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Form 3160-3
(April 2004)UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007

1a. Type of Work: ☒ DRILL ☐ REENTER		5. Lease Serial No. NM-19423
1b. Type of Well: ☐ Oil Well ☒ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone		6. If Indian, Allottee or Tribe Name
2. Name of Operator Cimarex Energy Co. of Colorado (162683)		7. If Unit or CA Agreement, Name and No.
3a. Address 600 N. Marienfeld St., Ste. 600; Midland, TX 79701		8. Lease Name and Well No. Seldom Seen 15 Federal No. 3 (38096)
3b. Phone No. (include area code) 432-571-7800		9. API Well No. 30-015- 38442
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At Surface 1880 FNL & 400 FEL (H)		10. Field and Pool, or Exploratory Sage Draw; Wolfcamp, E (96890)
At proposed prod. Zone 1780 FNL & 660 FWL Horizontal Wolfcamp Test		11. Sec., T. R. M. or Blk. and Survey or Area 15-25S-26E
14. Distance in miles and direction from nearest town or post office*		12. County or Parish Eddy
		13. State NM
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line if any) 400'	16. No of acres in lease 2560	17. Spacing Unit dedicated to this well N2 320 acres
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. N/A	19. Proposed Depth Pilot Hole 10250' Lateral MD 13812' TVD 9608' 41613 @ 2H L	20. BLM/BIA Bond No. on File NM-2575
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3364' GR	22. Approximate date work will start* 01.15.11	23. Estimated duration 30-35 days
24. Attachments		

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

- | | |
|---|--|
| 1. Well plat certified by a registered surveyor | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan | 5. Operator Certification |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the authorized officer. |

25. Signature Zeno Farris	Name (Printed/Typed) Zeno Farris	Date 11.08.10
Title Manager Operations Administration		
Approved By (Signature) Is/ Don Peterson	Name (Printed/Typed)	Date JAN 27 2011
Title FIELD MANAGER	Office CARLSBAD FIELD OFFICE	

Application approval 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.

Conditions of approval, if any, are attached.

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)

APPROVAL FOR TWO YEARS

Carlsbad Controlled Water Basin

SEE ATTACHED FOR
CONDITIONS OF APPROVALApproval Subject to General Requirements
& Special Stipulations Attached

Application to Drill
Seldom Seen 15 Federal No. 3
Cimarex Energy Co. of Colorado
Unit H, Section 15
T25S-R26E, Eddy County, NM

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In response to questions asked under Section II B of Bulletin NTL-6, the following information is provided for your consideration:

1. Location: SHL 1880 FNL & 400 FEL
BHL 1780 FNL & 660 FWL
2. Elevation above sea level: 3364' GR
3. Geologic name of surface formation: Quaternary Alluvium Deposits
4. Drilling tools and associated equipment: Conventional rotary drilling rig using fluid as a circulating medium for solids removal.
5. Proposed drilling depth: Pilot Hole 10250' Lateral MD 13812' TVD 9608'
6. Estimated tops of geological markers:

Top Salt	1110'
Base Salt	1737'
Delaware	1942'
Cherry Canyon	2921'
Brushy Canyon	4061'
Bone Spring	5659'
Wolfcamp	8627'
7. Possible mineral bearing formations:

Wolfcamp	Gas
Bone Spring	Gas
Delaware	Oil

8. Proposed drilling Plan

After drilling and setting surface casing, drill to vertical TD 10250' and log. Set 7" casing to 9336' and cross over to 2 3/4" 2000 psi IJ fiberglass tubing underneath to 10250' and cement in place. Drill out of the bottom of the 7" with a 6 1/8" bit and through cement and fiberglass tubing to KOP @ 9396' and kick off to drill the lateral. The fiberglass tubing effectively circulates cement to surface and plugs back the open hole.

Drill to lateral TD (13781' MD, 9608' TVD). Run cemented 4 1/2" liner with hanger @ 9236' to MD @ 13812'. Request 100' tie back for lateral casing string in order to set pump as deep as possible.

Application to Drill
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9. Mud Circulating System:

Depth	Mud Wt	Visc	Fluid Loss	Type Mud
0' to 450'	8.4 - 8.8	30-32	NC	FW spud mud. Add FW to control weight & viscosity and paper to prevent seepage.
450' to 9336'	9.8 - 10.0	28-29	NC	Saturated Brine. Sweep as needed to clean hole.
9396' to 9,876'	9.0 - 9.0	28-30	NC	Cut brine. Sweep as needed to clean hole.

Sufficient mud materials will be kept on location at all times in order to combat lost circulation or unexpected kicks. In order to run DSTs, open hole logs, and casing, the viscosity and water loss may have to be adjusted in order to meet these needs.

10. Casing Program:

	Hole Size	Depth	Casing OD	Weight	Collar	Grade
Surface	17½"	0' to 450'	New 13½"	48#	STC	H-40
Intermediate	12¼"	0' to 1917'	New 9½"	48#	LTC	J-55
Production	8½"	0' to 9336'	New 7"	26#	LTC	P-110
Fiberglass tbg	8½"	9336' to 10250'	New 2½"	2.18#	Fiberglass	IJ
Lateral1	6½"	9236' to 9876'	New 4½"	11.6#	BTC	P-110
Lateral2	6½"	9876' to 13812'	4½"	11.6#	LTC	P-110

11. Cementing Program:

Surface Casing	<u>Lead:</u> 200 sx (Class C) + 4% D20 + 0.2% D46 + 2% S1, 12.9 ppg, 1.97 cuft/sx, 10.87 gps. <u>Tail:</u> 150 sx (Class C) + 2% S1, 14.80 ppg, 1.34 cuft/sx, 6.29 gps. TOC Surface
Intermediate	310 sx Clas C + 2% Si + 0.236# D-130 (14.8, yld 1.34) TOC Surface
Production casing and Fiberglass tubing	<u>Lead:</u> 620 sx Interfill H + 0.3% HR-601 + 5# Gilsomite + 0.125# Poly-e-flake (wt 11.9, yld 2.47) <u>Tail:</u> 480 sx Super H + 0.5% Halad-344 + 0.25% D-AIR 3000 + 0.4% CFR-3 + 1# Salt + 5# Gilsomite + 0.125# Poly-e-flake + 0.35% HR-7 (wt 13.2, yld 1.61) TOC Surface
Lateral	450 sx 50-50 POZ H + 0.2% D20 + .02% D46 + 0.2% D65

Fresh water zones will be protected by setting 9½" casing at 450' and cementing to surface. Hydrocarbon zones will be protected by setting 9½" casing at 1910' and 7" at 9336' and 2½" fiberglass tubing at 10250' and cementing to surface.'

<u>Collapse Factor</u>	<u>Burst Factor</u>	<u>Tension Factor</u>
1.125	1.125	1.6

See
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12. Pressure control Equipment:

Exhibit "E". A 13 $\frac{5}{8}$ " 5000 PSI working pressure BOP psi consisting of one set of blind rams and one set of pipe rams and a 5000# annular type preventer. A choke manifold and 120 gallon accumulator with floor and remote operating stations and auxiliary power system. Rotating head as needed. A kelly cock will be installed and maintained in operable condition and a drill string safety valve in the open position will be available on the rig floor.

BOP unit will be hydraulically operated. BOP will be nipped up and operated at least once a day while drilling and the blind rams will be operated when out of hole during trips. No abnormal pressure or temperature is expected while drilling. From the base of the surface pipe through the running of production casing, the well will be equipped with a 5000 psi BOP system.

BOPS will be tested by an independent service company to 250 psi low and 5000 psi high. Hydril will be tested to 250 psi low and 3000 psi high.

See COR
Cimarex Energy Co. of Colorado (operator) requests a variance if Cactus 101 (rig name) is used to drill this well to use a co-flex line between the BOP and choke manifold.

Manufacturer: Midwest Hose & Specialty

Serial Number: 63270 See attached htdrostatic test report

Length: 35' Size: 4-1/16" Ends - flanges/clamps

WP rating: 10,000 psi Anchors required by manufacturer – Yes/No (No)

13. Testing, Logging and Coring Program:

A. Mud logging program: No mud logging program.

B. Electric logging program: CNL / LDT / CAL / GR, DLL / CAL / GR

C. No DSTs or cores are planned at this time.

See COR

14. Potential Hazards:

No abnormal pressures or temperatures are expected. In accordance with Onshore Order 6, Cimarex has encountered H₂S in a one-time encounter in an Intra-salt Pocket and while drilling and completing wells in the Delaware Mountain Group. In this regard, attached is an H₂S Drilling Operations Plan. The ROEs encountered do not meet the BLM's minimum requirements for the submission of a "Public Protection Plan" for the drilling and completion of this well. Adequate flare lines will be installed off the mud / gas separator where gas may be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used.

Estimated BHP **4000 psi** Estimated BHT **175°**

15. Road and location construction will begin after BLM approval of APD. Anticipated spud date as soon as approved.

Drilling expected to take 25-35 days

If production casing is run an additional 30 days will be required to complete and construct surface facilities.

16. Other Facets of Operations:

After running casing, cased hole gamma ray neutron collar logs will be run from total depth over possible pay intervals.

Wolfcamp pay will be perforated and stimulated.

The proposed well will be tested and potentialized as

a gas well.



Project: Eddy County (NM83E)
 Site: Sec 15 - T25S - R26E
 Well: Seldom Seen 15 Fed #3
 Wellbore: Wellbore #1
 Design: Plan #1

WELL DETAILS: Seldom Seen 15 Fed #3

N-S	E-W	Northing	Easting	Latitude	Longitude
0.0	0.0	411723.30	559879.10	32° 7' 54.811 N	104° 16' 24.361 W
SHL: 1880' FNL / 400' FEL					
BHL: 1780' FNL / 660' FWL					



Azimuths to Grid North

Total Correction: 7.93°

Magnetic Field
 Strength: 48604.6nT
 Dip Angle: 60.01°
 Date: 2010/10/29
 Model: IGRF200510

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Seldom Seen #3 PBHL	9608.0	102.2	-4251.5	411825.50	555627.60	32° 7' 55.843 N	104° 17' 13.805 W

- plan misses target center by 5.3usft at 13812.9usft MD (9613.3 TVD, 102.4 N, -4251.5 E)

PLAN DETAILS

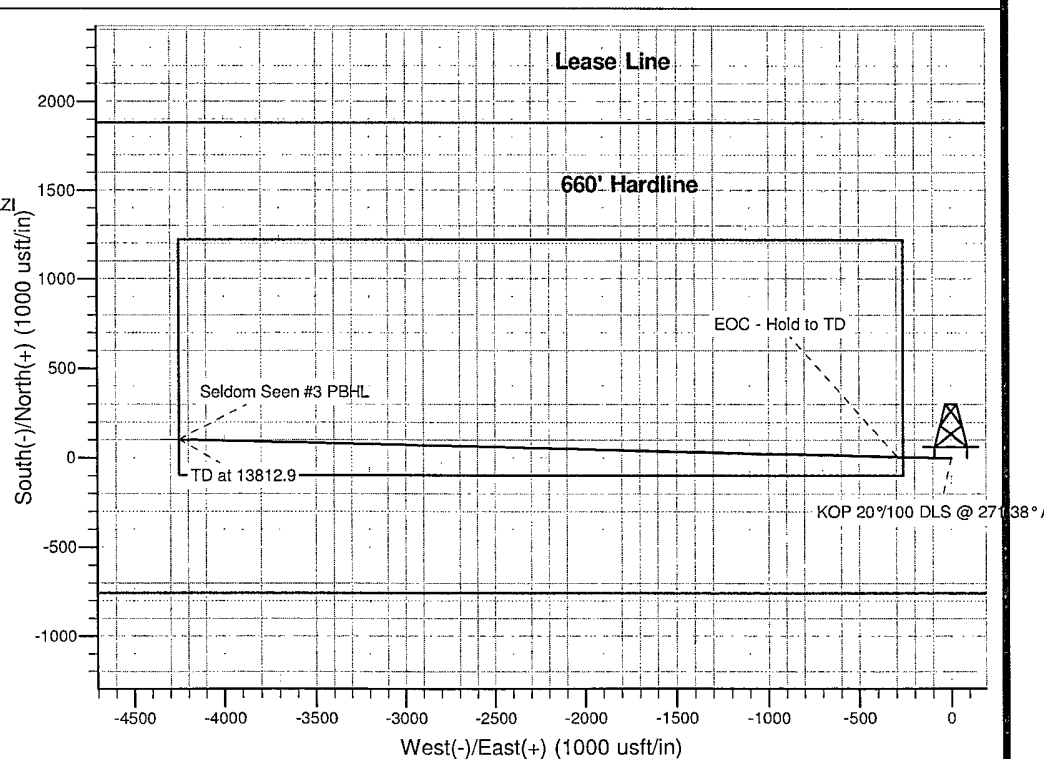
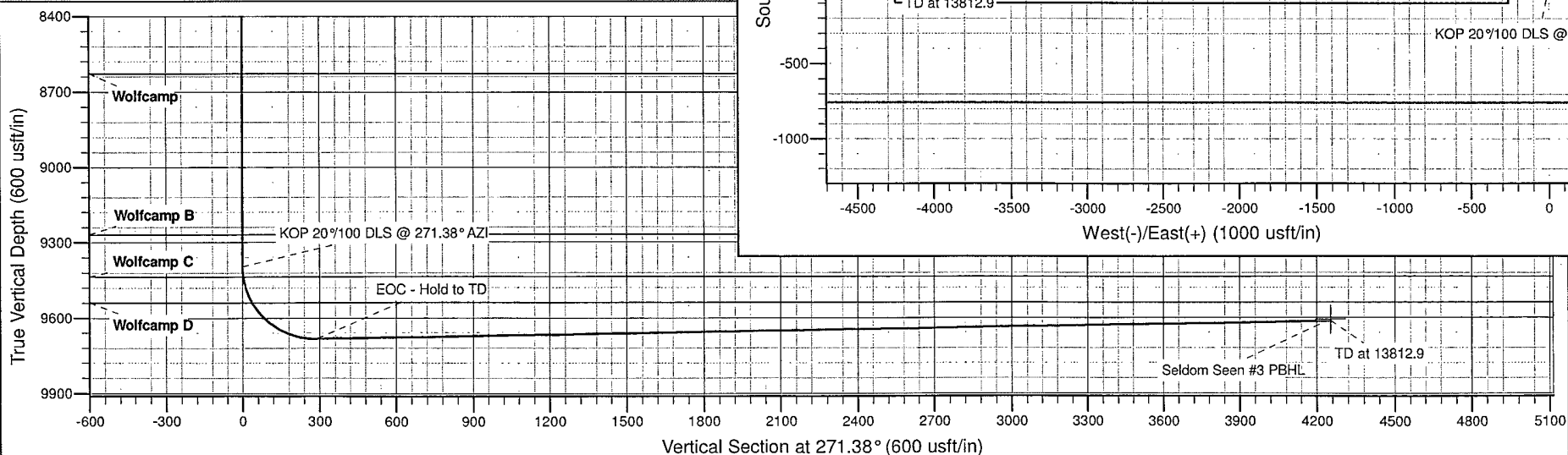
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
9396.0	0.00	0.00	9396.0	0.0	0.0	0.00	0.00	0.0	
9851.0	91.00	271.38	9682.4	7.0	-291.4	20.00	271.38	291.5	
13812.9	91.00	271.38	9613.3	102.4	-4251.5	0.00	0.00	4252.7	Seldom Seen #3 PBHL

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Departure	Annotation
9396.0	9396.0	0.00	0.00	0.0	0.0	0.0	0.0	KOP 20°/100 DLS @ 271.38° AZI
9682.4	9851.0	91.00	271.38	7.0	-291.4	291.5	291.5	EOC - Hold to TD
9613.3	13812.9	91.00	271.38	102.4	-4251.5	4252.7	4252.7	TD at 13812.9

FORMATION TOP DETAILS

TVDPath	MDPath	Formation	DipAngle	DipDir
8627.0	8627.0	Wolfcamp	0.00	
9269.0	9269.0	Wolfcamp B	0.00	
9436.0	9436.1	Wolfcamp C	0.00	
9538.0	9544.6	Wolfcamp D	0.00	





Cimarex Energy Co.

Eddy County (NM83E)

Sec 15 - T25S - R26E

Seldom Seen 15 Fed #3

Wellbore #1

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Plan: Plan #1

JAN 31 2011

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Standard Planning Report

29 October, 2010





Great White Directional Services
Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Seldom Seen 15 Fed #3
Company:	Cimarex Energy Co.	TVD Reference:	WELL @ 0.0usft (Original Well Elev)
Project:	Eddy County (NM83E)	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Site:	Sec 15 - T25S - R26E	North Reference:	Grid
Well:	Seldom Seen 15 Fed #3	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Project	Eddy County (NM83E)		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Sec 15 - T25S - R26E		
Site Position:		Northing:	408,993.20 usft
From:	Map	Easting:	559,652.50 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 7' 27.795 N
		Longitude:	104° 16' 27.013 W
		Grid Convergence:	0.03 °

Well	Seldom Seen 15 Fed #3		
Well Position	+N/-S	2,730.1 usft	Northing:
	+E/-W	226.6 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	
		Latitude:	32° 7' 54.811 N
		Longitude:	104° 16' 24.361 W
		Ground Level:	0.0 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination (°)
	IGRF200510	2010/10/29	7.96
			Dip Angle (°)
			60.01
			Field Strength (nT)
			48,605

Design	Plan #1		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.0
Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)
	0.0	0.0	0.0
			Direction (°)
			271.38

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
9,396.0	0.00	0.00	9,396.0	0.0	0.0	0.00	0.00	0.00	0.00	
9,851.0	91.00	271.38	9,682.4	7.0	-291.4	20.00	20.00	0.00	271.38	
13,812.9	91.00	271.38	9,613.3	102.4	-4,251.5	0.00	0.00	0.00	0.00	Seldom Seen #3 Pt



Great White Directional Services Planning Report



Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Seldom Seen 15 Fed #3
Company:	Cimarex Energy Co.	TVD Reference:	WELL @ 0.0usft (Original Well Elev)
Project:	Eddy County (NM83E)	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Site:	Sec 15 - T25S - R26E	North Reference:	Grid
Well:	Seldom Seen 15 Fed #3	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,396.0	0.00	0.00	9,396.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP 20°/100 DLS @ 271.38° AZI									
9,400.0	0.80	271.38	9,400.0	0.0	0.0	0.0	20.00	20.00	0.00
9,425.0	5.80	271.38	9,425.0	0.0	-1.5	1.5	20.00	20.00	0.00
9,436.1	8.03	271.38	9,436.0	0.1	-2.8	2.8	20.00	20.00	0.00
Wolfcamp C									
9,450.0	10.80	271.38	9,449.7	0.1	-5.1	5.1	20.00	20.00	0.00
9,475.0	15.80	271.38	9,474.0	0.3	-10.8	10.8	20.00	20.00	0.00
9,500.0	20.80	271.38	9,497.7	0.4	-18.7	18.7	20.00	20.00	0.00
9,525.0	25.80	271.38	9,520.7	0.7	-28.5	28.6	20.00	20.00	0.00
9,544.6	29.71	271.38	9,538.0	0.9	-37.7	37.7	20.00	20.00	0.00
Wolfcamp D									
9,550.0	30.80	271.38	9,542.7	1.0	-40.4	40.4	20.00	20.00	0.00
9,575.0	35.80	271.38	9,563.6	1.3	-54.1	54.1	20.00	20.00	0.00
9,600.0	40.80	271.38	9,583.2	1.7	-69.6	69.6	20.00	20.00	0.00
9,625.0	45.80	271.38	9,601.4	2.1	-86.7	86.8	20.00	20.00	0.00
9,650.0	50.80	271.38	9,618.0	2.5	-105.4	105.4	20.00	20.00	0.00
9,675.0	55.80	271.38	9,632.9	3.0	-125.4	125.5	20.00	20.00	0.00
9,700.0	60.80	271.38	9,646.1	3.5	-146.7	146.7	20.00	20.00	0.00
9,725.0	65.80	271.38	9,657.3	4.1	-169.0	169.0	20.00	20.00	0.00
9,750.0	70.80	271.38	9,666.5	4.6	-192.2	192.3	20.00	20.00	0.00
9,775.0	75.80	271.38	9,673.7	5.2	-216.1	216.2	20.00	20.00	0.00
9,800.0	80.80	271.38	9,678.8	5.8	-240.6	240.7	20.00	20.00	0.00
9,825.0	85.80	271.38	9,681.7	6.4	-265.4	265.5	20.00	20.00	0.00
9,851.0	91.00	271.38	9,682.4	7.0	-291.4	291.5	20.00	20.00	0.00
EOC - Hold to TD									
9,900.0	91.00	271.38	9,681.6	8.2	-340.4	340.5	0.00	0.00	0.00
10,000.0	91.00	271.38	9,679.8	10.6	-440.3	440.5	0.00	0.00	0.00
10,100.0	91.00	271.38	9,678.1	13.0	-540.3	540.4	0.00	0.00	0.00
10,200.0	91.00	271.38	9,676.3	15.4	-640.2	640.4	0.00	0.00	0.00
10,300.0	91.00	271.38	9,674.6	17.8	-740.2	740.4	0.00	0.00	0.00
10,400.0	91.00	271.38	9,672.9	20.2	-840.2	840.4	0.00	0.00	0.00
10,500.0	91.00	271.38	9,671.1	22.6	-940.1	940.4	0.00	0.00	0.00
10,600.0	91.00	271.38	9,669.4	25.1	-1,040.1	1,040.4	0.00	0.00	0.00
10,700.0	91.00	271.38	9,667.6	27.5	-1,140.0	1,140.3	0.00	0.00	0.00
10,800.0	91.00	271.38	9,665.9	29.9	-1,240.0	1,240.3	0.00	0.00	0.00
10,900.0	91.00	271.38	9,664.1	32.3	-1,339.9	1,340.3	0.00	0.00	0.00
11,000.0	91.00	271.38	9,662.4	34.7	-1,439.9	1,440.3	0.00	0.00	0.00
11,100.0	91.00	271.38	9,660.6	37.1	-1,539.8	1,540.3	0.00	0.00	0.00
11,200.0	91.00	271.38	9,658.9	39.5	-1,639.8	1,640.3	0.00	0.00	0.00
11,300.0	91.00	271.38	9,657.1	41.9	-1,739.8	1,740.3	0.00	0.00	0.00
11,400.0	91.00	271.38	9,655.4	44.3	-1,839.7	1,840.2	0.00	0.00	0.00
11,500.0	91.00	271.38	9,653.7	46.7	-1,939.7	1,940.2	0.00	0.00	0.00
11,600.0	91.00	271.38	9,651.9	49.1	-2,039.6	2,040.2	0.00	0.00	0.00
11,700.0	91.00	271.38	9,650.2	51.5	-2,139.6	2,140.2	0.00	0.00	0.00
11,800.0	91.00	271.38	9,648.4	54.0	-2,239.5	2,240.2	0.00	0.00	0.00
11,900.0	91.00	271.38	9,646.7	56.4	-2,339.5	2,340.2	0.00	0.00	0.00
12,000.0	91.00	271.38	9,644.9	58.8	-2,439.4	2,440.2	0.00	0.00	0.00
12,100.0	91.00	271.38	9,643.2	61.2	-2,539.4	2,540.1	0.00	0.00	0.00
12,200.0	91.00	271.38	9,641.4	63.6	-2,639.4	2,640.1	0.00	0.00	0.00
12,300.0	91.00	271.38	9,639.7	66.0	-2,739.3	2,740.1	0.00	0.00	0.00
12,400.0	91.00	271.38	9,637.9	68.4	-2,839.3	2,840.1	0.00	0.00	0.00
12,500.0	91.00	271.38	9,636.2	70.8	-2,939.2	2,940.1	0.00	0.00	0.00



Great White Directional Services Planning Report



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Site:	Sec 15 - T25S - R26E	North Reference:	Grid
Well:	Seldom Seen 15 Fed #3	Survey Calculation Method:	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Plan #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
12,600.0	91.00	271.38	9,634.5	73.2	-3,039.2	3,040.1	0.00	0.00	0.00
12,700.0	91.00	271.38	9,632.7	75.6	-3,139.1	3,140.0	0.00	0.00	0.00
12,800.0	91.00	271.38	9,631.0	78.0	-3,239.1	3,240.0	0.00	0.00	0.00
12,900.0	91.00	271.38	9,629.2	80.4	-3,339.0	3,340.0	0.00	0.00	0.00
13,000.0	91.00	271.38	9,627.5	82.8	-3,439.0	3,440.0	0.00	0.00	0.00
13,100.0	91.00	271.38	9,625.7	85.3	-3,539.0	3,540.0	0.00	0.00	0.00
13,200.0	91.00	271.38	9,624.0	87.7	-3,638.9	3,640.0	0.00	0.00	0.00
13,300.0	91.00	271.38	9,622.2	90.1	-3,738.9	3,740.0	0.00	0.00	0.00
13,400.0	91.00	271.38	9,620.5	92.5	-3,838.8	3,839.9	0.00	0.00	0.00
13,500.0	91.00	271.38	9,618.8	94.9	-3,938.8	3,939.9	0.00	0.00	0.00
13,600.0	91.00	271.38	9,617.0	97.3	-4,038.7	4,039.9	0.00	0.00	0.00
13,700.0	91.00	271.38	9,615.3	99.7	-4,138.7	4,139.9	0.00	0.00	0.00
13,800.0	91.00	271.38	9,613.5	102.1	-4,238.6	4,239.9	0.00	0.00	0.00
13,812.9	91.00	271.38	9,613.3	102.4	-4,251.5	4,252.7	0.00	0.00	0.00

TD at 13812.9 - Seldom Seen #3 PBHL

Design Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
Seldom Seen #3 PBH	0.00	0.00	9,608.0	102.2	-4,251.5	411,825.50	555,627.60	32° 7' 55.843 N	104° 17' 13.805 W
- plan misses target center by 5.3usft at 13812.9usft MD (9613.3 TVD, 102.4 N, -4251.5 E)									
- Point									

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
8,627.0	8,627.0	Wolfcamp		0.00	
9,269.0	9,269.0	Wolfcamp B		0.00	
9,436.1	9,436.0	Wolfcamp C		0.00	
9,544.6	9,538.0	Wolfcamp D		0.00	

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates	Comment
		+N/-S (usft)	+E/-W (usft)
9,396.0	9,396.0	0.0	0.0
9,851.0	9,682.4	7.0	-291.4
13,812.9	9,613.3	102.4	-4,251.5
			KOP 20°/100 DLS @ 271.38° AZI
			EOC - Hold to TD
			TD at 13812.9

SR & A

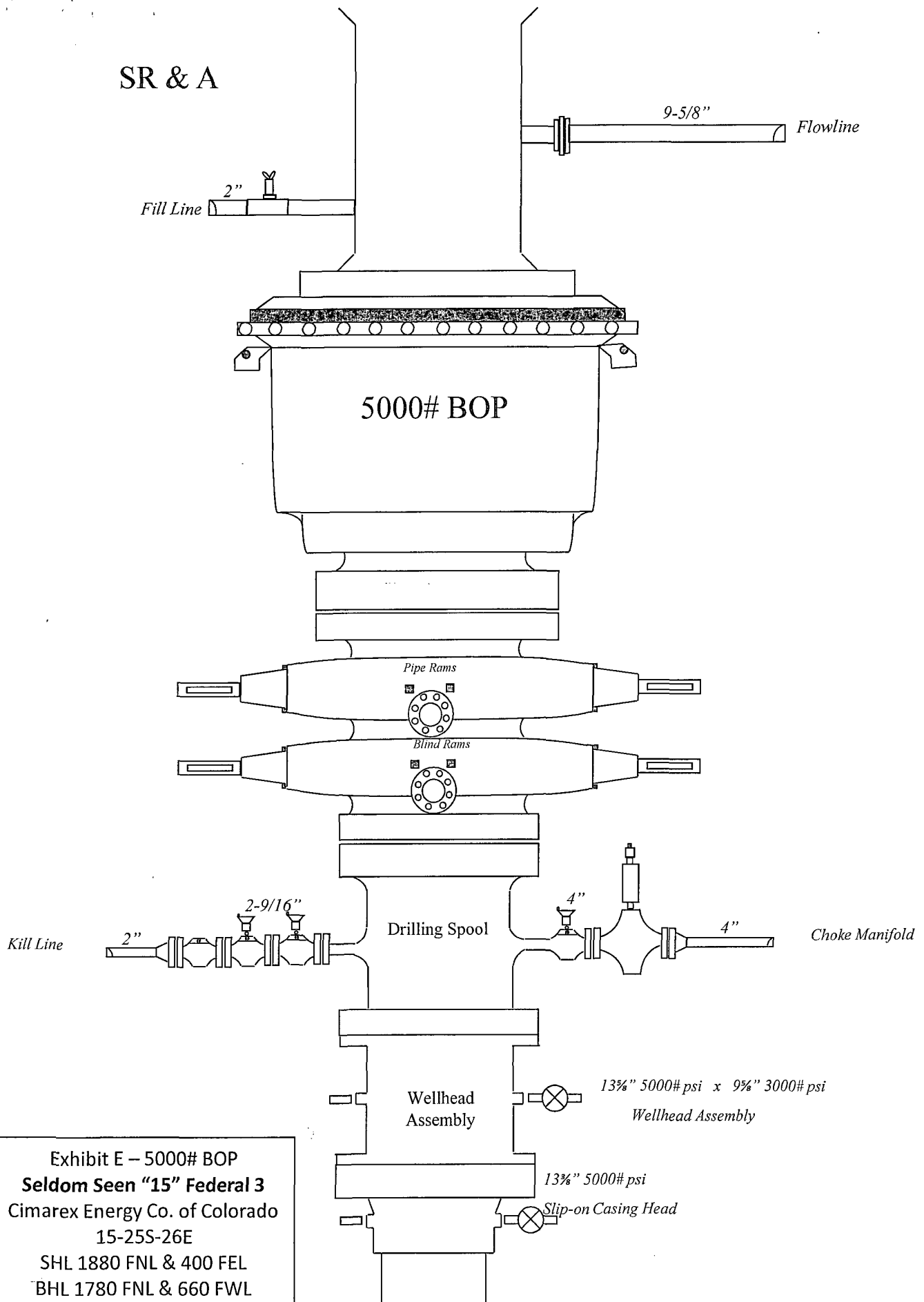


Exhibit E – 5000# BOP
Seldom Seen "15" Federal 3
Cimarex Energy Co. of Colorado
15-25S-26E
SHL 1880 FNL & 400 FEL
BHL 1780 FNL & 660 FWL
Eddy County, NM

Drilling Operations Choke Manifold 5M Service

Exhibit E-1 – Choke Manifold Diagram
Seldom Seen “15” Federal 3
Cimarex Energy Co. of Colorado
15-25S-26E
SHL 1880 FNL & 400 FEL
BHL 1780 FNL & 660 FWL
Eddy County, NM

