

Submit 1 Copy To Appropriate District Office

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

State of New Mexico
Energy, Minerals and Natural Resources

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103
Revised July 18, 2013

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO. 30-025-44840
1. Type of Well: Oil Well ☒ Gas Well ☐ Other ☐		5. Indicate Type of Lease STATE ☐ FEE ☐
2. Name of Operator Cimarex Energy Co.		6. State Oil & Gas Lease No.
3. Address of Operator 600 N. Marienfeld St., Suite 600 Midland, TX 79701		7. Lease Name or Unit Agreement Name West Grama Ridge 8 5 Federal
4. Well Location Unit Letter M : 457 feet from the South line and 590 feet from the West line Section 08 Township 22S Range 34E NMPM County Lea		8. Well Number 3H
11. Elevation (Show whether DR, RKB, RT, GR, etc.) 3525' GR		9. OGRID Number 215099
		10. Pool name or Wildcat Grama Ridge; Bone Spring, West (28432)

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:		SUBSEQUENT REPORT OF:	
PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐	CHANGE PLANS ☒	COMMENCE DRILLING OPNS. ☐	P AND A ☐
PULL OR ALTER CASING ☐	MULTIPLE COMPL ☐	CASING/CEMENT JOB ☐	
DOWNHOLE COMMINGLE ☐			
CLOSED-LOOP SYSTEM ☐			
OTHER: ☐		OTHER: ☐	

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 19.15.7.14 NMAC. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Cimarex respectfully requests approval to change the BHL of the West Grama Ridge 8 5 Federal #3H.

Approved:
BHL: 330' FNL & 510' FWL

Proposed:
BHL: 100' FNL & 510' FWL

Please see the attached plat and directional plan for changes due to the BHL move.

Spud Date:

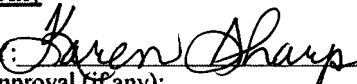
Rig Release Date:

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNATURE  TITLE Regulatory Analyst DATE 08/02/2018

Type or print name Fatima Vasquez E-mail address: fvasquez@cimarex.com PHONE: (432) 620-1933

For State Use Only

APPROVED BY:  TITLE Staff Mgr DATE 8-3-18
Conditions of Approval (if any):

Cimarex West Grama Ridge 8-5 Federal Com 3H Rev2 RM 01Aug18
Proposal Geodetic Report
 (Def Plan)



Report Date:	August 01, 2018 - 11:52 AM	Survey / DLS Computation:	Minimum Curvature / Lubinski
Client:	Cimarex	Vertical Section Azimuth:	359.669 ° (Grid North)
Field:	NM Lea County (NAD 83)	Vertical Section Origin:	0.000 ft, 0.000 ft
Structure / Slot:	Cimarex West Grama Ridge 8-5 Federal Com 3H / Cimarex West Grama Ridge 8-5 Federal Com 3H	TVD Reference Datum:	RKB
Well:	Cimarex West Grama Ridge 8-5 Federal Com 3H	TVD Reference Elevation:	3550.800 ft above MSL
Borehole:	Original Borehole	Seabed / Ground Elevation:	3524.800 ft above MSL
UWI / API#:	Unknown / Unknown	Magnetic Declination:	6.733 °
Survey Name:	Cimarex West Grama Ridge 8-5 Federal Com 3H Rev2 RM 01Aug18	Total Gravity Field Strength:	998.4755mgn (9.80665 Based)
Survey Date:	May 23, 2018	Gravity Model:	GARM
Tort / AHD / DDI / ERD Ratio:	97.181 ° / 10335.511 ft / 6.279 / 0.952	Total Magnetic Field Strength:	48121.017 nT
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Magnetic Dip Angle:	60.238 °
Location Lat / Long:	N 32° 24' 1.41258", W 103° 29' 55.83007"	Declination Date:	August 01, 2018
Location Grid N/E Y/X:	N 510399.160 ftUS, E 798893.410 ftUS	Magnetic Declination Model:	HDGM 2018
CRS Grid Convergence Angle:	0.4472 °	North Reference:	Grid North
Grid Scale Factor:	0.99998506	Grid Convergence Used:	0.4472 °
Version / Patch:	2.10.740.0	Total Corr Mag North->Grid North:	6.2862 °
		Local Coord Referenced To:	Structure Reference Point

HOBBS OCD

AUG 03 2018

RECEIVED

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 [517' FSL, 540' FWL]	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	510399.16	798893.41	N 32 24 1.41	W 103 29 55.83
Nudge 2"/100' DLS	1500.00	0.00	188.95	1500.00	0.00	0.00	0.00	0.00	510399.16	798893.41	N 32 24 1.41	W 103 29 55.83
Hold Nudge	1716.50	4.33	188.95	1716.29	-8.07	-8.08	-1.27	2.00	510391.08	798892.14	N 32 24 1.33	W 103 29 55.85
Drop to Vertical 2"/100' DLS	4006.74	4.33	188.95	4000.00	-178.72	-178.89	-28.17	0.00	510220.28	798865.24	N 32 23 59.64	W 103 29 56.17
Hold Vertical	4223.24	0.00	188.95	4216.29	-186.79	-186.96	-29.45	2.00	510212.20	798863.97	N 32 23 59.56	W 103 29 56.19
KOP - Build	10134.64	0.00	188.95	10127.69	-186.79	-186.96	-29.45	0.00	510212.20	798863.97	N 32 23 59.56	W 103 29 56.19
12"/100' DLS Landing Point	10872.32	88.52	359.67	10805.00	278.35	278.17	-32.13	12.00	510677.32	798861.28	N 32 24 4.17	W 103 29 56.18
Cimarex West Grama Ridge 8-5 Federal Com 3H - PBHL [100' FNL, 510' FWL]	20556.65	88.52	359.67	10855.00	9959.45	9959.11	-88.04	0.00	520358.10	798805.37	N 32 25 39.96	W 103 29 55.95

