ATS-10-777

OCD Artesia

Form 3160-3
(April 2004)

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

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5 Lease Serial No SHL NM-120888, BHL NM-121936

6. If Indian, Allotee or Tribe Name

1a Type of Work ☒ DRILL ✓ ☐ REENTER

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

1b Type of Well ☐ Oil Well ☒ Gas Well ☐ Other ☒ Single Zone ☐ Multiple Zone

8. Lease Name and Well No.
Sarvis 3 Federal Com No. 1H (38770)

2 Name of Operator
Cimarex Energy Co. of Colorado (162683)

9 API Well No.
30-015- 39357

3a Address
600 N. Marienfeld St., Ste. 600; Midland, TX 79701

3b Phone No *(include area code)*
432-571-7800

10. Field and Pool, or Exploratory
SAGE DRAW
Wolfcamp ~~Wildcat~~, EAST

4 Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At Surface 690 FNL & 400 FEL (A) UNORTHODOX surface LOCATION
At proposed prod Zone 660 FNL & 660 FWL Horizontal Wolfcamp Test

11 Sec , T R M. or Blk and Survey or Area
3-26S-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)	16 No of acres in lease	17 Spacing Unit dedicated to this well
400	NM-120888 - 400 acres NM-121936 - 80 acres	N2 320 acres
18 Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft	**19 Proposed Depth**	**20. BLM/BIA Bond No on File**
N/A	Pilot Hole 10400 MD 13816, TVD 9631	NM-2575
21 Elevations (Show whether DF, KDB, RT, GL, etc)	**22. Approximate date work will start***	**23. Estimated duration**
3396' GR ✓	03.01.11	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
2 A Drilling Plan
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).
4 Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator Certification
6 Such other site specific information and/or plans as may be required by the authorized officer

25 Signature	Name *(Printed/Typed)*	Date
Zeno Farris	Zeno Farris	01.05.11
Title		
Manager Operations Administration		
Approved By *(Signature)*	**Name (Printed/Typed)**	**Date**
/s/ Don Peterson		JUL 22 2011
Title	**Office**	
FIELD MANAGER	CARLSBAD FIELD OFFICE	

RECEIVED
AUG 4 2011
NMOCD ARTESIA

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

K-B 08/26/11

Approval Subject to General Requirements & Special Stipulations Attached

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

Application to Drill
Sarvis 3 Federal Com No. 1
Cimarex Energy Co. of Colorado
Unit A, Section 3
T26S-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 690 FNL & 400 FEL
   BHL 660 FNL & 660 FWL

2. Elevation above sea level: 3396' GR

3. Geologic name of surface formation: Quaternery 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 10400 MD 13816, TVD 9631

6. Estimated tops of geological markers:

Rustler	Spotty, N/A	1st Bone Spring Ss	6467
Top Salt	1123	2nd Bone Spring Ss	7037
Base Salt	1734	2nd BS Ss Lower	7762
Delaware	1950	3rd Bone Spring Ss	8346
Cherry Canyon	2928	Wolfcamp	8697
Brushy Canyon	3961	Wolfcamp B	9295
Bone Spring	5480	Wolfcamp C	9464
Bone Spring "A" Shale	5712	Wolfcamp D	9562
Bone Spring "C" Shale	5966	Wolfcamp E	10110

7. Possible mineral bearing formations:

Wolfcamp	Gas
Bone Spring	Gas
Delaware	Oil

8. Proposed drilling Plan

Drill 8¾" pilot hole to 10400 and log. Set 7" casing from 0-9360 and 2⅞" fiberglass tubing from 9360-10400 and cement with 395 sx HalCem -H (0.5% CFR-3 0.1% HR-60116.5 ppg yield 1.06 0% Excess). Using FG/cmt as a kick off plug, kick off 6⅛" lateral @ 9420 and drill to MD 13816, TVD 9631 Run 4½" 11.6# P110 BTC liner from 9260 to EOC @ 9876 and ~~BTC~~ LTC from 9876 to 13816. Cement liner.

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	1,900'	10	28-29	NC	Saturated Brine. Sweep as needed to clean hole.
1,900'	to	10,400'	9.0	28-30	NC	Cut brine. Sweep as needed to clean hole.
9,420'	to	13,816'	12.0	28-32	NC	OBM

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	13⅜"	48#	STC	H-40
Intermediate	12¼"	0'	to	1900'	New	9⅝"	40#	LTC	J-55
Production	8¾"	0'	to	9360'	New	7"	26#	LTC	P-110
Fiberglass	8¾"	9360'	to	10400'	New	2⅞"	2.18#		IJ
Liner	6⅛"	9260'	to	13816'	New	4½"	11.6#	LTC/BTC	P-110

11. Cementing Program: See COA

Surface Excess 100%	Lead: 100 sx Extendacem-CZ wt 13.5, yld 1.75 Tail: 390 sx Halcem-C + 2% CaCl wt 14.8, yld 1.35 **TOC Surface**
Intermediate Excess 70%	Lead: 360 sx Econocem-HLC + 5% Salt + 5# Gilsonite wt 12.9, yld 1.85 Tail: 220 sx Halcem-C wt 14.8, yld 1.33 **TOC Surface**
Production & *Fiberglass* Excess 50%	Lead: 940 sx Econocem-HLH + 0.5% Halad-322 + 0.2% HR-601 wt 12.9, yld 1.78 Tail: 605 sx Halcem-H + 0.5% CFR-3 + 0.2% HR-601 wt 16.5, yld 1.06 **TOC ~~1700~~** Surface
Liner Excess 25%	470 sx VersaCem-H + 0.5% Halad-344 + 0.4% CFR-3 + 1% Salt + 0.1% HR-601 wt 14.5, yld 1.21 TOC - 9260

According to the State Engineer, depth to groundwater is 12.' Fresh water zones will be protected by setting 13⅜ casing at 450' and cementing to surface. Hydrocarbon zones will be protected by setting 9⅝" casing at 1900' and 7" and fiberglass to 10400 and cementing to ~~1700~~. See COA

Collapse Factor	*Burst Factor*	*Tension Factor*
1.125	1.125	1.6

Application to Drill
Sarvis 3 Federal Com No. 1
Cimarex Energy Co. of Colorado
Unit A, Section 3
T26S-R26E, Eddy County, NM

12. Pressure control Equipment:
Exhibit "E". A 13⅝" 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 215.' 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 nippled 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 2500 psi high.

Cimarex Energy Co. of Colorado (operator) requests a variance if Cactus 122 (rig name) is used to drill this well to use a co-flex line between the BOP and choke manifold. See COA
Manufacturer: Midwest Hose & Specialty
Serial Number: 211964 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

13. Testing, Logging and Coring Program: See COA
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 H_2S 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 H_2S 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 potentialed as **a gas well.**

CIMAREX

Cimarex Energy Co.

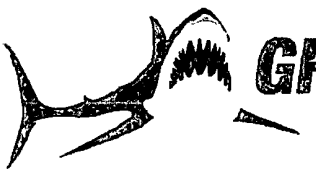
Eddy County (NM83E)
Sec 3 - T26S - R26E
Sarvis 3 Fed Com #1

Wellbore #1

Plan: Plan #1

Standard Planning Report

22 September, 2010



GREAT WHITE
DIRECTIONAL SERVICES, L.L.C.

CIMAREX

GREAT WHITE DIRECTIONAL SERVICES, L.L.C.

Project: Eddy County (NM83E)
Site. Sec 3 - T26S - R26E
Well Sarvis 3 Fed Com #1
Wellbore. Wellbore #1
Design. Plan #1

WELL DETAILS: Sarvis 3 Fed Com #1

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	391803.80	559802.40	32° 4' 37.683 N	104° 16' 25.381 W

SHL: 690 FNL / 400 FEL
BHL: 660 FNL / 660 FWL

Azimuths to Grid North
Total Correction: 7.94°
Magnetic Field
Strength 48581.1snT
Dip Angle 59.96°
Date: 2010/09/22
Model: IGRF200510

WELLBORE TARGET DETAILS

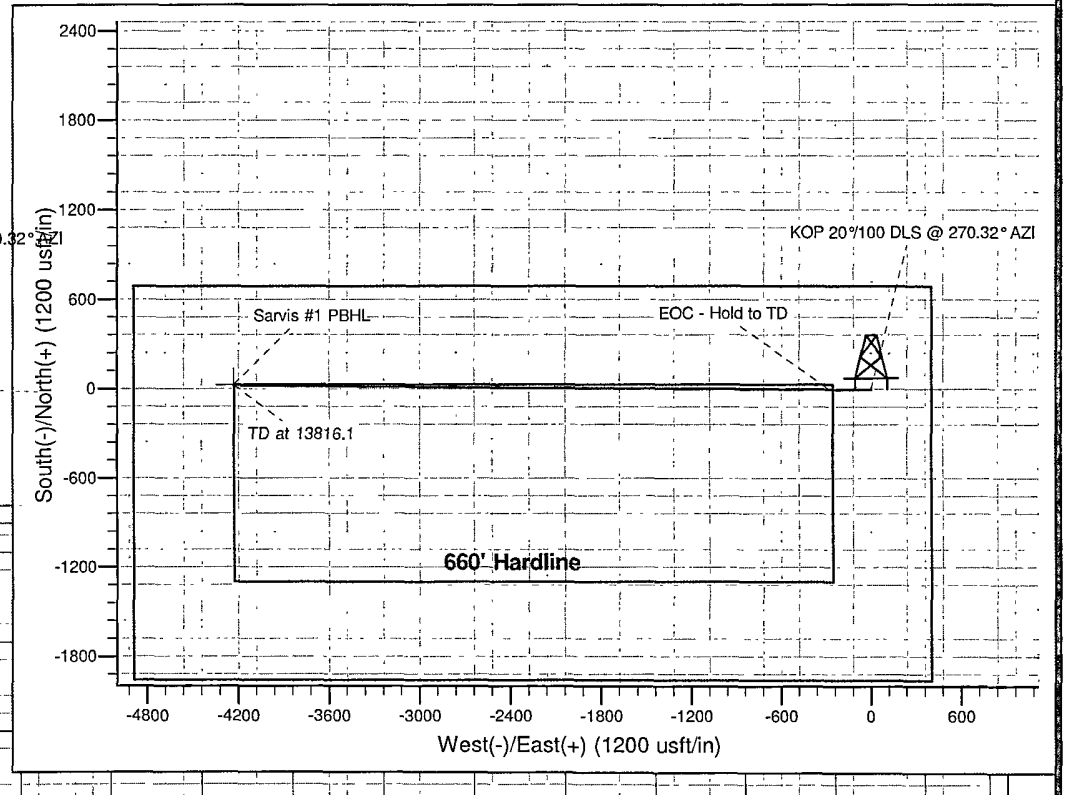
Name	TVD	+N/-S	+E/-W	Northing	Easting
Sarvis #1 PBHL	9632.0	23.4	-4231.8	391827.23	555570.63

