	2685.24	38.11	-2685.16	0.00	594290.84	660822.77	N 32 37 59.36 W 103 56 42.69	
	11100.00	90.00	269.89	8550.00	2785.24	37.92	-2785.16	0.00	594290.65	660722.78	N 32 37 59.36 W 103 56 43.86	
	11200.00	90.00	269.89	8550.00	2885.24	37.74	-2885.16	0.00	594290.46	660622.78	N 32 37 59.36 W 103 56 45.03	
	11300.00	90.00	269.89	8550.00	2985.24	37.55	-2985.16	0.00	594290.28	660522.79	N 32 37 59.36 W 103 56 46.20	
	11400.00	90.00	269.89	8550.00	3085.24	37.36	-3085.16	0.00	594290.09	660422.80	N 32 37 59.36 W 103 56 47.37	
	11500.00	90.00	269.89	8550.00	3185.24	37.17	-3185.16	0.00	594289.90	660322.81	N 32 37 59.37 W 103 56 48.54	
	11600.00	90.00	269.89	8550.00	3285.23	36.99	-3285.16	0.00	594289.71	660222.82	N 32 37 59.37 W 103 56 49.71	
	11700.00	90.00	269.89	8550.00	3385.23	36.80	-3385.16	0.00	594289.53	660122.82	N 32 37 59.37 W 103 56 50.88	
	11800.00	90.00	269.89	8550.00	3485.23	36.61	-3485.16	0.00	594289.34	660022.83	N 32 37 59.37 W 103 56 52.05	
	11900.00	90.00	269.89	8550.00	3585.23	36.43	-3585.16	0.00	594289.15	659922.84	N 32 37 59.37 W 103 56 53.22	
	12000.00	90.00	269.89	8550.00	3685.23	36.24	-3685.16	0.00	594288.97	659822.85	N 32 37 59.37 W 103 56 54.39	
	12100.00	90.00	269.89	8550.00	3785.23	36.05	-3785.16	0.00	594288.78	659722.85	N 32 37 59.37 W 103 56 55.56	
	12200.00	90.00	269.89	8550.00	3885.23	35.86	-3885.16	0.00	594288.59	659622.86	N 32 37 59.38 W 103 56 56.72	
	12300.00	90.00	269.89	8550.00	3985.23	35.68	-3985.16	0.00	594288.40	659522.87	N 32 37 59.38 W 103 56 57.89	
	12400.00	90.00	269.89	8550.00	4085.23	35.49	-4085.16	0.00	594288.22	659422.88	N 32 37 59.38 W 103 56 59.06	
	12500.00	90.00	269.89	8550.00	4185.23	35.30	-4185.16	0.00	594288.03	659322.89	N 32 37 59.38 W 103 57 0.23	
	12600.00	90.00	269.89	8550.00	4285.23	35.11	-4285.16	0.00	594287.84	659222.89	N 32 37 59.39 W 103 57 1.40	
	12700.00	90.00	269.89	8550.00	4385.23	34.93	-4385.16	0.00	594287.65	659122.90	N 32 37 59.39 W 103 57 2.57	
	12800.00	90.00	269.89	8550.00	4485.22	34.74	-4485.16	0.00	594287.47	659022.91	N 32 37 59.39 W 103 57 3.74	
	12900.00	90.00	269.89	8550.00	4585.22	34.55	-4585.16	0.00	594287.28	658922.92	N 32 37 59.39 W 103 57 4.91	
	13000.00	90.00	269.89	8550.00	4685.22	34.36	-4685.16	0.00	594287.09	658822.92	N 32 37 59.39 W 103 57 6.08	
	13100.00	90.00	269.89	8550.00	4785.22	34.18	-4785.16	0.00	594286.90	658722.93	N 32 37 59.39 W 103 57 7.25	
	13200.00	90.00	269.89	8550.00	4885.22	33.99	-4885.16	0.00	594286.72	658622.94	N 32 37 59.40 W 103 57 8.42	
	13300.00	90.00	269.89	8550.00	4985.22	33.80	-4985.16	0.00	594286.53	658522.95	N 32 37 59.40 W 103 57 9.59	
	13400.00	90.00	269.89	8550.00	5085.22	33.62	-5085.16	0.00	594286.34	658422.96	N 32 37 59.40 W 103 57 10.76	
	13500.00	90.00	269.89	8550.00	5185.22	33.43	-5185.16	0.00	594286.16	658322.96	N 32 37 59.40 W 103 57 11.93	

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 °.′.″)
	13600.00	90.00	269.89	8550.00	5285.22	33.24	-5285.16	0.00	594285.97	658222.97	N 32 37 59.40	W 103 57 13.10
	13700.00	90.00	269.89	8550.00	5385.22	33.05	-5385.16	0.00	594285.78	658122.98	N 32 37 59.40	W 103 57 14.26
	13800.00	90.00	269.89	8550.00	5485.22	32.87	-5485.16	0.00	594285.59	658022.99	N 32 37 59.41	W 103 57 15.43
	13900.00	90.00	269.89	8550.00	5585.22	32.68	-5585.16	0.00	594285.41	657922.99	N 32 37 59.41	W 103 57 16.60
	14000.00	90.00	269.89	8550.00	5685.22	32.49	-5685.16	0.00	594285.22	657823.00	N 32 37 59.41	W 103 57 17.77
	14100.00	90.00	269.89	8550.00	5785.21	32.30	-5785.16	0.00	594285.03	657723.01	N 32 37 59.41	W 103 57 18.94
	14200.00	90.00	269.89	8550.00	5885.21	32.12	-5885.16	0.00	594284.84	657623.02	N 32 37 59.41	W 103 57 20.11
	14300.00	90.00	269.89	8550.00	5985.21	31.93	-5985.16	0.00	594284.66	657523.03	N 32 37 59.41	W 103 57 21.28
	14400.00	90.00	269.89	8550.00	6085.21	31.74	-6085.16	0.00	594284.47	657423.03	N 32 37 59.42	W 103 57 22.45
	14500.00	90.00	269.89	8550.00	6185.21	31.55	-6185.16	0.00	594284.28	657323.04	N 32 37 59.42	W 103 57 23.62
	14600.00	90.00	269.89	8550.00	6285.21	31.37	-6285.16	0.00	594284.09	657223.05	N 32 37 59.42	W 103 57 24.79
	14700.00	90.00	269.89	8550.00	6385.21	31.18	-6385.16	0.00	594283.91	657123.06	N 32 37 59.42	W 103 57 25.96
	14800.00	90.00	269.89	8550.00	6485.21	30.99	-6485.16	0.00	594283.72	657023.06	N 32 37 59.42	W 103 57 27.13
	14900.00	90.00	269.89	8550.00	6585.21	30.81	-6585.16	0.00	594283.53	656923.07	N 32 37 59.42	W 103 57 28.30
	15000.00	90.00	269.89	8550.00	6685.21	30.62	-6685.16	0.00	594283.35	656823.08	N 32 37 59.43	W 103 57 29.47
	15100.00	90.00	269.89	8550.00	6785.21	30.43	-6785.16	0.00	594283.16	656723.09	N 32 37 59.43	W 103 57 30.64
	15200.00	90.00	269.89	8550.00	6885.21	30.24	-6885.16	0.00	594282.97	656623.09	N 32 37 59.43	W 103 57 31.80
	15300.00	90.00	269.89	8550.00	6985.21	30.06	-6985.16	0.00	594282.78	656523.10	N 32 37 59.43	W 103 57 32.97
	15400.00	90.00	269.89	8550.00	7085.20	29.87	-7085.16	0.00	594282.60	656423.11	N 32 37 59.43	W 103 57 34.14
	15500.00	90.00	269.89	8550.00	7185.20	29.68	-7185.16	0.00	594282.41	656323.12	N 32 37 59.43	W 103 57 35.31
	15600.00	90.00	269.89	8550.00	7285.20	29.49	-7285.16	0.00	594282.22	656223.13	N 32 37 59.44	W 103 57 36.48
	15700.00	90.00	269.89	8550.00	7385.20	29.31	-7385.16	0.00	594282.03	656123.13	N 32 37 59.44	W 103 57 37.65
	15800.00	90.00	269.89	8550.00	7485.20	29.12	-7485.16	0.00	594281.85	656023.14	N 32 37 59.44	W 103 57 38.82
	15900.00	90.00	269.89	8550.00	7585.20	28.93	-7585.16	0.00	594281.66	655923.15	N 32 37 59.44	W 103 57 39.99
	16000.00	90.00	269.89	8550.00	7685.20	28.74	-7685.16	0.00	594281.47	655823.16	N 32 37 59.44	W 103 57 41.16
	16100.00	90.00	269.89	8550.00	7785.20	28.56	-7785.16	0.00	594281.29	655723.16	N 32 37 59.44	W 103 57 42.33
	16200.00	90.00	269.89	8550.00	7885.20	28.37	-7885.16	0.00	594281.10	655623.17	N 32 37 59.44	W 103 57 43.50
	16300.00	90.00	269.89	8550.00	7985.20	28.18	-7985.16	0.00	594280.91	655523.18	N 32 37 59.45	W 103 57 44.67
	16400.00	90.00	269.89	8550.00	8085.20	28.00	-8085.16	0.00	594280.72	655423.19	N 32 37 59.45	W 103 57 45.84
	16500.00	90.00	269.89	8550.00	8185.20	27.81	-8185.16	0.00	594280.54	655323.20	N 32 37 59.45	W 103 57 47.01
	16600.00	90.00	269.89	8550.00	8285.19	27.62	-8285.15	0.00	594280.35	655223.20	N 32 37 59.45	W 103 57 48.18
	16700.00	90.00	269.89	8550.00	8385.19	27.43	-8385.15	0.00	594280.16	655123.21	N 32 37 59.45	W 103 57 49.34
	16800.00	90.00	269.89	8550.00	8485.19	27.25	-8485.15	0.00	594279.97	655023.22	N 32 37 59.45	W 103 57 50.51
	16900.00	90.00	269.89	8550.00	8585.19	27.06	-8585.15	0.00	594279.79	654923.23	N 32 37 59.46	W 103 57 51.68
	17000.00	90.00	269.89	8550.00	8685.19	26.87	-8685.15	0.00	594279.60	654823.23	N 32 37 59.46	W 103 57 52.85
	17100.00	90.00	269.89	8550.00	8785.19	26.68	-8785.15	0.00	594279.41	654723.24	N 32 37 59.46	W 103 57 54.02
	17200.00	90.00	269.89	8550.00	8885.19	26.50	-8885.15	0.00	594279.22	654623.25	N 32 37 59.46	W 103 57 55.19
	17300.00	90.00	269.89	8550.00	8985.19	26.31	-8985.15	0.00	594279.04	654523.26	N 32 37 59.46	W 103 57 56.36
	17400.00	90.00	269.89	8550.00	9085.19	26.12	-9085.15	0.00	594278.85	654423.27	N 32 37 59.46	W 103 57 57.53
	17500.00	90.00	269.89	8550.00	9185.19	25.93	-9185.15	0.00	594278.66	654323.27	N 32 37 59.47	W 103 57 58.70
	17600.00	90.00	269.89	8550.00	9285.19	25.75	-9285.15	0.00	594278.48	654223.28	N 32 37 59.47	W 103 57 59.87
	17700.00	90.00	269.89	8550.00	9385.19	25.56	-9385.15	0.00	594278.29	654123.29	N 32 37 59.47	W 103 58 1.04
	17800.00	90.00	269.89	8550.00	9485.19	25.37	-9485.15	0.00	594278.10	654023.30	N 32 37 59.47	W 103 58 2.21
	17900.00	90.00	269.89	8550.00	9585.18	25.19	-9585.15	0.00	594277.91	653923.30	N 32 37 59.47	W 103 58 3.38
	18000.00	90.00	269.89	8550.00	9685.18	25.00	-9685.15	0.00	594277.73	653823.31	N 32 37 59.47	W 103 58 4.55
	18100.00	90.00	269.89	8550.00	9785.18	24.81	-9785.15	0.00	594277.54	653723.32	N 32 37 59.47	W 103 58 5.72
	18200.00	90.00	269.89	8550.00	9885.18	24.62	-9885.15	0.00	594277.35	653623.33	N 32 37 59.48	W 103 58 6.88
	18300.00	90.00	269.89	8550.00	9985.18	24.44	-9985.15	0.00	594277.16	653523.34	N 32 37 59.48	W 103 58 8.05
	18400.00	90.00	269.89	8550.00	10085.18	24.25	-10085.15	0.00	594276.98	653423.34	N 32 37 59.48	W 103 58 9.22
	18500.00	90.00	269.89	8550.00	10185.18	24.06	-10185.15	0.00	594276.79	653323.35	N 32 37 59.48	W 103 58 10.39
	18600.00	90.00	269.89	8550.00	10285.18	23.87	-10285.15	0.00	594276.60	653223.36	N 32 37 59.48	W 103 58 11.56
	18700.00	90.00	269.89	8550.00	10385.18	23.69	-10385.15	0.00	594276.42	653123.37	N 32 37 59.48	W 103 58 12.73
	18800.00	90.00	269.89	8550.00	10485.18	23.50	-10485.15	0.00	594276.23	653023.37	N 32 37 59.48	W 103 58 13.90
	18900.00	90.00	269.89	8550.00	10585.18	23.31	-10585.15	0.00	594276.04	652923.38	N 32 37 59.49	W 103 58 15.07
	19000.00	90.00	269.89	8550.00	10685.18	23.13	-10685.15	0.00	594275.85	652823.39	N 32 37 59.49	W 103 58 16.24
	19100.00	90.00	269.89	8550.00	10785.17	22.94	-10785.15	0.00	594275.67	652723.40	N 32 37 59.49	W 103 58 17.41

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 ° ' ")
Cimarex Hackberry 26 Federal Com 2H - PBHL [1980' FNL, 980 FEL]	19135.24	90.00	269.89	8550.00	10820.41	22.87	-10820.39	0.00	594275.60	652688.16	N 32 37 59.49	W 103 58 17.82

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	25.000	1/100.000	30.000	30.000		NAL_MWD_PLUS_0.5_DEG- Depth Only	Original Borehole / Cimarex Hackberry 26 Federal Com 2H Rev2 RM 03Nov16
	1	25.000	19135.240	1/100.000	30.000	30.000		NAL_MWD_PLUS_0.5_DEG	Original Borehole / Cimarex Hackberry 26 Federal Com 2H

Structure: