

HOBBS OCD

DISTRICT I

1825 N. French Dr., Hobbs, NM 88240
Phone (505) 833-6181 Fax (505) 833-0720

DISTRICT II

811 E. First St., Artesia, NM 88210
Phone (505) 740-1255 Fax (505) 740-0720

DISTRICT III

1000 Rio Brazos Rd., Aztec, NM 87410
Phone (505) 834-6170 Fax (505) 834-6170

DISTRICT IV

1820 S. St. Francis Dr., Santa Fe, NM 87505
Phone (505) 476-2400 Fax (505) 476-0400

FEB 01 2013

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

RECEIVED

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-025-40972	Pool Code 28432	Pool Name Gramma Ridge; Bone Springs, West
Property Code 39674	Property Name WEST GRAMA RIDGE 8 STATE COM	Well Number 4
OGRID No. 215099	Operator Name CIMAREX ENERGY CO.	Elevation 3544'

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	8	22 S	34 E		330	SOUTH	660	EAST	LEA

Bottom Hole Location If Different From Surface

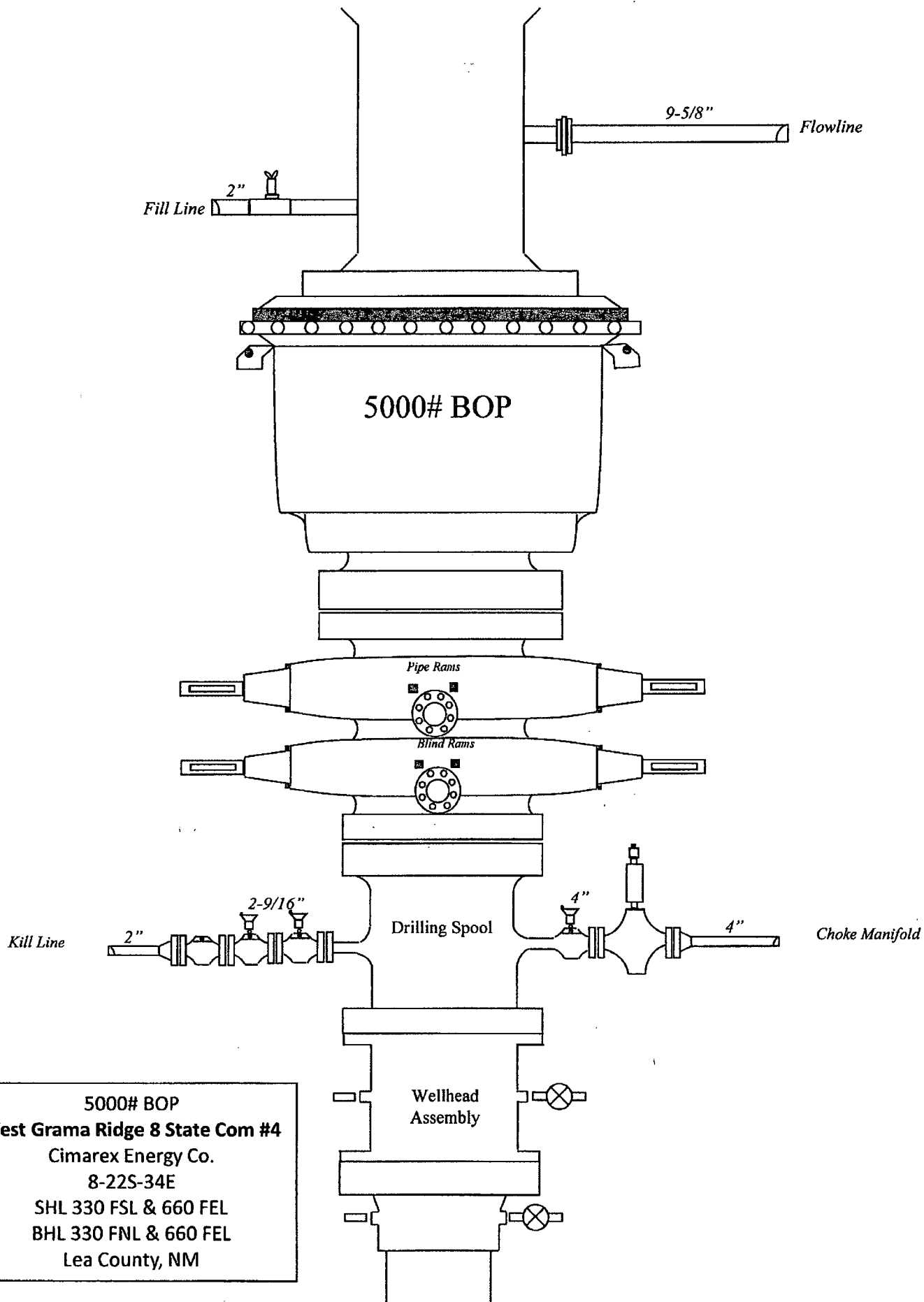
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
A	8	22 S	34 E		330	NORTH	660	EAST	LEA

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

PROPOSED BOTTOM HOLE LOCATION Lat - N 32°24'45.28" Long - W 103°29'08.35" NMSPC - N 514864.0 E 802828.7 (NAD-83) SURFACE LOCATION Lat - N 32°23'59.57" Long - W 103°29'08.44" NMSPC - N 510244.8 E 802957.9 (NAD-83)	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 undivided 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. <i>Michelle Chappell</i> 01/30/13 Signature Date Michelle Chappell Printed Name mchappell@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. GARY L. JONES Date Surveyed Signature & Seal of Professional Surveyor
	Certificate No. Gary L. Jones 7977
	BASIN SURVEYS 26190

FEB 04 2013



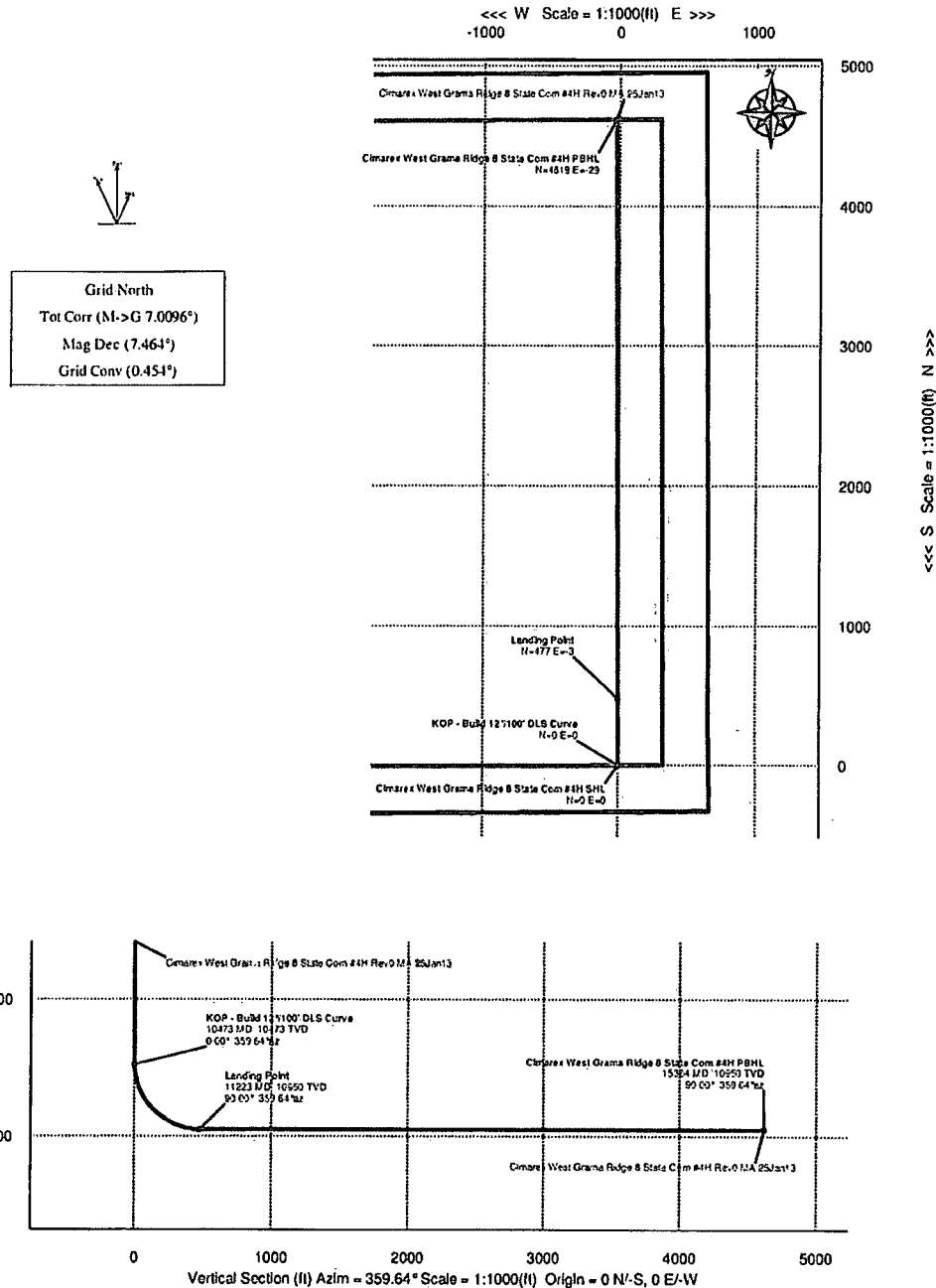
5000# BOP
West Grama Ridge 8 State Com #4
Cimarex Energy Co.
8-22S-34E
SHL 330 FSL & 660 FEL
BHL 330 FNL & 660 FEL
Lea County, NM