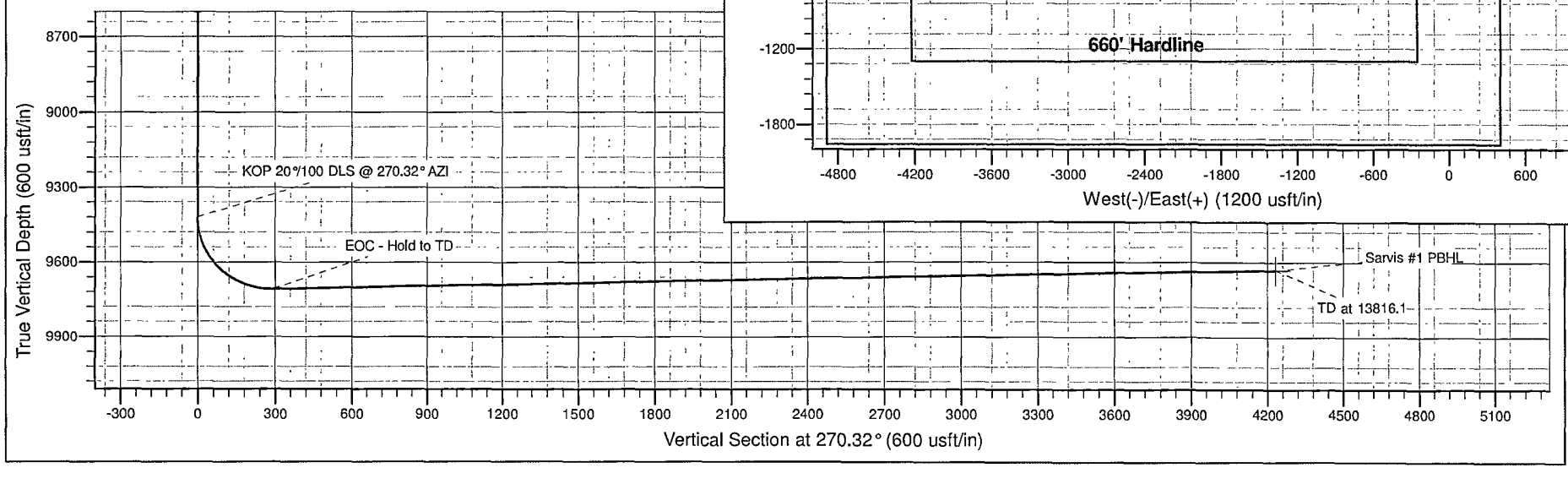
PLAN DETAILS

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	
9420.0	0.00	0.00	9420.0	0.0	0.0	0.00	0.00	0.0	
9875.5	91.10	270.32	9706.4	1.6	-292.0	20.00	270.32	292.0	
13816.1	91.10	270.32	9630.8	23.6	-4231.8	0.00	0.00	4231.8	Sarvis #1 PBHL

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSect	Departure	Annotation
9420.0	9420.0	0.00	0.00	0.0	0.0	0.0	0.0	KOP 20°/100 DLS @ 270.32° AZI
9706.4	9875.5	91.10	270.32	1.6	-292.0	292.0	292.0	EOC - Hold to TD
9630.8	13816.1	91.10	270.32	23.6	-4231.8	4231.8	4231.8	TD at 13816.1





Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well Sarvis 3 Fed Com #1
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 3 - T26S - R26E	**North Reference:**	Grid
Well:	Sarvis 3 Fed Com #1	**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 3 - T26S - R26E

Site Position:		**Northing:**	391,803.80 usft	**Latitude:**	32° 4' 37.683 N
From:	Map	**Easting:**	559,802.40 usft	**Longitude:**	104° 16' 25.381 W
Position Uncertainty:	0.0 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.03 °

Well Sarvis 3 Fed Com #1

Well Position	**+N/-S**	0.0 usft	**Northing:**	391,803.80 usft	**Latitude:**	32° 4' 37.683 N
	+E/-W	0.0 usft	**Easting:**	559,802.40 usft	**Longitude:**	104° 16' 25.381 W
Position Uncertainty		0.0 usft	**Wellhead Elevation:**		**Ground Level:**	0.0 usft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF200510	2010/09/22	7.97	59.96	48,581

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)**	**Direction (°)**	
	0.0	0.0	0.0	270.32	

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	
9,420.0	0.00	0.00	9,420.0	0.0	0.0	0.00	0.00	0.00	0.00	
9,875.5	91.10	270.32	9,706.4	1.6	-292.0	20.00	20.00	0.00	270.32	
13,816.1	91.10	270.32	9,630.8	23.6	-4,231.8	0.00	0.00	0.00	0.00	Sarvis #1 PBHL

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well Sarvis 3 Fed Com #1
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 3 - T26S - R26E	**North Reference:**	Grid
Well:	Sarvis 3 Fed Com #1	**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)
9,420.0	0.00	0.00	9,420.0	0.0	0.0	0.0	0.00	0.00	0.00
KOP 20°/100 DLS @ 270.32° AZI									
9,425.0	1.00	270.32	9,425.0	0.0	0.0	0.0	20.00	20.00	0.00
9,450.0	6.00	270.32	9,449.9	0.0	-1.6	1.6	20.00	20.00	0.00
9,475.0	11.00	270.32	9,474.7	0.0	-5.3	5.3	20.00	20.00	0.00
9,500.0	16.00	270.32	9,499.0	0.1	-11.1	11.1	20.00	20.00	0.00
9,525.0	21.00	270.32	9,522.7	0.1	-19.0	19.0	20.00	20.00	0.00
9,550.0	26.00	270.32	9,545.6	0.2	-29.0	29.0	20.00	20.00	0.00
9,575.0	31.00	270.32	9,567.5	0.2	-40.9	40.9	20.00	20.00	0.00
9,600.0	36.00	270.32	9,588.4	0.3	-54.7	54.7	20.00	20.00	0.00
9,625.0	41.00	270.32	9,607.9	0.4	-70.3	70.3	20.00	20.00	0.00
9,650.0	46.00	270.32	9,626.1	0.5	-87.5	87.5	20.00	20.00	0.00
9,675.0	51.00	270.32	9,642.6	0.6	-106.2	106.2	20.00	20.00	0.00
9,700.0	56.00	270.32	9,657.5	0.7	-126.3	126.3	20.00	20.00	0.00
9,725.0	61.00	270.32	9,670.6	0.8	-147.6	147.6	20.00	20.00	0.00
9,750.0	66.00	270.32	9,681.7	0.9	-170.0	170.0	20.00	20.00	0.00
9,775.0	71.00	270.32	9,690.9	1.1	-193.2	193.2	20.00	20.00	0.00
9,800.0	76.00	270.32	9,698.0	1.2	-217.2	217.2	20.00	20.00	0.00
9,825.0	81.00	270.32	9,703.0	1.3	-241.7	241.7	20.00	20.00	0.00
9,850.0	86.00	270.32	9,705.8	1.5	-266.5	266.5	20.00	20.00	0.00
9,875.5	91.10	270.32	9,706.4	1.6	-292.0	292.0	20.00	20.00	0.00
EOC - Hold to TD									
9,900.0	91.10	270.32	9,706.0	1.8	-316.5	316.5	0.00	0.00	0.00
10,000.0	91.10	270.32	9,704.0	2.3	-416.4	416.5	0.00	0.00	0.00
10,100.0	91.10	270.32	9,702.1	2.9	-516.4	516.4	0.00	0.00	0.00
10,200.0	91.10	270.32	9,700.2	3.4	-616.4	616.4	0.00	0.00	0.00
10,300.0	91.10	270.32	9,698.3	4.0	-716.4	716.4	0.00	0.00	0.00
10,400.0	91.10	270.32	9,696.4	4.6	-816.4	816.4	0.00	0.00	0.00
10,500.0	91.10	270.32	9,694.4	5.1	-916.3	916.4	0.00	0.00	0.00
10,600.0	91.10	270.32	9,692.5	5.7	-1,016.3	1,016.3	0.00	0.00	0.00
10,700.0	91.10	270.32	9,690.6	6.2	-1,116.3	1,116.3	0.00	0.00	0.00
10,800.0	91.10	270.32	9,688.7	6.8	-1,216.3	1,216.3	0.00	0.00	0.00
10,900.0	91.10	270.32	9,686.8	7.4	-1,316.3	1,316.3	0.00	0.00	0.00
11,000.0	91.10	270.32	9,684.8	7.9	-1,416.2	1,416.3	0.00	0.00	0.00
11,100.0	91.10	270.32	9,682.9	8.5	-1,516.2	1,516.3	0.00	0.00	0.00
11,200.0	91.10	270.32	9,681.0	9.0	-1,616.2	1,616.2	0.00	0.00	0.00
11,300.0	91.10	270.32	9,679.1	9.6	-1,716.2	1,716.2	0.00	0.00	0.00
11,400.0	91.10	270.32	9,677.2	10.1	-1,816.2	1,816.2	0.00	0.00	0.00
11,500.0	91.10	270.32	9,675.2	10.7	-1,916.1	1,916.2	0.00	0.00	0.00
11,600.0	91.10	270.32	9,673.3	11.3	-2,016.1	2,016.2	0.00	0.00	0.00
11,700.0	91.10	270.32	9,671.4	11.8	-2,116.1	2,116.1	0.00	0.00	0.00
11,800.0	91.10	270.32	9,669.5	12.4	-2,216.1	2,216.1	0.00	0.00	0.00
11,900.0	91.10	270.32	9,667.6	12.9	-2,316.1	2,316.1	0.00	0.00	0.00
12,000.0	91.10	270.32	9,665.6	13.5	-2,416.0	2,416.1	0.00	0.00	0.00
12,100.0	91.10	270.32	9,663.7	14.1	-2,516.0	2,516.1	0.00	0.00	0.00
12,200.0	91.10	270.32	9,661.8	14.6	-2,616.0	2,616.1	0.00	0.00	0.00
12,300.0	91.10	270.32	9,659.9	15.2	-2,716.0	2,716.0	0.00	0.00	0.00
12,400.0	91.10	270.32	9,658.0	15.7	-2,816.0	2,816.0	0.00	0.00	0.00
12,500.0	91.10	270.32	9,656.0	16.3	-2,915.9	2,916.0	0.00	0.00	0.00
12,600.0	91.10	270.32	9,654.1	16.8	-3,015.9	3,016.0	0.00	0.00	0.00
12,700.0	91.10	270.32	9,652.2	17.4	-3,115.9	3,116.0	0.00	0.00	0.00
12,800.0	91.10	270.32	9,650.3	18.0	-3,215.9	3,215.9	0.00	0.00	0.00
12,900.0	91.10	270.32	9,648.4	18.5	-3,315.9	3,315.9	0.00	0.00	0.00
13,000.0	91.10	270.32	9,646.4	19.1	-3,415.8	3,415.9	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	**Local Co-ordinate Reference:**	Well Sarvis 3 Fed Com #1
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 3 - T26S - R26E	**North Reference:**	Grid
Well:	Sarvis 3 Fed Com #1	**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)
13,100.0	91.10	270.32	9,644.5	19.6	-3,515.8	3,515.9	0.00	0.00	0.00
13,200.0	91.10	270.32	9,642.6	20.2	-3,615.8	3,615.9	0.00	0.00	0.00
13,300.0	91.10	270.32	9,640.7	20.8	-3,715.8	3,715.8	0.00	0.00	0.00
13,400.0	91.10	270.32	9,638.8	21.3	-3,815.8	3,815.8	0.00	0.00	0.00
13,500.0	91.10	270.32	9,636.8	21.9	-3,915.7	3,915.8	0.00	0.00	0.00
13,600.0	91.10	270.32	9,634.9	22.4	-4,015.7	4,015.8	0.00	0.00	0.00
13,700.0	91.10	270.32	9,633.0	23.0	-4,115.7	4,115.8	0.00	0.00	0.00
13,800.0	91.10	270.32	9,631.1	23.5	-4,215.7	4,215.8	0.00	0.00	0.00
13,816.1	91.10	270.32	9,630.8	23.6	-4,231.7	4,231.8	0.00	0.00	0.00
TD at 13816.1 - Sarvis #1 PBHL									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Sarvis #1 PBHL	0.00	0.00	9,632.0	23.4	-4,231.8	391,827.23	555,570.63	32° 4' 37.936 N	104° 17' 14.567 W
- plan misses target center by 1.2usft at 13816.1usft MD (9630.8 TVD, 23.6 N, -4231.7 E)									
- Point									

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
9,420.0	9,420.0	0.0	0.0	KOP 20°/100 DLS @ 270.32° AZI
9,875.5	9,706.4	1.6	-292.0	EOC - Hold to TD
13,816.1	9,630.8	23.6	-4,231.8	TD at 13816.1

SR & A

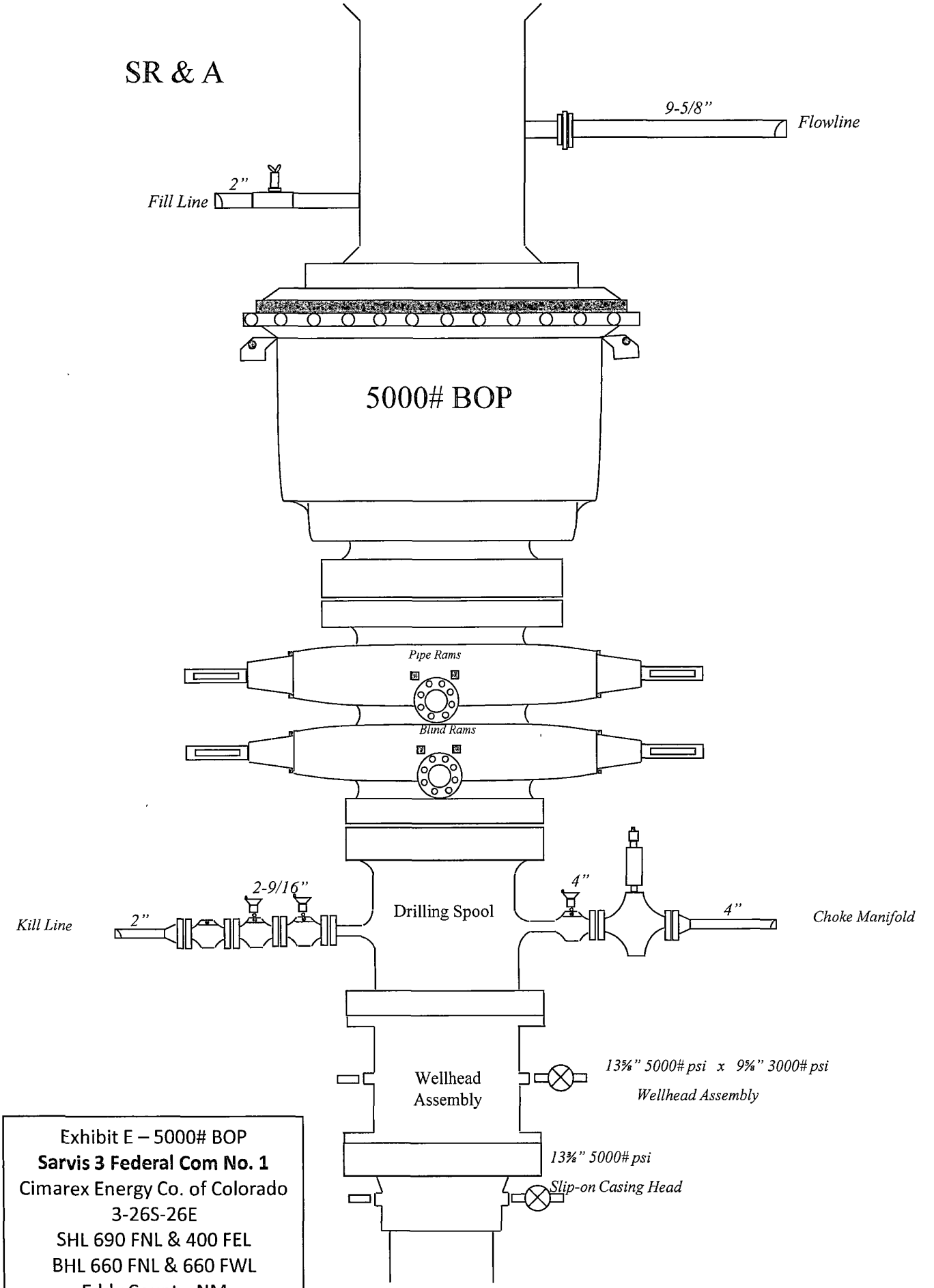
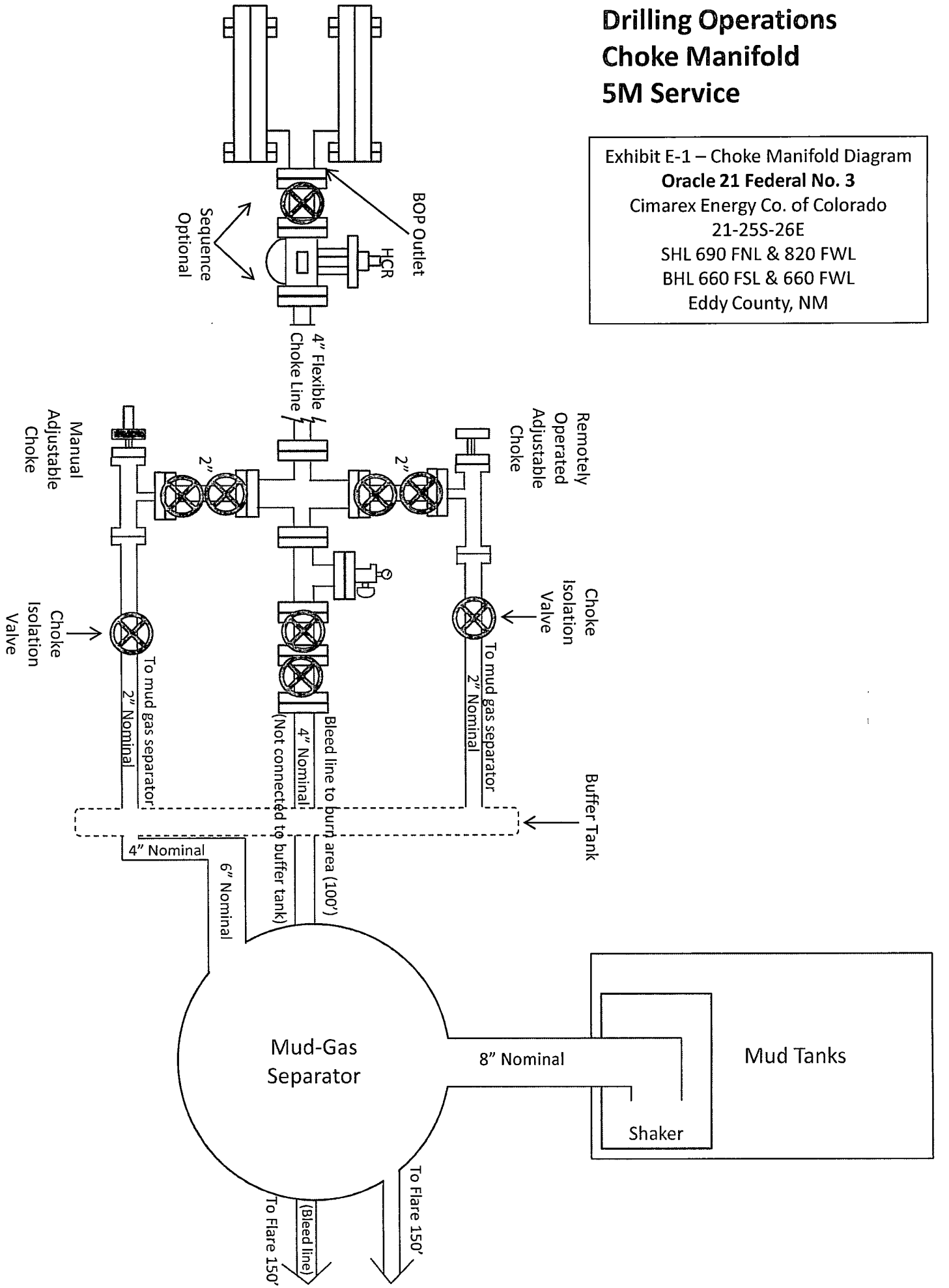
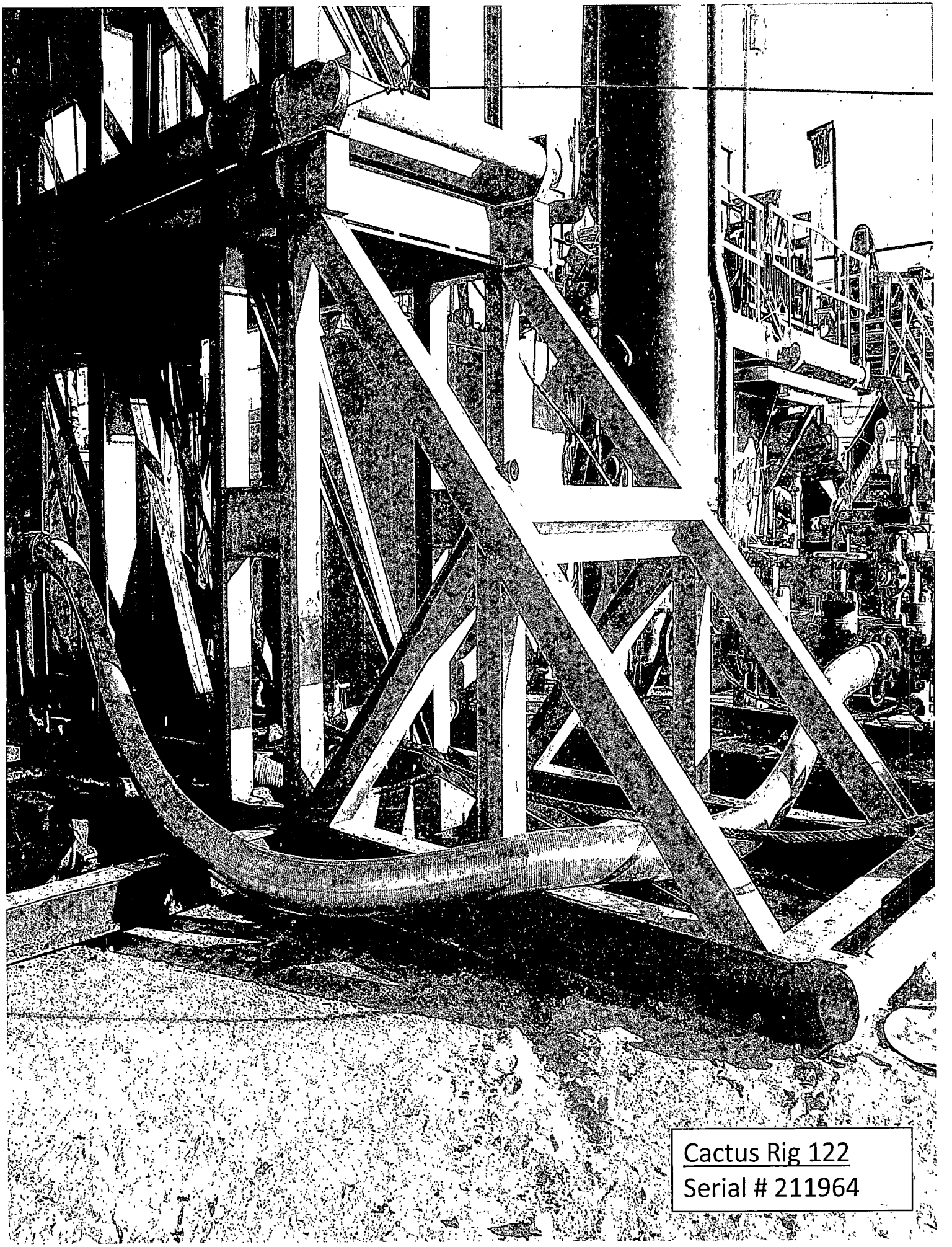


