

OCD-ARTESIA

ATS-11-152
FA-11-284Form 3160-3
(April 2004)FORM APPROVED
OMB No. 1004-0137
Expires March 31, 2007UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of Work: ☒ DRILL ☐ REENTER		5. Lease Serial No. NM-94839
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		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. 37481 Cottonwood Draw 22 Federal No. 9 H
3b. Phone No. (include area code) 432-571-7800		9. API Well No. 30-015- 38656
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At Surface 330 FNL & 500 FWL (D) At BHL 330 FSL & 660 FWL At proposed prod. Zone 330 FNL & 500 FWL Horizontal Bone Spring Test		10. Field and Pool, or Exploratory Bone Spring Wildcat 96403
11. Sec., T. R. M. or Blk. and Survey or Area 22-25S-26E		12. County or Parish Eddy
13. State NM		
14. Distance in miles and direction from nearest town or post office*	15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line if any) 330	16. No of acres in lease 1480
17. Spacing Unit dedicated to this well W2W2 160 acres	18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. N/A	19. Proposed Depth Max TVD Pilot Hole 8100 MD 12285, TVD 7739
20. BLM/BIA Bond No. on File NM-2575	21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3386' GR	22. Approximate date work will start* 02.15.11
23. Estimated duration 20-25 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 12.14.10
Title Manager Operations Administration		
Approved By (Signature) /s/ Don Peterson	Name (Printed/Typed) Name	Date MAR 11 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.

APPROVAL FOR TWO YEARS

Title 18 U.S.S. 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)

Carlsbad Controlled Water Basin

SEE ATTACHED FOR
CONDITIONS OF APPROVALDYE TRACE REQUIRED
SEE C.O.A.Approval Subject to General Requirements
& Special Stipulations Attached

Application to Drill
Cottonwood Draw 22 Federal No. 9
Cimarex Energy Co. of Colorado
Unit D, Section 22
T25S-R26E, Eddy County, NM

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

1. Location: SHL 330 FNL & 500 FWL
BHL 330 FSL & 660 FWL
2. Elevation above sea level: 3386' 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 TVD 8100 MD 12285, TVD 7759
6. Estimated tops of geological markers:

<u>Rustler</u>	<u>NA Spotty</u>		
Top Salt	1068'	Bone Spring "A" Shale	5618'
Base Salt	1665'	Bone Spring "C" Shale	5859'
Delaware	1911'	1st Bone Spring Ss	6393'
Cherry Canyon	2875'	2nd Bone Spring Ss	6941'
Brushy Canyon	3879'	2nd BS Ss Lower	7659'
Brushy Canyon Lower	5149'	3rd Bone Spr Carb "C"	7840'
Bone Spring	5428'		
7. Possible mineral bearing formations:

Bone Spring	Oil
Delaware	Oil
8. Proposed drilling Plan

Drill 8 3/4" hole to pilot hole TD @ 8100 and log. Set 250 sx Class H cement plug from 8100 to 7413 and dress off. Kick off lateral @ 7473 and drill to lateral TD (12285 MD, 7759 TVD). Run cemented 5 1/2" production casing from 0-12285.

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9. Mud Circulating System:

Depth	Mud Wt	Visc	Fluid Loss	Type Mud
0' to 450'	8.4 - 8.6	30-32	NC	FW spud mud.
450' to 1886'	9.9 - 10	28-29	NC	Brine
1,886' to 12285'	8.6 - 9.2	28-30	NC	Cut brine.

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 13¾"	48#	STC	H-40
Intermediate	12¾"	0' to 1886'	New 9¾"	36#	LTC	J-55
Production	8¾"	0' to 12285'	New 5½"	17#	LTC	P-110

11. Cementing Program:

Surface Casing	Lead: 360SKS Halcem C + 4% Bentomite + 2% CaCl 13.5ppg 1.75yield 100% Excess Tail: 130SKS Halcem C + 2% CaCl 14.2ppg 1.34 yield 50% Excess TOC Surface, Centralizers per Onshorder 2.III.B.1.f
Intermediate	Lead: 520SKS EconoCem + 5% salt + 5 lbm gilsonite 14.6ppg 1.54yield 70% Excess Tail: 200SKS HalCem + 1% CaCl 14.8ppg 1.34 yield 25% Excess TOC Surface
Production <i>See COA</i>	Lead: 675SKS EconoCem - H + 0.2 % HR-601 2.44 11.9ppg 2.44 yield 50% Excess Tail: 1375SKS Versacem - H + 0.5% Halad(R)-344 + 0.4% CFR-3 + 1 lbm/sk salt + 0.1% HR-601 14.5ppg 1.22 yield 25% Excess TOC Surface, Centralizers every 3rd joint in lateral to provide adequate cement coverage every 100' unless lateral doglegs require greater spacing between centralizers.

According to the State Enginner, depth to surface water is 17.' Fresh water zones will be protected by setting 13¾" casing at 450' and cementing to surface. Hydrocarbon zones will be protected by setting 9¾" casing at 1886' and 5½" casing at 12285' and cementing to surface.

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

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12. Pressure control Equipment:

Exhibit "E". A 13 $\frac{3}{8}$ " 5000 PSI working pressure B.O.P. 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 below 450.' 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.

Test BOP equipment and choke manifold to 250 psi low and 5000 psi high and annular BOP to 250 psi low and 2500 psi high by an independent service company.

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.

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 **3000 psi** Estimated BHT **115°**

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.

Bone Spring pay will be perforated and stimulated.

The proposed well will be tested and potential as **an oil well.**



WELL DETAILS: Cottonwood Draw Fed #9

+N/-S +E/-W Northing Easting Latitude Longitude
0.0 0.0 408056.50 555526.90 32° 7' 18.545 N 104° 17' 14.995 W
SHL: 330' FNL / 500' FWL
BHL: 330' FSL / 660' FWL

Project: Eddy County (NM33E)

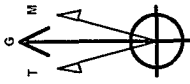
Site: Sec 22 - T25S - R26

Well: Cottonwood Draw Fed #9

Wellbore: Wellbore #1

Design: Plan #1

Asimuths to Grid North
Total Correction: 7.93°
Magnetic Field
Strength: 48586.8nT
Dip Angle: 60.00°
Date: 12/07/2010
Model: IGRF200510



WELLBORE TARGET DETAILS

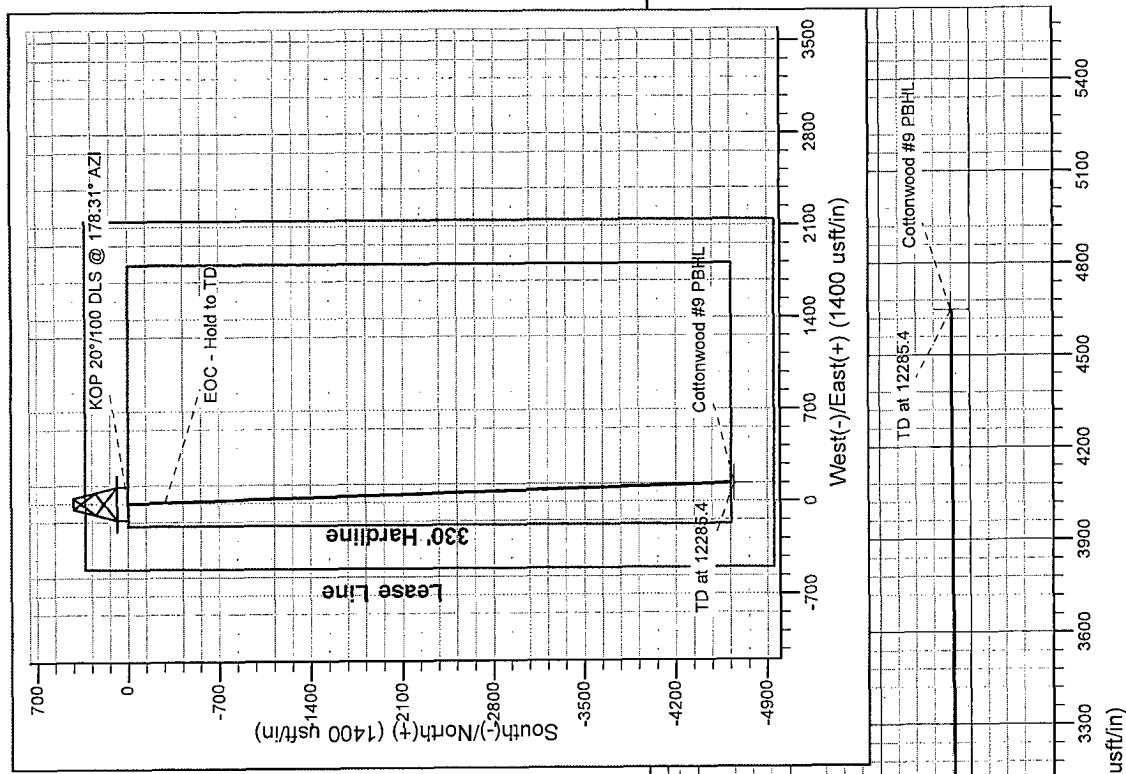
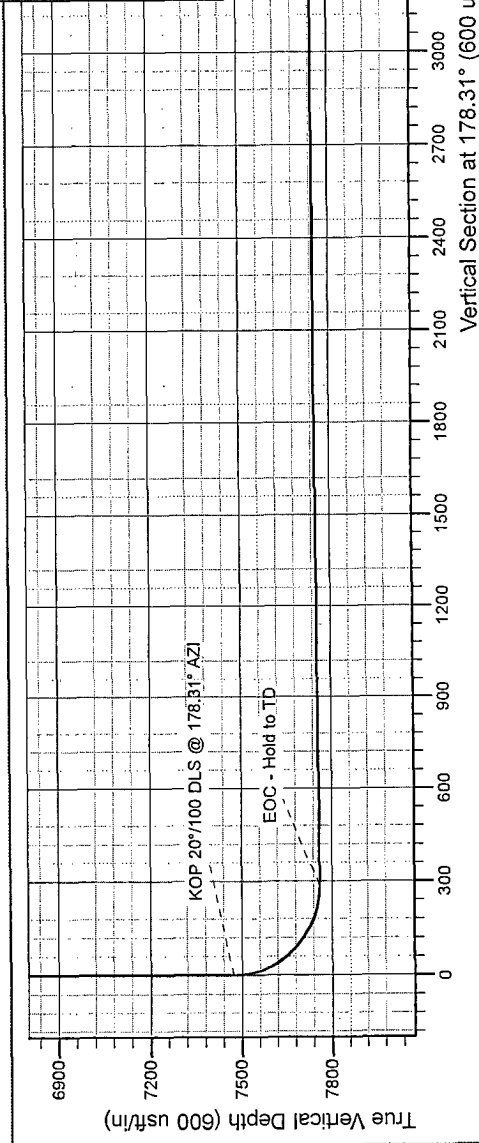
Name	TVD	+N/-S	+E/-W	Northing	Easting
Cottonwood #9 PBHL	7739.0	-4647.3	137.4	403409.20	555664.30

PLAN DETAILS

MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
0.0	0.00	0.00	0.0	0.0	0.00	0.00	0.00	0.0	
7472.5	0.00	0.00	7472.5	0.0	0.00	0.00	0.00	0.0	
7923.8	90.26	178.31	7759.0	-287.7	8.5	20.00	78.31	287.8	Cottonwood #9 PBHL
12285.4	90.26	178.30	7739.0	-4647.3	137.4	0.00	-57.01	4649.3	Cottonwood #9 PBHL

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VScal	Departure	Annotation
7472.5	7472.5	0.00	0.00	0.0	0.0	0.0	0.0	KOP 20°/100 DLS @ 178.31° AZI
7759.0	7923.8	90.26	178.31	-287.7	8.5	287.8	287.8	EOC - Hold to TD
7739.0	12285.4	90.26	178.30	-4647.3	137.4	4649.3	4649.3	TD at 12285.4





Cimarex Energy Co.

Eddy County (NM83E)

Sec 22 - T25S - R26

Cottonwood Draw Fed #9

Wellbore #1

Plan: Plan #1

Standard Planning Report

07 December, 2010



Great White Directional Services

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Cottonwood Draw Fed #9
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 22 - T25S - R26	North Reference:	Grid
Well:	Cottonwood Draw Fed #9	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 22 - T25S - R26		
Site Position:	Map	Northing:	407,849.00 usft
From:		Easting:	559,962.20 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 7' 16.470 N
		Longitude:	104° 16' 23.419 W
		Grid Convergence:	0.03 °

Well	Cottonwood Draw Fed #9		
Well Position	+N/-S	207.5 usft	Northing:
	+E/-W	-4,435.3 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	Ground Level:
			0.0 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
	IGRF200510	12/07/10	7.96
			Dip Angle
			60.00
			Field Strength
			48,587

Design	Plan #1		
Audit Notes:			
Version:	Phase:	PLAN	Tie On Depth:
			0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(usft)	(usft)	(usft)
	0.0	0.0	0.0
			Direction
			178.31

Plan Sections											
Measured	Inclination	Azimuth	Vertical	+N/-S	+E/-W	Dogleg	Build	Turn	TFO	Target	
Depth	(°)	(°)	Depth	(usft)	(usft)	Rate	Rate	Rate	(°)		
(usft)			(usft)			(°/100usft)	(°/100usft)	(°/100usft)			
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	0.00	
7,472.5	0.00	0.00	7,472.5	0.0	0.0	0.00	0.00	0.00	0.00	0.00	
7,923.8	90.26	178.31	7,759.0	-287.7	8.5	20.00	20.00	0.00	178.31		
12,285.4	90.26	178.30	7,739.0	-4,647.3	137.4	0.00	0.00	0.00	-57.01	Cottonwood #9 PBHL	



Great White Directional Services

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Cottonwood Draw Fed #9
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 22 - T25S - R26	North Reference:	Grid
Well:	Cottonwood Draw Fed #9	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 (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,472.5	0.00	0.00	7,472.5	0.0	0.0	0.0	0.00	0.00	0.00
KOP 20°/100 DLS @ 178.31° AZI									
7,475.0	0.50	178.31	7,475.0	0.0	0.0	0.0	20.00	20.00	0.00
7,500.0	5.50	178.31	7,500.0	-1.3	0.0	1.3	20.00	20.00	0.00
7,525.0	10.50	178.31	7,524.7	-4.8	0.1	4.8	20.00	20.00	0.00
7,550.0	15.50	178.31	7,549.1	-10.4	0.3	10.4	20.00	20.00	0.00
7,575.0	20.50	178.31	7,572.8	-18.1	0.5	18.1	20.00	20.00	0.00
7,600.0	25.50	178.31	7,595.8	-27.9	0.8	27.9	20.00	20.00	0.00
7,625.0	30.50	178.31	7,617.9	-39.6	1.2	39.6	20.00	20.00	0.00
7,650.0	35.50	178.31	7,638.9	-53.2	1.6	53.3	20.00	20.00	0.00
7,675.0	40.50	178.31	7,658.6	-68.6	2.0	68.6	20.00	20.00	0.00
7,700.0	45.50	178.31	7,676.8	-85.6	2.5	85.7	20.00	20.00	0.00
7,725.0	50.50	178.31	7,693.6	-104.2	3.1	104.3	20.00	20.00	0.00
7,750.0	55.50	178.31	7,708.6	-124.2	3.7	124.2	20.00	20.00	0.00
7,775.0	60.50	178.31	7,721.8	-145.3	4.3	145.4	20.00	20.00	0.00
7,800.0	65.50	178.31	7,733.2	-167.6	4.9	167.7	20.00	20.00	0.00
7,825.0	70.50	178.31	7,742.5	-190.8	5.6	190.9	20.00	20.00	0.00
7,850.0	75.50	178.31	7,749.9	-214.7	6.3	214.8	20.00	20.00	0.00
7,875.0	80.50	178.31	7,755.0	-239.1	7.1	239.2	20.00	20.00	0.00
7,900.0	85.50	178.31	7,758.1	-263.9	7.8	264.0	20.00	20.00	0.00
7,923.8	90.26	178.31	7,759.0	-287.7	8.5	287.8	20.00	20.00	0.00
EOC - Hold to TD									
8,000.0	90.26	178.31	7,758.6	-363.8	10.7	364.0	0.00	0.00	0.00
8,100.0	90.26	178.31	7,758.2	-463.8	13.7	464.0	0.00	0.00	0.00
8,200.0	90.26	178.31	7,757.7	-563.7	16.6	564.0	0.00	0.00	0.00
8,300.0	90.26	178.31	7,757.3	-663.7	19.6	664.0	0.00	0.00	0.00
8,400.0	90.26	178.31	7,756.8	-763.6	22.5	764.0	0.00	0.00	0.00
8,500.0	90.26	178.31	7,756.4	-863.6	25.5	864.0	0.00	0.00	0.00
8,600.0	90.26	178.31	7,755.9	-963.6	28.4	964.0	0.00	0.00	0.00
8,700.0	90.26	178.31	7,755.4	-1,063.5	31.4	1,064.0	0.00	0.00	0.00
8,800.0	90.26	178.31	7,755.0	-1,163.5	34.3	1,164.0	0.00	0.00	0.00
8,900.0	90.26	178.31	7,754.5	-1,263.4	37.3	1,264.0	0.00	0.00	0.00
9,000.0	90.26	178.31	7,754.1	-1,363.4	40.2	1,364.0	0.00	0.00	0.00
9,100.0	90.26	178.31	7,753.6	-1,463.3	43.2	1,464.0	0.00	0.00	0.00
9,200.0	90.26	178.31	7,753.2	-1,563.3	46.1	1,564.0	0.00	0.00	0.00
9,300.0	90.26	178.31	7,752.7	-1,663.2	49.1	1,664.0	0.00	0.00	0.00
9,400.0	90.26	178.31	7,752.3	-1,763.2	52.1	1,764.0	0.00	0.00	0.00
9,500.0	90.26	178.31	7,751.8	-1,863.2	55.0	1,864.0	0.00	0.00	0.00
9,600.0	90.26	178.31	7,751.3	-1,963.1	58.0	1,964.0	0.00	0.00	0.00
9,700.0	90.26	178.31	7,750.9	-2,063.1	60.9	2,064.0	0.00	0.00	0.00
9,800.0	90.26	178.31	7,750.4	-2,163.0	63.9	2,164.0	0.00	0.00	0.00
9,900.0	90.26	178.31	7,750.0	-2,263.0	66.8	2,264.0	0.00	0.00	0.00
10,000.0	90.26	178.31	7,749.5	-2,362.9	69.8	2,364.0	0.00	0.00	0.00
10,100.0	90.26	178.31	7,749.1	-2,462.9	72.7	2,464.0	0.00	0.00	0.00
10,200.0	90.26	178.31	7,748.6	-2,562.8	75.7	2,564.0	0.00	0.00	0.00
10,300.0	90.26	178.31	7,748.1	-2,662.8	78.6	2,664.0	0.00	0.00	0.00
10,400.0	90.26	178.31	7,747.7	-2,762.7	81.6	2,764.0	0.00	0.00	0.00
10,500.0	90.26	178.31	7,747.2	-2,862.7	84.6	2,864.0	0.00	0.00	0.00
10,600.0	90.26	178.31	7,746.8	-2,962.7	87.5	2,964.0	0.00	0.00	0.00
10,700.0	90.26	178.31	7,746.3	-3,062.6	90.5	3,063.9	0.00	0.00	0.00
10,800.0	90.26	178.31	7,745.8	-3,162.6	93.4	3,163.9	0.00	0.00	0.00
10,900.0	90.26	178.30	7,745.4	-3,262.5	96.4	3,263.9	0.00	0.00	0.00
11,000.0	90.26	178.30	7,744.9	-3,362.5	99.3	3,363.9	0.00	0.00	0.00
11,100.0	90.26	178.30	7,744.5	-3,462.4	102.3	3,463.9	0.00	0.00	0.00



Great White Directional Services

Planning Report

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Project:	Eddy County (NM83E)	MD Reference:	WELL @ 0.0usft (Original Well Elev)
Site:	Sec 22 - T25S - R26	North Reference:	Grid
Well:	Cottonwood Draw Fed #9	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 (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,200.0	90.26	178.30	7,744.0	-3,562.4	105.3	3,563.9	0.00	0.00	0.00
11,300.0	90.26	178.30	7,743.5	-3,662.3	108.2	3,663.9	0.00	0.00	0.00
11,400.0	90.26	178.30	7,743.1	-3,762.3	111.2	3,763.9	0.00	0.00	0.00
11,500.0	90.26	178.30	7,742.6	-3,862.3	114.1	3,863.9	0.00	0.00	0.00
11,600.0	90.26	178.30	7,742.2	-3,962.2	117.1	3,963.9	0.00	0.00	0.00
11,700.0	90.26	178.30	7,741.7	-4,062.2	120.1	4,063.9	0.00	0.00	0.00
11,800.0	90.26	178.30	7,741.2	-4,162.1	123.0	4,163.9	0.00	0.00	0.00
11,900.0	90.26	178.30	7,740.8	-4,262.1	126.0	4,263.9	0.00	0.00	0.00
12,000.0	90.26	178.30	7,740.3	-4,362.0	128.9	4,363.9	0.00	0.00	0.00
12,100.0	90.26	178.30	7,739.9	-4,462.0	131.9	4,463.9	0.00	0.00	0.00
12,200.0	90.26	178.30	7,739.4	-4,561.9	134.9	4,563.9	0.00	0.00	0.00
12,285.4	90.26	178.30	7,739.0	-4,647.3	137.4	4,649.3	0.00	0.00	0.00
TD at 12285.4 - Cottonwood #9 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									
Cottonwood #9 PBHL	0.00	0.00	7,739.0	-4,647.3	137.4	403,409.20	555,664.30	32° 6' 32.554 N	104° 17' 13.420 W
- plan hits target center									
- Point									

Plan Annotations				
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment
		+N/-S (usft)	+E/-W (usft)	
7,472.5	7,472.5	0.0	0.0	KOP 20°/100 DLS @ 178.31° AZI
7,923.8	7,759.0	-287.7	8.5	EOC - Hold to TD
12,285.4	7,739.0	-4,647.3	137.4	TD at 12285.4

SR & A

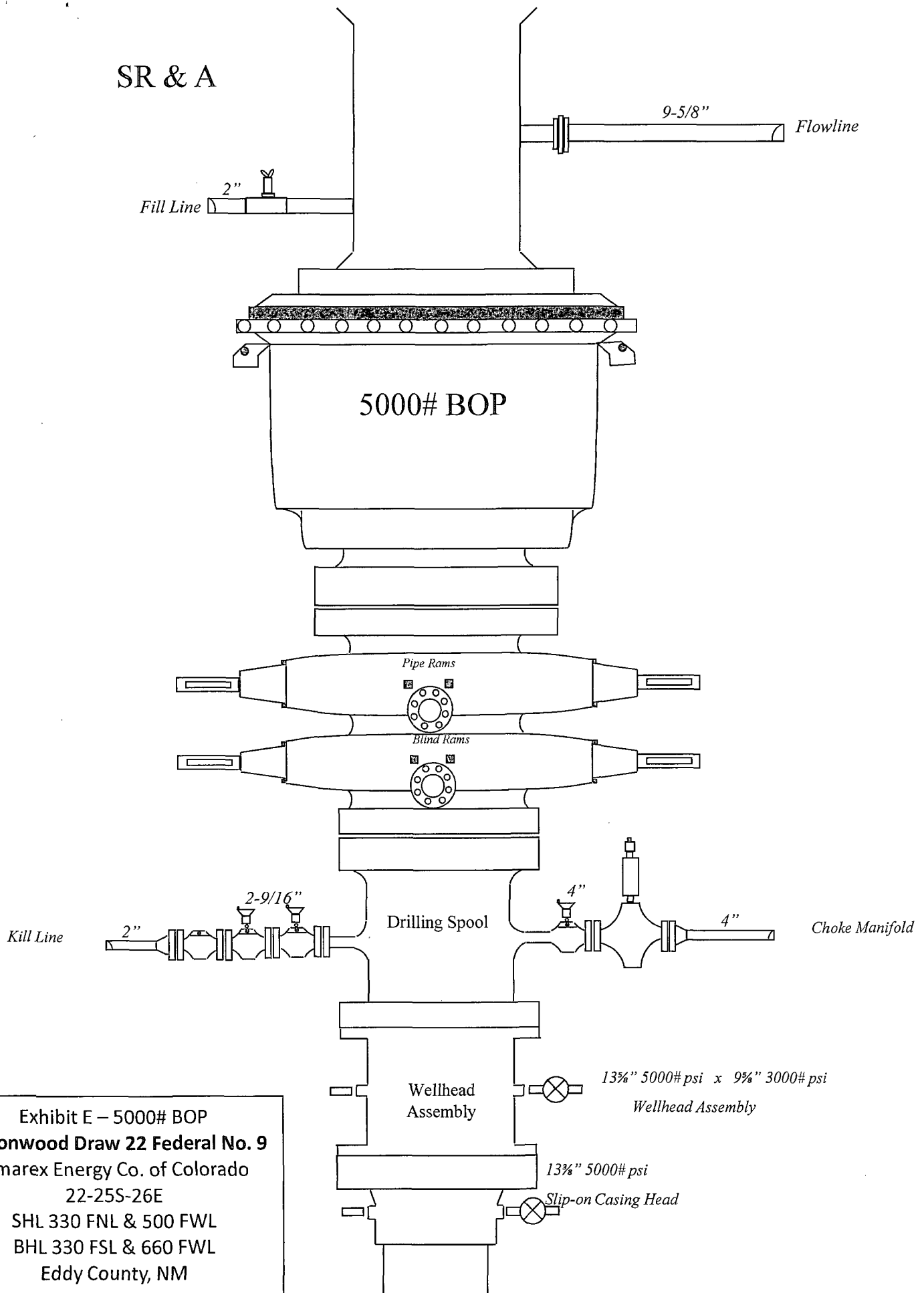
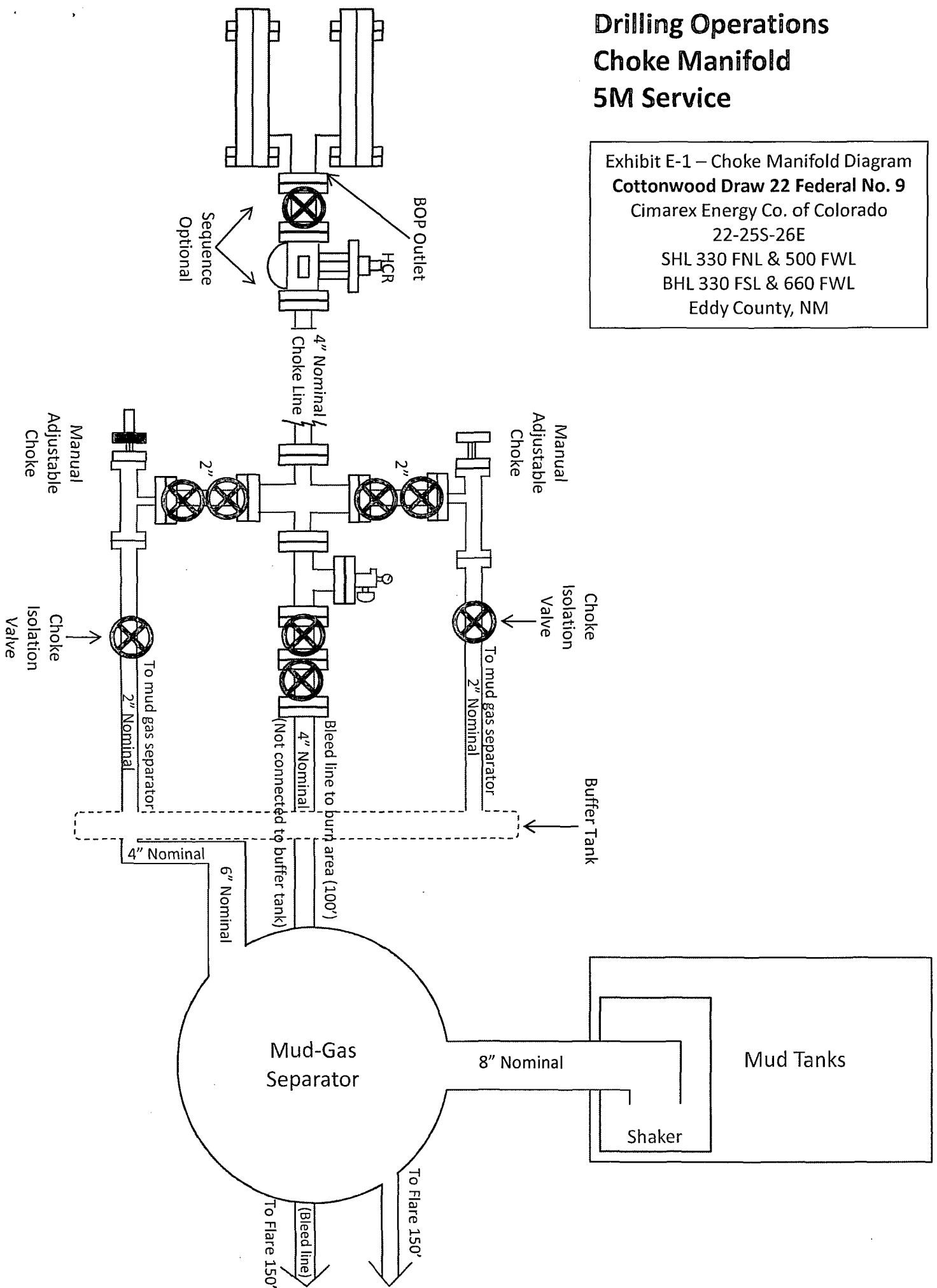


Exhibit E – 5000# BOP
Cottonwood Draw 22 Federal No. 9
Cimarex Energy Co. of Colorado
22-25S-26E
SHL 330 FNL & 500 FWL
BHL 330 FSL & 660 FWL
Eddy County, NM

Drilling Operations Choke Manifold 5M Service

Exhibit E-1 – Choke Manifold Diagram
Cottonwood Draw 22 Federal No. 9
Cimarex Energy Co. of Colorado
22-25S-26E
SHL 330 FNL & 500 FWL
BHL 330 FSL & 660 FWL
Eddy County, NM



DISTRICT I --- CHECKLIST FOR INTENTS TO DRILL

Operator CIMAREX ENERGY CO. of COLORADO OGRID # 162683

Well Name & # COTTONWOOD DRAW 22 FED # 9H Surface Type (F) (S) (P)

Location: UL D, Sect 22, Township 25 s, RNG 26 e, Sub-surface Type (F) (S) (P)

37773
37481

M 22-25-26

A. Date C101 rec'd / / C101 reviewed / /

B. 1. Check mark, Information is OK on Forms:

OGRID X, BONDING FED PROP CODE , WELL # , SIGNATURE

2. Inactive Well list as of: 4/4/11 # wells 1153, # Inactive wells 8

a. District Grant APD but see number of inactive wells:

No letter required X; Sent Letter to Operator , to Santa Fe

3. Additional Bonding as of: 4/4/11

a. District Denial because operator needs addition bonding:

No Letter required X; Sent Letter to Operator , To Santa Fe

b. District Denial because of Inactive well list and Financial Assurance:

No Letter required X; Sent Letter to Operator , To Santa Fe

C. C102 YES , NO , Signature

1. Pool WILDCAT; BON SPRING, Code 96403

a. Dedicated acreage 160, What Units DELM

b. SUR. Location Standard X; Non-Standard Location

c. Well shares acres: Yes , No X # of wells plus this well #

2. 2nd. Operator in same acreage, Yes , No X

Agreement Letter , Disagreement letter

3. Intent to Directional Drill Yes X, No

a. Dedicated acreage 160, What Units DELM

b. Bottomhole Location Standard X; Non-Standard Bottomhole

4. Downhole Commingle: Yes , No X

a. Pool #2 , Code , Acres

Pool #3 , Code , Acres

Pool #4 , Code , Acres

5. POTASH Area Yes , No FED

D. Blowout Preventer Yes X, No

E. H2S Yes , No , part FED APD

F. C144 Pit Registration Yes , No X, need

G. Does APD require Santa Fe Approval:

1. Non-Standard Location: Yes , No X, NSL #

2. Non-Standard Proration: Yes , No X, NSP #

3. Simultaneous Dedication: Yes , No X, SD #

Number of wells Plus #

4. Injection order Yes , No X; PMX # or WFX #

5. SWD order Yes , NO X; SWD #

6. DHC from SF ; DHC-HOB ; Holding

7. OCD Approval Date 4/4/11

API #30-0 15-38656

8. Reviewers KZ