WELL	West Grama Ridge 8 State #4H	FIELD	NM Lea County	STRUCTURE	West Grama Ridge 8 State #4H
Geology / Formation	Permian	Surface Location	N 103 W 28 S 10 E Sec 10 T10N R10E Lea Co NM		
Well Name	WGRD-227-8	Well ID	W 103 28 10	Survey	W 103 28 10
Drill Date	8/2/2011	Drill Date	8/2/2011	Survey Date	8/2/2011
Drill Time	7:45	Drill Time	7:45	Survey Time	7:45
Drill Depth	10313.3	Drill Depth	10313.3	Survey Depth	10313.3
Drill Type	WGRD-227-8	Drill Type	WGRD-227-8	Survey Type	WGRD-227-8
Drill Status	WGRD-227-8	Drill Status	WGRD-227-8	Survey Status	WGRD-227-8
Drill Operator	WGRD-227-8	Drill Operator	WGRD-227-8	Survey Operator	WGRD-227-8
Drill Company	WGRD-227-8	Drill Company	WGRD-227-8	Survey Company	WGRD-227-8
Drill License	WGRD-227-8	Drill License	WGRD-227-8	Survey License	WGRD-227-8
Drill Permit	WGRD-227-8	Drill Permit	WGRD-227-8	Survey Permit	WGRD-227-8
Drill Plan	WGRD-227-8	Drill Plan	WGRD-227-8	Survey Plan	WGRD-227-8
Drill Log	WGRD-227-8	Drill Log	WGRD-227-8	Survey Log	WGRD-227-8
Drill Report	WGRD-227-8	Drill Report	WGRD-227-8	Survey Report	WGRD-227-8
Drill Summary	WGRD-227-8	Drill Summary	WGRD-227-8	Survey Summary	WGRD-227-8
Drill Notes	WGRD-227-8	Drill Notes	WGRD-227-8	Survey Notes	WGRD-227-8
Drill History	WGRD-227-8	Drill History	WGRD-227-8	Survey History	WGRD-227-8
Drill Details	WGRD-227-8	Drill Details	WGRD-227-8	Survey Details	WGRD-227-8
Drill Data	WGRD-227-8	Drill Data	WGRD-227-8	Survey Data	WGRD-227-8
Drill Results	WGRD-227-8	Drill Results	WGRD-227-8	Survey Results	WGRD-227-8
Drill Analysis	WGRD-227-8	Drill Analysis	WGRD-227-8	Survey Analysis	WGRD-227-8
Drill Conclusion	WGRD-227-8	Drill Conclusion	WGRD-227-8	Survey Conclusion	WGRD-227-8
Drill Recommendation	WGRD-227-8	Drill Recommendation	WGRD-227-8	Survey Recommendation	WGRD-227-8
Drill Action	WGRD-227-8	Drill Action	WGRD-227-8	Survey Action	WGRD-227-8
Drill Follow-up	WGRD-227-8	Drill Follow-up	WGRD-227-8	Survey Follow-up	WGRD-227-8
Drill Review	WGRD-227-8	Drill Review	WGRD-227-8	Survey Review	WGRD-227-8
Drill Approval	WGRD-227-8	Drill Approval	WGRD-227-8	Survey Approval	WGRD-227-8
Drill Sign-off	WGRD-227-8	Drill Sign-off	WGRD-227-8	Survey Sign-off	WGRD-227-8
Drill Completion	WGRD-227-8	Drill Completion	WGRD-227-8	Survey Completion	WGRD-227-8
Drill Final	WGRD-227-8	Drill Final	WGRD-227-8	Survey Final	WGRD-227-8
Drill End	WGRD-227-8	Drill End	WGRD-227-8	Survey End	WGRD-227-8