Exhibit E – 5000# BOP
Sarvis 3 Federal Com No. 1
Cimarex Energy Co. of Colorado
3-26S-26E
SHL 690 FNL & 400 FEL
BHL 660 FNL & 660 FWL
Eddy County, NM

Drilling Operations
Choke Manifold
5M Service

Exhibit E-1 – Choke Manifold Diagram
Oracle 21 Federal No. 3
Cimarex Energy Co. of Colorado
21-25S-26E
SHL 690 FNL & 820 FWL
BHL 660 FSL & 660 FWL
Eddy County, NM





Cactus Rig 122
Serial # 211964

MIDWEST

HOSE AND SPECIALTY INC.

INTERNAL HYDROSTATIC TEST REPORT		
Customer: CACTUS		**P.O. Number:** Asset#M4812
HOSE SPECIFICATIONS		
Type: CHOKE LINE		**Length:** 35'
I.D. 4" *INCHES*		**O.D.** 8" *INCHES*
WORKING PRESSURE 10,000 *PSI*	**TEST PRESSURE** 15,000 *PSI*	**BURST PRESSURE** *PSI*
COUPLINGS		
Type of End Fitting 4 1/16 10K FLANGE		
Type of Coupling: SWEDGED		**MANUFACTURED BY** MIDWEST HOSE & SPECIALTY
PROCEDURE		
Hose assembly pressure tested with water at ambient temperature.		
TIME HELD AT TEST PRESSURE 15 *MIN.*		**ACTUAL BURST PRESSURE:** 0 *PSI*
COMMENTS: s/n#O211964 Hose is covered with stainless steel armour cover and wraped with fire resistant vermiculite coated fiberglass insulation rated for 1500 degrees complete with lifting eyes		
Date: 6/28/2006	**Tested By:** BOBBY FINK	**Approved:** MENDI JACKSON

Midwest Hose
& Specialty, Inc.

Specification Sheet
Choke & Kill Hose

The Midwest Hose & Specialty Choke & Kill hose is manufactured with only premium componets.The reinforcement cables, inner liner and cover are made of the highest quality material to handle the tough drilling applications of today's industry. The end connections are available with API flanges, API male threads, hubs, hammer unions or other special fittings upon request. Hose assembly is manufactured to API 7K. This assembly is wrapped with fire resistant vermculite coated fiberglass insulation, rated at 2000 degrees with stainless steel armor cover.

Working Pressure:	5,000 or 10,000 psi working pressure
Test Pressure:	10,000 or 15,000 psi test pressure
Reinforcement:	Multiple steel cables
Cover:	Stainless Steel Armor
Inner Tube:	Petroleum resistant, Abrasion resistant
End Fitting:	API flanges, API male threads, threaded or butt weld hammer unions, unibolt and other special connections
Maximum Length:	110 Feet
ID:	2-1/2", 3", 3-1/2", 4"
Operating Temperature:	-22 deg F to +180 deg F (-30 deg C to +82 deg C)

P.O. Box 96558 – 1421 S.E. 29th St. Oklahoma City, OK 73143 * (405) 670-6718 * Fax: (405) 670-6816

DISTRICT I --- CHECKLIST FOR INTENTS TO DRILL

Operator CIMAREX ENERGY CO. of COLORADO OGRID # 162683
Well Name & # SARUS 3 FEDERAL COM # 1 H Surface Type (F) (S) (P)
Location: UL A, Sect 3, Twnship 26 s, RNG 26 e, Sub-surface Type (F) (S) (P)
D 3 26 s 2

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

B. 1. Check mark, Information is OK on Forms:
OGRID X, BONDING ~~FED~~ PROP CODE X, WELL # X, SIGNATURE ____
2. Inactive Well list as of : 5/26/11 # wells 1216, # Inactive wells 6
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: 8/26/11
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 SAGE DRAW; WC, EAST, Code 96890
a. Dedicated acreage 320, What Units AABCDEFGH
b. SUR. Location Standard X; Non-Standard Location_____
c. Well shares acres: Yes X, No ~~X~~ # of wells ____ plus this well #____
2. 2nd. