

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

NM OIL CONSERVATION

ARTESIA DISTRICT
OCD ArtesiaFORM APPROVED
OMB NO. 1004-0137
Expires: January 31, 2018

DEC 02 2016

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.

RECEIVED

5. Lease Serial No.
NMNM130859

6. If Indian, Allottee or Tribe Name

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

8. Well Name and No.
HACKBERRY 26 FEDERAL COM 1H9. API Well No.
30-015-43856-00-X110. Field and Pool or Exploratory Area
WILDCAT11. County or Parish, State
EDDY COUNTY, NM**SUBMIT IN TRIPLICATE - Other instructions on page 2**

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

CIMAREX ENERGY COMPANY OF CO

Contact: ARICKA EASTERLING

E-Mail: aeasterling@cimarex.com

3a. Address

202 S CHEYENNE AVE SUITE 1000
TULSA, OK 74103.4346

3b. Phone No. (include area code)

Ph: 918-560-7060

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

Sec 26 T19S R30E NENE 915FNL 1069FEL

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 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 must 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 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: 680 FNL & 380 FWL Sec. 27-19S-30E

Proposed

BHL: 660 FNL & 990 FEL Sec. 28-19S-30E

All previous COAs still apply

Additional cement for Production casing excess cement calculates to 4%.

Submit amended C102 to NMOCDO

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

Electronic Submission #357353 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 (17DLM0215SE)

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 **

Cimarex Hackberry 26 Federal Com 1H Rev2 RM 03Nov16 Proposal

Geodetic Report

(Non-Def Plan)



Report Date: November 03, 2016 - 02:41 PM
Client: Cimarex
Field: NM Eddy County (NAD 83)
Structure / Slot: Cimarex Hackberry 26 Federal Com 1H / Cimarex Hackberry 26 Federal Com 1H
Well: Hackberry 26 Federal Com 1H
Borehole: Original Borehole
UWI / API#: Unknown / Unknown
Survey Name: Cimarex Hackberry 26 Federal Com 1H Rev2 RM 03Nov16
Survey Date: November 02, 2015
Tort / AHD / DDI / ERD Ratio: 101.535° / 10522.402 ft / 6.371 / 1.231
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 38' 9.83603", W 103° 56' 15.26576"
Location Grid N/E Y/X: N 595358.440 ftUS, E 663164.160 ftUS
CRS Grid Convergence Angle: 0.2134°
Grid Scale Factor: 0.99992809
Version / Patch: 2.10.254.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 271.295° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB
TVD Reference Elevation: 3295.900 ft above MSL
Seabed / Ground Elevation: 3270.900 ft above MSL
Magnetic Declination: 7.522°
Total Gravity Field Strength: 998.5159mgn (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 48378.879 nT
Magnetic Dip Angle: 60.549°
Declination Date: November 03, 2016
Magnetic Declination Model: HDGM 2015
North Reference: Grid North
Grid Convergence Used: 0.2134°
Total Corr Mag North->Grid North: 7.3090°
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 1H [915' FNL, 1069' FEL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	595358.44	663164.16	N 32 38 9.84	W 103 56 15.27
	100.00	0.00	292.04	100.00	0.00	0.00	0.00	0.00	595358.44	663164.16	N 32 38 9.84	W 103 56 15.27
	200.00	0.00	292.04	200.00	0.00	0.00	0.00	0.00	595358.44	663164.16	N 32 38 9.84	W 103 56 15.27
	300.00	0.00	292.04	300.00	0.00	0.00	0.00	0.00	595358.44	663164.16	N 32 38 9.84	W 103 56 15.27
	400.00	0.00	292.04	400.00	0.00	0.00	0.00	0.00	595358.44	663164.16	N 32 38 9.84	W 103 56 15.27
	500.00	0.00	292.04	500.00	0.00	0.00	0.00	0.00	595358.44	663164.16	N 32 38 9.84	W 103 56 15.27
	600.00	0.00	292.04	600.00	0.00	0.00	0.00	0.00	595358.44	663164.16	N 32 38 9.84	W 103 56 15.27
	700.00	0.00	292.04	700.00	0.00	0.00	0.00	0.00	595358.44	663164.16	N 32 38 9.84	W 103 56 15.27
	800.00	0.00	292.04	800.00	0.00	0.00	0.00	0.00	595358.44	663164.16	N 32 38 9.84	W 103 56 15.27
	900.00	0.00	292.04	900.00	0.00	0.00	0.00	0.00	595358.44	663164.16	N 32 38 9.84	W 103 56 15.27
	1000.00	0.00	292.04	1000.00	0.00	0.00	0.00	0.00	595358.44	663164.16	N 32 38 9.84	W 103 56 15.27
	1100.00	0.00	292.04	1100.00	0.00	0.00	0.00	0.00	595358.44	663164.16	N 32 38 9.84	W 103 56 15.27
	1200.00	0.00	292.04	1200.00	0.00	0.00	0.00	0.00	595358.44	663164.16	N 32 38 9.84	W 103 56 15.27
	1300.00	0.00	292.04	1300.00	0.00	0.00	0.00	0.00	595358.44	663164.16	N 32 38 9.84	W 103 56 15.27
	1400.00	0.00	292.04	1400.00	0.00	0.00	0.00	0.00	595358.44	663164.16	N 32 38 9.84	W 103 56 15.27
	1500.00	0.00	292.04	1500.00	0.00	0.00	0.00	0.00	595358.44	663164.16	N 32 38 9.84	W 103 56 15.27
	1600.00	0.00	292.04	1600.00	0.00	0.00	0.00	0.00	595358.44	663164.16	N 32 38 9.84	W 103 56 15.27
	1700.00	0.00	292.04	1700.00	0.00	0.00	0.00	0.00	595358.44	663164.16	N 32 38 9.84	W 103 56 15.27
	1800.00	0.00	292.04	1800.00	0.00	0.00	0.00	0.00	595358.44	663164.16	N 32 38 9.84	W 103 56 15.27
	1900.00	0.00	292.04	1900.00	0.00	0.00	0.00	0.00	595358.44	663164.16	N 32 38 9.84	W 103 56 15.27
	2000.00	0.00	292.04	2000.00	0.00	0.00	0.00	0.00	595358.44	663164.16	N 32 38 9.84	W 103 56 15.27
	2100.00	0.00	292.04	2100.00	0.00	0.00	0.00	0.00	595358.44	663164.16	N 32 38 9.84	W 103 56 15.27
	2200.00	0.00	292.04	2200.00	0.00	0.00	0.00	0.00	595358.44	663164.16	N 32 38 9.84	W 103 56 15.27

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'	8001.39	0.00	292.04	8001.39	0.00	0.00	0.00	0.00	593358.44	663164.16	N 32 38 9.84	W 103 56 15.27
	8100.00	11.83	292.04	8099.30	9.49	3.81	-9.41	12.00	593362.25	663154.76	N 32 38 9.87	W 103 56 15.38
	8200.00	23.83	292.04	8194.32	38.08	15.28	-37.74	12.00	593373.72	663126.42	N 32 38 9.99	W 103 56 15.71
	8300.00	35.83	292.04	8280.91	84.51	33.91	-83.77	12.00	593392.35	663080.40	N 32 38 10.17	W 103 56 16.24
	8400.00	47.83	292.04	8355.28	146.77	58.89	-145.48	12.00	595417.33	663018.69	N 32 38 10.42	W 103 56 16.96
	8500.00	59.83	292.04	8414.19	222.13	89.13	-220.17	12.00	595447.57	662944.01	N 32 38 10.73	W 103 56 17.84
	8600.00	71.83	292.04	8455.05	307.29	123.31	-304.59	12.00	595481.74	662859.60	N 32 38 11.07	W 103 56 18.82
	8626.39	75.00	292.04	8462.59	330.94	132.80	-328.03	12.00	595491.23	662836.16	N 32 38 11.16	W 103 56 19.10
	8700.00	76.59	289.49	8480.65	398.22	158.09	-394.75	4.00	595516.51	662769.44	N 32 38 11.41	W 103 56 19.87
	8800.00	78.80	286.07	8501.96	491.89	187.90	-487.77	4.00	595546.33	662676.43	N 32 38 11.71	W 103 56 20.96
Landing Point	8900.00	81.04	282.71	8519.47	587.77	212.35	-583.12	4.00	595570.77	662581.09	N 32 38 11.96	W 103 56 22.08
	9000.00	83.32	279.38	8533.08	685.38	231.32	-680.33	4.00	595589.74	662483.88	N 32 38 12.15	W 103 56 23.21
	9100.00	85.61	276.09	8542.73	784.27	244.71	-778.94	4.00	595603.13	662385.28	N 32 38 12.29	W 103 56 24.36
	9200.00	87.92	272.82	8548.37	883.94	252.47	-878.46	4.00	595610.89	662285.77	N 32 38 12.37	W 103 56 25.53
	9289.77	90.00	269.89	8550.00	973.67	254.59	-968.17	4.00	595613.01	662196.06	N 32 38 12.39	W 103 56 26.58
	9300.00	90.00	269.89	8550.00	983.91	254.57	-978.40	0.00	595612.99	662185.83	N 32 38 12.39	W 103 56 26.70
	9400.00	90.00	269.89	8550.00	1083.88	254.39	-1078.40	0.00	595612.81	662085.84	N 32 38 12.39	W 103 56 27.87
	9500.00	90.00	269.89	8550.00	1183.85	254.20	-1178.40	0.00	595612.62	661985.85	N 32 38 12.39	W 103 56 29.03
	9600.00	90.00	269.89	8550.00	1283.82	254.01	-1278.40	0.00	595612.43	661885.85	N 32 38 12.40	W 103 56 30.20
	9700.00	90.00	269.89	8550.00	1383.79	253.83	-1378.40	0.00	595612.25	661785.86	N 32 38 12.40	W 103 56 31.37
	9800.00	90.00	269.89	8550.00	1483.76	253.64	-1478.40	0.00	595612.06	661685.87	N 32 38 12.40	W 103 56 32.54
	9900.00	90.00	269.89	8550.00	1583.73	253.45	-1578.40	0.00	595611.88	661585.88	N 32 38 12.40	W 103 56 33.71
	10000.00	90.00	269.89	8550.00	1683.70	253.27	-1678.40	0.00	595611.69	661485.89	N 32 38 12.40	W 103 56 34.88
	10100.00	90.00	269.89	8550.00	1783.67	253.08	-1778.40	0.00	595611.50	661385.89	N 32 38 12.41	W 103 56 36.05
	10200.00	90.00	269.89	8550.00	1883.64	252.90	-1878.40	0.00	595611.32	661285.90	N 32 38 12.41	W 103 56 37.22
	10300.00	90.00	269.89	8550.00	1983.61	252.71	-1978.40	0.00	595611.13	661185.91	N 32 38 12.41	W 103 56 38.39
	10400.00	90.00	269.89	8550.00	2083.58	252.52	-2078.40	0.00	595610.94	661085.92	N 32 38 12.41	W 103 56 39.56
	10500.00	90.00	269.89	8550.00	2183.55	252.34	-2178.40	0.00	595610.76	660985.93	N 32 38 12.41	W 103 56 40.73
	10600.00	90.00	269.89	8550.00	2283.52	252.15	-2278.40	0.00	595610.57	660885.94	N 32 38 12.42	W 103 56 41.90
	10700.00	90.00	269.89	8550.00	2383.49	251.96	-2378.40	0.00	595610.39	660785.94	N 32 38 12.42	W 103 56 43.07
	10800.00	90.00	269.89	8550.00	2483.46	251.78	-2478.40	0.00	595610.20	660685.95	N 32 38 12.42	W 103 56 44.24
	10900.00	90.00	269.89	8550.00	2583.43	251.59	-2578.40	0.00	595610.01	660585.95	N 32 38 12.42	W 103 56 45.41
	11000.00	90.00	269.89	8550.00	2683.40	251.41	-2678.40	0.00	595609.83	660485.96	N 32 38 12.42	W 103 56 46.58
	11100.00	90.00	269.89	8550.00	2783.37	251.22	-2778.40	0.00	595609.64	660385.97	N 32 38 12.42	W 103 56 47.74
	11200.00	90.00	269.89	8550.00	2883.34	251.03	-2878.40	0.00	595609.45	660285.98	N 32 38 12.42	W 103 56 48.91
	11300.00	90.00	269.89	8550.00	2983.31	250.85	-2978.40	0.00	595609.27	660185.99	N 32 38 12.43	W 103 56 50.08
	11400.00	90.00	269.89	8550.00	3083.28	250.66	-3078.40	0.00	595609.08	660085.99	N 32 38 12.43	W 103 56 51.25
	11500.00	90.00	269.89	8550.00	3183.25	250.48	-3178.40	0.00	595608.90	659986.01	N 32 38 12.43	W 103 56 52.42
	11600.00	90.00	269.89	8550.00	3283.22	250.29	-3278.40	0.00	595608.71	659886.01	N 32 38 12.43	W 103 56 53.59
	11700.00	90.00	269.89	8550.00	3383.19	250.10	-3378.40	0.00	595608.52	659786.02	N 32 38 12.43	W 103 56 54.76
	11800.00	90.00	269.89	8550.00	3483.16	249.92	-3478.40	0.00	595608.34	659686.02	N 32 38 12.44	W 103 56 55.93
	11900.00	90.00	269.89	8550.00	3583.13	249.73	-3578.40	0.00	595608.15	659586.03	N 32 38 12.44	W 103 56 57.10
	12000.00	90.00	269.89	8550.00	3683.10	249.54	-3678.40	0.00	595607.97	659486.04	N 32 38 12.44	W 103 56 58.27
	12100.00	90.00	269.89	8550.00	3783.07	249.36	-3778.40	0.00	595607.78	659386.05	N 32 38 12.44	W 103 56 59.44
	12200.00	90.00	269.89	8550.00	3883.04	249.17	-3878.40	0.00	595607.59	659286.06	N 32 38 12.44	W 103 57 0.61
	12300.00	90.00	269.89	8550.00	3983.01	248.99	-3978.40	0.00	595607.41	659186.07	N 32 38 12.44	W 103 57 1.78
	12400.00	90.00	269.89	8550.00	4082.98	248.80	-4078.40	0.00	595607.22	659086.07	N 32 38 12.45	W 103 57 2.95
	12500.00	90.00	269.89	8550.00	4182.95	248.61	-4178.40	0.00	595607.03	658986.08	N 32 38 12.45	W 103 57 4.12
	12600.00	90.00	269.89	8550.00	4282.92	248.43	-4278.40	0.00	595606.85	658886.09	N 32 38 12.45	W 103 57 5.29
	12700.00	90.00	269.89	8550.00	4382.89	248.24	-4378.40	0.00	595606.66	658786.09	N 32 38 12.45	W 103 57 6.45
	12800.00	90.00	269.89	8550.00	4482.86	248.05	-4478.40	0.00	595606.48	658686.10	N 32 38 12.45	W 103 57 7.62
	12900.00	90.00	269.89	8550.00	4582.83	247.87	-4578.40	0.00	595606.29	658586.11	N 32 38 12.45	W 103 57 8.79
	13000.00	90.00	269.89	8550.00	4682.80	247.68	-4678.40	0.00	595606.10	658486.12	N 32 38 12.46	W 103 57 9.96
	13100.00	90.00	269.89	8550.00	4782.77	247.50	-4778.40	0.00	595605.92	658386.13	N 32 38 12.46	W 103 57 11.13
	13200.00	90.00	269.89	8550.00	4882.74	247.31	-4878.40	0.00	595605.73	658286.13	N 32 38 12.46	W 103 57 12.30
	13300.00	90.00	269.89	8550.00	4982.71	247.12	-4978.40	0.00	595605.55	658186.14	N 32 38 12.46	W 103 57 13.47
	13400.00	90.00	269.89	8550.00	5082.68	246.94	-5078.40	0.00	595605.36	658086.15	N 32 38 12.46	W 103 57 14.64

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 ° ' '')
	13500.00	90.00	269.89	8550.00	5182.65	246.75	-5178.40	0.00	595605.17	657986.16	N 32 38 12.46 W 103 57 15.81	
	13600.00	90.00	269.89	8550.00	5282.62	246.57	-5278.40	0.00	595604.99	657886.16	N 32 38 12.47 W 103 57 16.98	
	13700.00	90.00	269.89	8550.00	5382.59	246.38	-5378.40	0.00	595604.80	657786.17	N 32 38 12.47 W 103 57 18.15	
	13800.00	90.00	269.89	8550.00	5482.56	246.19	-5478.40	0.00	595604.61	657686.18	N 32 38 12.47 W 103 57 19.32	
	13900.00	90.00	269.89	8550.00	5582.53	246.01	-5578.40	0.00	595604.43	657586.19	N 32 38 12.47 W 103 57 20.49	
	14000.00	90.00	269.89	8550.00	5682.50	245.82	-5678.40	0.00	595604.24	657486.20	N 32 38 12.47 W 103 57 21.66	
	14100.00	90.00	269.89	8550.00	5782.47	245.63	-5778.40	0.00	595604.06	657386.21	N 32 38 12.47 W 103 57 22.83	
	14200.00	90.00	269.89	8550.00	5882.44	245.45	-5878.40	0.00	595603.87	657286.21	N 32 38 12.48 W 103 57 24.00	
	14300.00	90.00	269.89	8550.00	5982.41	245.26	-5978.39	0.00	595603.68	657186.22	N 32 38 12.48 W 103 57 25.16	
	14400.00	90.00	269.89	8550.00	6082.38	245.08	-6078.39	0.00	595603.50	657086.23	N 32 38 12.48 W 103 57 26.33	
	14500.00	90.00	269.89	8550.00	6182.35	244.89	-6178.39	0.00	595603.31	656986.23	N 32 38 12.48 W 103 57 27.50	
	14600.00	90.00	269.89	8550.00	6282.32	244.70	-6278.39	0.00	595603.12	656886.24	N 32 38 12.48 W 103 57 28.67	
	14700.00	90.00	269.89	8550.00	6382.29	244.52	-6378.39	0.00	595602.94	656786.25	N 32 38 12.48 W 103 57 29.84	
	14800.00	90.00	269.89	8550.00	6482.26	244.33	-6478.39	0.00	595602.75	656686.26	N 32 38 12.49 W 103 57 31.01	
	14900.00	90.00	269.89	8550.00	6582.23	244.14	-6578.39	0.00	595602.57	656586.27	N 32 38 12.49 W 103 57 32.18	
	15000.00	90.00	269.89	8550.00	6682.20	243.96	-6678.39	0.00	595602.38	656486.27	N 32 38 12.49 W 103 57 33.35	
	15100.00	90.00	269.89	8550.00	6782.17	243.77	-6778.39	0.00	595602.19	656386.28	N 32 38 12.49 W 103 57 34.52	
	15200.00	90.00	269.89	8550.00	6882.14	243.59	-6878.39	0.00	595602.01	656286.29	N 32 38 12.49 W 103 57 35.69	
	15300.00	90.00	269.89	8550.00	6982.11	243.40	-6978.39	0.00	595601.82	656186.30	N 32 38 12.49 W 103 57 36.86	
	15400.00	90.00	269.89	8550.00	7082.08	243.21	-7078.39	0.00	595601.64	656086.31	N 32 38 12.50 W 103 57 38.03	
	15500.00	90.00	269.89	8550.00	7182.05	243.03	-7178.39	0.00	595601.45	655986.31	N 32 38 12.50 W 103 57 39.20	
	15600.00	90.00	269.89	8550.00	7282.02	242.84	-7278.39	0.00	595601.26	655886.32	N 32 38 12.50 W 103 57 40.37	
	15700.00	90.00	269.89	8550.00	7381.99	242.66	-7378.39	0.00	595601.08	655786.33	N 32 38 12.50 W 103 57 41.54	
	15800.00	90.00	269.89	8550.00	7481.96	242.47	-7478.39	0.00	595600.89	655686.34	N 32 38 12.50 W 103 57 42.71	
	15900.00	90.00	269.89	8550.00	7581.93	242.28	-7578.39	0.00	595600.70	655586.34	N 32 38 12.50 W 103 57 43.87	
	16000.00	90.00	269.89	8550.00	7681.90	242.10	-7678.39	0.00	595600.52	655486.35	N 32 38 12.51 W 103 57 45.04	
	16100.00	90.00	269.89	8550.00	7781.87	241.91	-7778.39	0.00	595600.33	655386.36	N 32 38 12.51 W 103 57 46.21	
	16200.00	90.00	269.89	8550.00	7881.84	241.72	-7878.39	0.00	595600.15	655286.37	N 32 38 12.51 W 103 57 47.38	
	16300.00	90.00	269.89	8550.00	7981.81	241.54	-7978.39	0.00	595599.96	655186.37	N 32 38 12.51 W 103 57 48.55	
	16400.00	90.00	269.89	8550.00	8081.78	241.35	-8078.39	0.00	595599.77	655086.38	N 32 38 12.51 W 103 57 49.72	
	16500.00	90.00	269.89	8550.00	8181.75	241.17	-8178.39	0.00	595599.59	654986.39	N 32 38 12.51 W 103 57 50.89	
	16600.00	90.00	269.89	8550.00	8281.72	240.98	-8278.39	0.00	595599.40	654886.40	N 32 38 12.52 W 103 57 52.06	
	16700.00	90.00	269.89	8550.00	8381.69	240.79	-8378.39	0.00	595599.21	654786.41	N 32 38 12.52 W 103 57 53.23	
	16800.00	90.00	269.89	8550.00	8481.66	240.61	-8478.39	0.00	595599.03	654686.41	N 32 38 12.52 W 103 57 54.40	
	16900.00	90.00	269.89	8550.00	8581.63	240.42	-8578.39	0.00	595598.84	654586.42	N 32 38 12.52 W 103 57 55.57	
	17000.00	90.00	269.89	8550.00	8681.60	240.23	-8678.39	0.00	595598.66	654486.43	N 32 38 12.52 W 103 57 56.74	
	17100.00	90.00	269.89	8550.00	8781.57	240.05	-8778.39	0.00	595598.47	654386.44	N 32 38 12.52 W 103 57 57.91	
	17200.00	90.00	269.89	8550.00	8881.54	239.86	-8878.39	0.00	595598.28	654286.44	N 32 38 12.52 W 103 57 59.08	
	17300.00	90.00	269.89	8550.00	8981.51	239.68	-8978.39	0.00	595598.10	654186.45	N 32 38 12.53 W 103 58 0.25	
	17400.00	90.00	269.89	8550.00	9081.48	239.49	-9078.39	0.00	595597.91	654086.46	N 32 38 12.53 W 103 58 1.42	
	17500.00	90.00	269.89	8550.00	9181.45	239.30	-9178.39	0.00	595597.73	653986.47	N 32 38 12.53 W 103 58 2.59	
	17600.00	90.00	269.89	8550.00	9281.42	239.12	-9278.39	0.00	595597.54	653886.48	N 32 38 12.53 W 103 58 3.75	
	17700.00	90.00	269.89	8550.00	9381.39	238.93	-9378.39	0.00	595597.35	653786.48	N 32 38 12.53 W 103 58 4.92	
	17800.00	90.00	269.89	8550.00	9481.36	238.74	-9478.39	0.00	595597.17	653686.49	N 32 38 12.53 W 103 58 6.09	
	17900.00	90.00	269.89	8550.00	9581.33	238.56	-9578.39	0.00	595596.98	653586.50	N 32 38 12.54 W 103 58 7.26	
	18000.00	90.00	269.89	8550.00	9681.30	238.37	-9678.39	0.00	595596.79	653486.51	N 32 38 12.54 W 103 58 8.43	
	18100.00	90.00	269.89	8550.00	9781.27	238.19	-9778.39	0.00	595596.61	653386.51	N 32 38 12.54 W 103 58 9.60	
	18200.00	90.00	269.89	8550.00	9881.24	238.00	-9878.39	0.00	595596.42	653286.52	N 32 38 12.54 W 103 58 10.77	
	18300.00	90.00	269.89	8550.00	9981.21	237.81	-9978.39	0.00	595596.24	653186.53	N 32 38 12.54 W 103 58 11.94	
	18400.00	90.00	269.89	8550.00	10081.18	237.63	-10078.39	0.00	595596.05	653086.54	N 32 38 12.54 W 103 58 13.11	
	18500.00	90.00	269.89	8550.00	10181.15	237.44	-10178.39	0.00	595595.86	652986.55	N 32 38 12.54 W 103 58 14.28	
	18600.00	90.00	269.89	8550.00	10281.12	237.26	-10278.39	0.00	595595.68	652886.55	N 32 38 12.55 W 103 58 15.45	
	18700.00	90.00	269.89	8550.00	10381.09	237.07	-10378.39	0.00	595595.49	652786.56	N 32 38 12.55 W 103 58 16.62	
	18800.00	90.00	269.89	8550.00	10481.06	236.88	-10478.39	0.00	595595.30	652686.57	N 32 38 12.55 W 103 58 17.79	
Cimarex Hackberry 26 Federal Com 1H - PBHL [660 FNL, 390 FEL]	18802.61	90.00	269.89	8550.00	10483.67	236.88	-10481.00	0.00	595595.30	652683.96	N 32 38 12.55 W 103 58 17.82	

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 ° ' ")
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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 1H Rev2 RM 03Nov16
	1	25.000	18802.609	1/100.000	30.000	30.000		NAL_MWD_PLUS_0.5_DEG	Original Borehole / Cimarex Hackberry 26 Federal Com 1H

Structure:

Vertical Section (ft) Azim = 271.294705098769° Scale = 1:450.00(ft) Origin = 0N/-S. 0E/-W