HOBBS OCD

FEB 01 2013

RECEIVED



Critical Point	MD	INCL	AZIM	Critical Points				
				TYD	YSEC	N(±)/St(±)	E(±)/W(±)	DLS
Cimarex West Grama Ridge & State Com #4H SHL	0.00	0.00	359.64	0.00	0.00	0.00	0.00	
KOP - Build 12'*/100' DLS Curve	10472.50	0.00	359.64	10472.50	0.00	0.00	0.00	0.00
Landing Point	11222.56	90.00	359.64	10950.00	477.50	477.49	-3.00	12.00
Cimarex West Grama Ridge & State Com #4H PBHL	15364.41	90.00	359.64	10950.00	4619.36	4619.27	-29.20	0.00



Cimarex West Grama Ridge 8 State Com #4H Rev0 MA 25Jan13 Proposal Report (Non-Def Plan)



Report Date:	January 25, 2013 - 10:20 AM	Survey / DLS Computation:	Minimum Curvature / Lubinski
Client:	Cimarex	Vertical Section Azimuth:	359.638 ° (Grid North)
Field:	NM Lea County (NAD 83)	Vertical Section Origin:	0.000 ft, 0.000 ft
Structure / Slot:	Cimarex West Grama Ridge 8 State Com #4H / Cimarex West Grama Ridge 8 State Com #4H	TVD Reference Datum:	Ground Level
Well:	Cimarex West Grama Ridge 8 State Com #4H	TVD Reference Elevation:	3544.000 ft above MSL
Borehole:	Original Borehole	Seabed / Ground Elevation:	3544.000 ft above MSL
UWI / API#:	Unknown / Unknown	Magnetic Declination:	7.464 °
Survey Name:	Cimarex West Grama Ridge 8 State Com #4H Rev0 MA 25Jan13	Total Gravity Field Strength:	998.4885mgn (9.80665 Based)
Survey Date:	January 25, 2013	Total Magnetic Field Strength:	48553.298 nT
Tort / AHD / DDI / ERD Ratio:	90.005 ° / 4619.359 ft / 5.766 / 0.422	Magnetic Dip Angle:	60.287 °
Coordinate Reference System:	NAD83 New Mexico State Plane, Eastern Zone, US Feet	Declination Date:	January 25, 2013
Location Lat / Long:	N 32° 23' 59.56887", W 103° 29' 8.43996"	Magnetic Declination Model:	BGGM 2012
Location Grid N/E Y/X:	N 510244.800 RUS, E 802957.900 RUS	North Reference:	Grid North
CRS Grid Convergence Angle:	0.4542 °	Grid Convergence Used:	0.4542 °
Grid Scale Factor:	0.99998748	Total Corr Mag North->Grid North:	7.0096 °
		Local Coord Referenced To:	Structure Reference Point

Comments	MD (ft)	Incl (°)	Azlm Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (RUS)	Easting (RUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")	Closure (ft)	Closure Azimuth (°)	DLS (°/100ft)
Cimarex West Grama Ridge 8 State Com #4H SHL	0.00	0.00	359.64	0.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	N/A
	100.00	0.00	359.64	100.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	200.00	0.00	359.64	200.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	300.00	0.00	359.64	300.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	400.00	0.00	359.64	400.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	500.00	0.00	359.64	500.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	600.00	0.00	359.64	600.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	700.00	0.00	359.64	700.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	800.00	0.00	359.64	800.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	900.00	0.00	359.64	900.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	1000.00	0.00	359.64	1000.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	1100.00	0.00	359.64	1100.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	1200.00	0.00	359.64	1200.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	1300.00	0.00	359.64	1300.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	1400.00	0.00	359.64	1400.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	1500.00	0.00	359.64	1500.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	1600.00	0.00	359.64	1600.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	1700.00	0.00	359.64	1700.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	1800.00	0.00	359.64	1800.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	1900.00	0.00	359.64	1900.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	2000.00	0.00	359.64	2000.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	2100.00	0.00	359.64	2100.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	2200.00	0.00	359.64	2200.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	2300.00	0.00	359.64	2300.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	2400.00	0.00	359.64	2400.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	2500.00	0.00	359.64	2500.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	2600.00	0.00	359.64	2600.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00

1/30/2013 2:13 PM Page 2 of 4

Comments	MD (ft)	Incl (°)	Azin Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	Northing (RUS)	Easting (RUS)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')	Closure (ft)	Closure Azimuth (°)	DLS ("/100ft)
	8200.00	0.00	359.64	8200.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	8300.00	0.00	359.64	8300.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	8400.00	0.00	359.64	8400.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	8500.00	0.00	359.64	8500.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	8600.00	0.00	359.64	8600.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	8700.00	0.00	359.64	8700.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	8800.00	0.00	359.64	8800.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	8900.00	0.00	359.64	8900.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	9000.00	0.00	359.64	9000.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	9100.00	0.00	359.64	9100.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	9200.00	0.00	359.64	9200.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	9300.00	0.00	359.64	9300.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	9400.00	0.00	359.64	9400.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	9500.00	0.00	359.64	9500.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	9600.00	0.00	359.64	9600.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	9700.00	0.00	359.64	9700.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	9800.00	0.00	359.64	9800.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	9900.00	0.00	359.64	9900.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	10000.00	0.00	359.64	10000.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	10100.00	0.00	359.64	10100.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	10200.00	0.00	359.64	10200.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	10300.00	0.00	359.64	10300.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
	10400.00	0.00	359.64	10400.00	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
KOP - Build 12"/100'	10472.50	0.00	359.64	10472.50	0.00	0.00	0.00	510244.80	802957.90	N 32 23 59.57	W 103 29 8.44	0.00	0.00	0.00
DLS Curve	10500.00	3.30	359.64	10499.98	0.79	0.79	0.00	510245.59	802957.90	N 32 23 59.69	W 103 29 8.44	0.79	359.64	12.00
	10600.00	15.30	359.64	10598.49	16.92	16.92	-0.11	510261.72	802957.79	N 32 23 59.74	W 103 29 8.44	16.92	359.64	12.00
	10700.00	27.30	359.64	10591.49	53.18	53.18	-0.33	510297.98	802957.57	N 32 24 0.10	W 103 29 8.44	53.18	359.64	12.00
	10800.00	39.30	359.64	10774.92	107.98	107.97	-0.68	510352.77	802957.22	N 32 24 0.64	W 103 29 8.44	107.98	359.64	12.00
	10900.00	51.30	359.64	10845.14	178.92	178.92	-1.12	510423.72	802956.78	N 32 24 1.34	W 103 29 8.44	178.92	359.64	12.00
	11000.00	63.30	359.64	10899.07	262.92	262.91	-1.65	510507.71	802956.25	N 32 24 2.17	W 103 29 8.43	262.92	359.64	12.00
	11100.00	75.29	359.64	10934.36	356.29	356.28	-2.24	510601.07	802955.66	N 32 24 3.09	W 103 29 8.43	356.29	359.64	12.00
	11200.00	87.29	359.64	10949.47	454.95	454.94	-2.86	510699.74	802955.04	N 32 24 4.07	W 103 29 8.43	454.95	359.64	12.00
Landing Point	11222.56	90.00	359.64	10950.00	477.50	477.49	-3.00	510722.28	802954.90	N 32 24 4.29	W 103 29 8.43	477.50	359.64	12.00
	11300.00	90.00	359.64	10950.00	554.94	554.93	-3.49	510799.73	802954.41	N 32 24 5.06	W 103 29 8.43	554.94	359.64	0.00
	11400.00	90.00	359.64	10950.00	654.94	654.93	-4.12	510899.72	802953.78	N 32 24 6.05	W 103 29 8.43	654.94	359.64	0.00
	11500.00	90.00	359.64	10950.00	754.94	754.93	-4.74	510999.72	802953.16	N 32 24 7.04	W 103 29 8.43	754.94	359.64	0.00
	11600.00	90.00	359.64	10950.00	854.94	854.93	-5.37	511099.72	802952.53	N 32 24 8.03	W 103 29 8.42	854.94	359.64	0.00
	11700.00	90.00	359.64	10950.00	954.94	954.93	-6.00	511199.71	802951.90	N 32 24 9.02	W 103 29 8.42	954.94	359.64	0.00
	11800.00	90.00	359.64	10950.00	1054.94	1054.92	-6.63	511299.71	802951.27	N 32 24 10.01	W 103 29 8.42	1054.94	359.64	0.00
	11900.00	90.00	359.64	10950.00	1154.94	1154.92	-7.26	511399.71	802950.64	N 32 24 11.00	W 103 29 8.42	1154.94	359.64	0.00
	12000.00	90.00	359.64	10950.00	1254.94	1254.92	-7.89	511499.70	802950.01	N 32 24 11.99	W 103 29 8.42	1254.94	359.64	0.00
	12100.00	90.00	359.64	10950.00	1354.94	1354.92	-8.52	511599.70	802949.38	N 32 24 12.98	W 103 29 8.41	1354.94	359.64	0.00
	12200.00	90.00	359.64	10950.00	1454.94	1454.92	-9.15	511699.69	802948.75	N 32 24 13.97	W 103 29 8.41	1454.94	359.64	0.00
	12300.00	90.00	359.64	10950.00	1554.94	1554.91	-9.78	511799.69	802948.12	N 32 24 14.95	W 103 29 8.41	1554.94	359.64	0.00
	12400.00	90.00	359.64	10950.00	1654.94	1654.91	-10.41	511899.69	802947.49	N 32 24 15.94	W 103 29 8.41	1654.94	359.64	0.00
	12500.00	90.00	359.64	10950.00	1754.94	1754.91	-11.04	511999.68	802946.86	N 32 24 16.93	W 103 29 8.41	1754.94	359.64	0.00
	12600.00	90.00	359.64	10950.00	1854.94	1854.91	-11.67	512099.68	802946.23	N 32 24 17.92	W 103 29 8.40	1854.94	359.64	0.00
	12700.00	90.00	359.64	10950.00	1954.94	1954.91	-12.31	512199.68	802945.59	N 32 24 18.91	W 103 29 8.40	1954.94	359.64	0.00
	12800.00	90.00	359.64	10950.00	2054.94	2054.90	-12.94	512299.67	802944.96	N 32 24 19.90	W 103 29 8.40	2054.94	359.64	0.00
	12900.00	90.00	359.64	10950.00	2154.94	2154.90	-13.57	512399.67	802944.33	N 32 24 20.89	W 103 29 8.40	2154.94	359.64	0.00
	13000.00	90.00	359.64	10950.00	2254.94	2254.90	-14.20	512499.67	802943.70	N 32 24 21.88	W 103 29 8.40	2254.94	359.64	0.00
	13100.00	90.00	359.64	10950.00	2354.94	2354.90	-14.83	512599.66	802943.07	N 32 24 22.87	W 103 29 8.40	2354.94	359.64	0.00
	13200.00	90.00	359.64	10950.00	2454.94	2454.90	-15.46	512699.66	802942.44	N 32 24 23.86	W 103 29 8.39	2454.94	359.64	0.00
	13300.00	90.00	359.64	10950.00	2554.94	2554.89	-16.10	512799.66	802941.80	N 32 24 24.85	W 103 29 8.39	2554.94	359.64	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 (ft/100ft)
	13400.00	90.00	359.64	10950.00	2654.94	2654.89	-16.73	512899.65	802941.17	N 32 24 25.84	W 103 29 8.39	2654.94	359.64	0.00
	13500.00	90.00	359.64	10950.00	2754.94	2754.89	-17.36	512999.65	802940.54	N 32 24 26.83	W 103 29 8.39	2754.94	359.64	0.00
	13600.00	90.00	359.64	10950.00	2854.94	2854.89	-18.00	513099.65	802939.90	N 32 24 27.82	W 103 29 8.39	2854.94	359.64	0.00
	13700.00	90.00	359.64	10950.00	2954.94	2954.89	-18.63	513199.64	802939.27	N 32 24 28.81	W 103 29 8.38	2954.94	359.64	0.00
	13800.00	90.00	359.64	10950.00	3054.94	3054.88	-19.26	513299.64	802938.64	N 32 24 29.80	W 103 29 8.38	3054.94	359.64	0.00
	13900.00	90.00	359.64	10950.00	3154.94	3154.88	-19.90	513399.64	802938.00	N 32 24 30.79	W 103 29 8.38	3154.94	359.64	0.00
	14000.00	90.00	359.64	10950.00	3254.94	3254.88	-20.53	513499.63	802937.37	N 32 24 31.78	W 103 29 8.38	3254.94	359.64	0.00
	14100.00	90.00	359.64	10950.00	3354.94	3354.88	-21.16	513599.63	802936.74	N 32 24 32.77	W 103 29 8.38	3354.94	359.64	0.00
	14200.00	90.00	359.64	10950.00	3454.94	3454.88	-21.80	513699.63	802936.10	N 32 24 33.76	W 103 29 8.37	3454.94	359.64	0.00
	14300.00	90.00	359.64	10950.00	3554.94	3554.87	-22.43	513799.62	802935.47	N 32 24 34.74	W 103 29 8.37	3554.94	359.64	0.00
	14400.00	90.00	359.64	10950.00	3654.94	3654.87	-23.07	513899.62	802934.83	N 32 24 35.73	W 103 29 8.37	3654.94	359.64	0.00
	14500.00	90.00	359.64	10950.00	3754.94	3754.87	-23.70	513999.62	802934.20	N 32 24 36.72	W 103 29 8.37	3754.94	359.64	0.00
	14600.00	90.00	359.64	10950.00	3854.94	3854.87	-24.34	514099.61	802933.56	N 32 24 37.71	W 103 29 8.37	3854.94	359.64	0.00
	14700.00	90.00	359.64	10950.00	3954.94	3954.87	-24.97	514199.61	802932.93	N 32 24 38.70	W 103 29 8.37	3954.94	359.64	0.00
	14800.00	90.00	359.64	10950.00	4054.94	4054.86	-25.61	514299.61	802932.29	N 32 24 39.69	W 103 29 8.36	4054.94	359.64	0.00
	14900.00	90.00	359.64	10950.00	4154.94	4154.86	-26.25	514399.60	802931.66	N 32 24 40.68	W 103 29 8.36	4154.94	359.64	0.00
	15000.00	90.00	359.64	10950.00	4254.94	4254.86	-26.88	514499.60	802931.02	N 32 24 41.67	W 103 29 8.36	4254.94	359.64	0.00
	15100.00	90.00	359.64	10950.00	4354.94	4354.86	-27.52	514599.59	802930.38	N 32 24 42.66	W 103 29 8.36	4354.94	359.64	0.00
	15200.00	90.00	359.64	10950.00	4454.94	4454.86	-28.15	514699.59	802929.75	N 32 24 43.65	W 103 29 8.36	4454.94	359.64	0.00
	15300.00	90.00	359.64	10950.00	4554.94	4554.85	-28.79	514799.59	802929.11	N 32 24 44.64	W 103 29 8.35	4554.94	359.64	0.00
Cimarex West Grama Ridge 8 State Com #4H PBHL	15364.41	90.00	359.64	10950.00	4619.36	4619.27	-29.20	514854.00	802928.70	N 32 24 45.28	W 103 29 8.35	4619.36	359.64	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	15364.415	1/100.000	30.000	30.000	SLB_MWD-STD	Original Borehole / Cimarex West Grama Ridge 8 State Com #4H