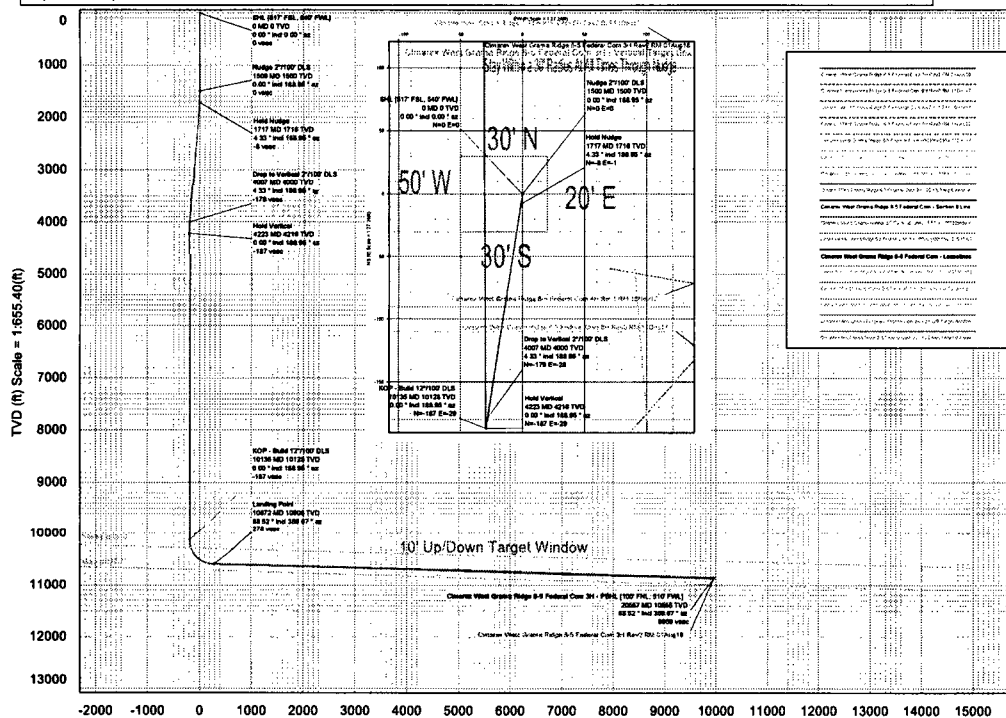
Survey Type: Def Plan

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

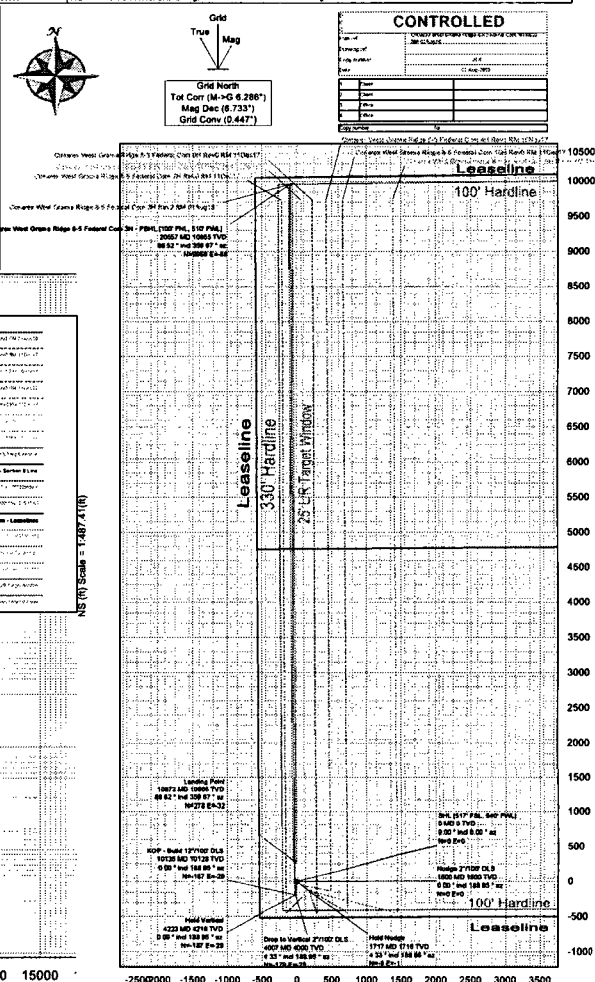
Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size (in)	Casing Diameter (in)	Expected Max Inclination (deg)	Survey Tool Type	Borehole / Survey
	1	0.000	26.000	1/100.000	30.000	30.000		NAL_MWD_IFR1+MS-Depth Only	Original Borehole / Cimarex West Grama Ridge 8-5 Federal Com 3H Rev2 RM 01Aug18
	1	26.000	20556.647	1/100.000	30.000	30.000		NAL_MWD_IFR1+MS	Original Borehole / Cimarex West Grama Ridge 8-5 Federal Com 3H

Borehole:		Well:		Field:		Structure:	
Original Borehole		Cimarex West Grama Ridge 8-5 Federal Com 3H		NM Lea County (NAD 83)		Cimarex West Grama Ridge 8-5 Federal Com 3H	
Survey & Magnetic Parameters	Dir: 86.23° Mag Dec: 6.73°	Date: 01-Aug-2018 Gravity: 9.80665	Surface Location Lat: 33 34 1.41 Lon: W 103 29 55.83	NEB2 New Mexico State Plane, Eastern Zone, US Feet Northing: 919238.18518 Easting: 789591.49518	Grid Conv: Scale Feet: 6.4472*	Structure: Cimarex West Grama Ridge 8-5 Federal Com 3H TVD Ref: RBN(3556.88 above BSL)	

Critical Points								
Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/W(-)	E(+)/W(-)	DLB
SHL (517 FSL, 540 FWL)	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
Nudge 27100' DLS	1500.00	0.00	180.95	1500.00	0.00	0.00	0.00	0.00
Hold Nudge	1718.50	4.33	180.95	1718.28	-8.07	-8.08	-1.27	2.00
Drop to Vertical 27100' DLS	4006.74	4.33	180.95	4006.00	-178.72	-178.89	-28.17	0.00
Hold Vertical	4223.24	0.00	180.95	4216.28	-188.78	-188.96	-29.45	2.00
KOP - Build 127100' DLS	10134.64	0.00	180.95	10127.60	-188.78	-188.96	-29.45	0.00
Landing Point	10872.32	86.52	359.87	10865.00	278.35	278.17	-32.13	12.00
Cimarex West Grama Ridge 8-5 Federal Com 3H - PBL (100 FSL, 910 FWL)	20556.85	88.52	359.87	10855.00	9509.45	9509.11	-84.04	0.00



Vertical Section (ft) Azim = 359.67° Scale = 1:655.40(ft) Origin = 0N/-S, 0E/-W



EW (ft) Scale = 1:487.41(ft)

Cimarex West Grama Ridge 8-5 Federal Com 3H Rev2 RM 01Aug18 Anti-Collision Summary Report

Analysis Date-24hr Time: August 01, 2018 - 11:53
 Client: Cimarex
 Field: NM Lea County (NAD 83)
 Structure: Cimarex West Grama Ridge 8-5 Federal Com 3H
 Slot: Cimarex West Grama Ridge 8-5 Federal Com 3H
 Well: Cimarex West Grama Ridge 8-5 Federal Com 3H
 Borehole: Original Borehole
 Scan MD Range: 0.00ft - 20556.65ft

Analysis Method: 3D Least Distance
 Reference Trajectory: Cimarex West Grama Ridge 8-5 Federal Com 3H Rev2 RM 01Aug18 (Def Plan)
 Depth Interval: Every 10.00 Measured Depth (ft)
 Rule Set: NAL Procedure: D&M AntiCollision Standard S002
 Min Pts: All local minima indicated.
 Version / Patch: 2.10.740.0
 Database \ Project: US1153APP452.dir.slb.com\drilling-NM Lea County 2.10

ISWASA0 3-D 95.000% Confidence 2.7955 sigma, for subject well. For offset wells, error model version is specified with each well respectively.

Trajectory Error Model:

Offset Trajectories Summary

Offset Selection Criteria

Wellhead distance scan:

Selection filters:

Not performed!

Definitive Surveys - Definitive Plans - Definitive surveys exclude definitive plans

- All Non-Def Surveys when no Def-Survey is set in a borehole - All Non-Def Plans when no Def-Plan is set in a borehole

Offset Trajectory	Separation			Allow	Sep.	Controlling	Reference Trajectory		Risk Level			Alert	Status
	Cl-Ct (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Minor	Major			

Results highlighted: Sep-Factor separation <= 1.50 ft

Cimarex West Grama Ridge 8-5
 Federal Com 4H Rev1 RM
 15Nov17 (Non-Def Plan)

92.16	32.81	89.66	59.35	N/A	MAS = 10.00 (m)	0.00	0.00					Warning Alert
92.15	32.81	89.65	59.34	57841.72	MAS = 10.00 (m)	26.00	26.00					Surface
92.15	32.81	80.62	59.34	9.83	MAS = 10.00 (m)	1500.00	1500.00					WRP
92.15	32.81	80.61	59.34	9.91	MAS = 10.00 (m)	1510.00	1510.00					MinPts
92.70	32.81	81.04	59.80	9.85	MAS = 10.00 (m)	1800.00	1599.98					MINPT-O-EOU
375.84	32.81	358.73	343.03	27.43	MAS = 10.00 (m)	4006.74	4000.00					MinPt-O-SF
496.09	32.81	476.32	483.28	28.59	MAS = 10.00 (m)	5060.00	5063.05					MinPt-O-SF
509.94	92.38	447.51	417.55	8.47	OSF1.50	11850.00	10630.24					MinPt-CICt
510.08	154.81	405.90	355.13	5.00	OSF1.50	13390.00	10689.99	OSF<5.00				Enter Alert
558.27	472.29	194.39	37.80	1.62	OSF1.50	20340.00	10849.41					MinPts
	440.30	283.90	117.97	1.90	OSF1.50	20556.85	10855.00					TD

Cimarex West Grama Ridge 8-5
 Federal Com 7H Rev0 RM
 11Dec17 (Non-Def Plan)

192.05	32.81	189.55	158.24	N/A	MAS = 10.00 (m)	0.00	0.00					Warning Alert
192.04	32.81	189.54	159.23	170618.35	MAS = 10.00 (m)	26.00	26.00					Surface
191.07	32.81	179.50	158.27	20.78	MAS = 10.00 (m)	1600.00	1599.98					WRP
106.16	32.81	92.76	73.35	9.54	MAS = 10.00 (m)	4070.00	4063.12					MinPt-O-SF
106.17	32.81	92.74	73.36	9.52	MAS = 10.00 (m)	4080.00	4073.11					MinPts
106.41	32.81	92.91	73.60	9.47	MAS = 10.00 (m)	4110.00	4103.08					MINPT-O-EOU
301.39	32.82	278.68	268.57	14.79	OSF1.50	6790.00	6783.05					MinPt-O-SF
301.39	44.71	270.75	258.68	10.62	OSF1.50	10134.64	10127.89					MINPT-O-EOU
301.42	44.74	270.75	258.67	10.81	OSF1.50	10140.00	10133.05					MinPt-O-ADP
302.00	44.87	271.25	257.12	10.60	OSF1.50	10180.00	10153.04					MinPt-O-SF
1032.12	311.56	823.58	720.56	5.00	OSF1.50	20270.00	10847.60	OSF<5.00				Enter Alert
1030.35	313.93	820.23	718.42	4.95	OSF1.50	20350.00	10849.67					MinPt-CICt
1030.50	314.33	820.11	718.17	4.95	OSF1.50	20370.00	10850.18					MinPts
1031.04	314.61	820.48	716.42	4.94	OSF1.50	20390.00	10850.70					MinPt-O-SF
1040.88	314.18	830.60	726.70	5.00	OSF1.50	20500.00	10853.54	OSF>5.00				Exit Alert
1050.42	312.67	841.13	737.74	5.07	OSF1.50	20556.65	10855.00					TD

Cimarex West Grama Ridge 8-5
 Federal Com 9H Rev0 RM
 11Dec17 (Non-Def Plan)

108.18	32.81	105.88	75.37	N/A	MAS = 10.00 (m)	0.00	0.00					Warning Alert
108.13	32.81	105.83	75.32	N/A	MAS = 10.00 (m)	26.00	26.00					Surface
108.13	32.81	86.59	75.32	11.69	MAS = 10.00 (m)	1510.00	1510.00					WRP
154.20	32.81	143.01	121.39	17.47	MAS = 10.00 (m)	4100.00	4093.09					MinPt-O-SF
162.43	32.81	150.80	129.62	17.52	MAS = 10.00 (m)	4300.00	4293.05					MinPt-O-SF
305.32	32.81	284.50	272.51	16.53	MAS = 10.00 (m)	6530.00	6523.05					MinPt-O-SF
313.05	32.81	292.18	280.24	16.90	MAS = 10.00 (m)	6780.00	6783.05					MinPts
313.05	37.71	287.07	275.34	13.23	OSF1.50	10134.64	10127.89					MINPT-O-EOU
313.08	37.75	287.06	275.33	13.22	OSF1.50	10140.00	10133.05					MinPt-O-ADP
313.64	37.87	287.56	275.77	13.20	OSF1.50	10180.00	10153.04					MinPt-O-SF
777.14	235.20	619.51	541.94	4.99	OSF1.50	17680.00	10780.74	OSF<5.00				Enter Alert
709.93	320.06	495.72	389.86	3.34	OSF1.50	20350.00	10849.67					MinPts
710.06	320.18	495.78	389.89	3.34	OSF1.50	20360.00	10849.92					MinPt-O-SF
740.70	310.62	532.78	430.08	3.59	OSF1.50	20556.65	10855.00					TD

Cimarex West Grama Ridge 8-5
 Federal Com 9H Rev0 RM
 11Dec17 (Non-Def Plan)

208.06	32.81	205.56	175.25	N/A	MAS = 10.00 (m)	0.00	0.00					Warning Alert
208.04	32.81	205.54	175.23	N/A	MAS = 10.00 (m)	26.00	26.00					Surface
208.09	32.81	193.20	172.28	21.58	MAS = 10.00 (m)	1700.00	1699.94					WRP
203.28	32.81	191.88	170.47	22.06	MAS = 10.00 (m)	1810.00	1809.53					MinPt-O-SF
203.27	32.81	191.73	170.47	22.20	MAS = 10.00 (m)	1820.00	1819.50					MINPT-O-EOU
271.23	32.81	260.91	238.42	34.37	MAS = 10.00 (m)	4100.00	4093.09					MinPts
280.29	32.81	269.65	247.48	34.10	MAS = 10.00 (m)	4300.00	4293.05					MinPt-O-SF
410.53	32.81	390.81	377.72	23.70	MAS = 10.00 (m)	6540.00	6533.05					MinPt-O-SF
414.11	32.81	394.27	381.31	23.73	MAS = 10.00 (m)	6610.00	6603.05					MinPt-O-SF
418.38	32.81	396.59	383.57	23.94	MAS = 10.00 (m)	6800.00	6793.05					MinPts
418.40	38.94	389.61	377.46	17.04	OSF1.50	10140.00	10133.05					MinPts
418.52	39.26	391.51	379.26	16.98	OSF1.50	10190.00	10182.93					MinPt-O-SF
1072.16	323.68	855.54	748.48	5.00	OSF1.50	20240.00	10846.83	OSF<5.00				Enter Alert
1069.65	327.11	850.75	742.54	4.93	OSF1.50	20350.00	10849.67					MinPt-CICt
1069.78	327.48	850.61	742.28	4.93	OSF1.50	20370.00	10850.18					MinPts
1070.23	327.73	850.91	742.50	4.92	OSF1.50	20390.00	10850.70					MinPt-O-SF

Offset Trajectory	Separation			Allow	Sep. Fact.	Controlling Rule	Reference Trajectory		Risk Level			Alert	Status
	Cl-Cl (ft)	MAS (ft)	EOU (ft)				MD (ft)	TVD (ft)	Alert	Minor	Major		

1082.35	326.70	863.71	755.64	5.00	OSF1.50	20520.00	10854.05		OSF>5.00			Exit Alert	
1088.55	325.61	870.64	762.93	5.04	OSF1.50	20556.65	10855.00					TD	

Cimarex West Grama Ridge 8-5 Federal Com 3H Rev0 RM 11Dec17 (Non-Def Plan)													
	178.90	32.81	174.40	144.10	N/A	MAS = 10.00 (m)	0.00	0.00				Pass	
	178.88	32.81	174.38	144.08	N/A	MAS = 10.00 (m)	26.00	26.00				Surface	
	155.83	32.81	143.09	123.02	14.99	MAS = 10.00 (m)	2270.00	2288.21				WRP	
	155.83	32.81	143.09	123.02	14.99	MAS = 10.00 (m)	2280.00	2278.19				MinPts	
	1377.02	68.47	1330.54	1308.55	31.25	OSF1.50	10200.00	10192.85				MinPts	
	1625.08	441.60	1329.82	1183.45	5.54	OSF1.50	20350.00	10849.67				MinPt-O-SF	
	1625.49	443.06	1329.28	1182.43	5.53	OSF1.50	20380.00	10850.70				MinPt-CICt	
	1625.75	443.39	1329.33	1182.37	5.52	OSF1.50	20400.00	10850.98				MINPT-O-EOU	
	1629.31	445.19	1331.68	1184.12	5.51	OSF1.50	20470.00	10852.78				MinPt-O-ADP	
	1637.85	448.33	1338.47	1191.52	5.53	OSF1.50	20556.65	10855.00				MinPt-O-SF	
												TD	

Cimarex West Grama Ridge 8-5 Federal Com 10H Rev0 RM 11Dec17 (Non-Def Plan)													
	224.67	32.81	222.17	191.87	N/A	MAS = 10.00 (m)	0.00	0.00				Pass	
	224.67	32.81	222.17	191.86	249985.08	MAS = 10.00 (m)	26.00	26.00				Surface	
	224.67	32.81	213.14	191.86	24.81	MAS = 10.00 (m)	1500.00	1500.00				WRP	
	224.67	32.81	213.13	191.87	24.58	MAS = 10.00 (m)	1510.00	1510.00				MinPts	
	225.39	32.81	213.79	192.58	24.51	MAS = 10.00 (m)	1590.00	1589.98				MINPT-O-EOU	
	459.51	32.81	445.13	426.70	38.46	MAS = 10.00 (m)	4100.00	4083.09				MinPt-O-SF	
	480.52	32.81	465.57	447.71	38.38	MAS = 10.00 (m)	4300.00	4293.05				MinPt-O-SF	
	784.77	40.42	756.99	744.35	30.94	OSF1.50	7100.00	7093.05				MinPt-O-SF	
	797.48	50.30	763.10	747.16	24.95	OSF1.50	10140.00	10133.05				MinPts	
	802.23	50.89	767.47	751.34	24.79	OSF1.50	10250.00	10241.93				MinPt-O-SF	
	1287.89	371.71	1019.05	895.98	5.14	OSF1.50	20380.00	10849.92				MinPt-CICt	
	1287.89	372.21	1018.82	895.68	5.13	OSF1.50	20380.00	10850.44				MinPts	
	1289.25	372.93	1019.79	896.31	5.13	OSF1.50	20420.00	10851.47				MinPt-O-SF	
	1283.31	372.74	1033.98	910.57	5.18	OSF1.50	20556.65	10855.00				TD	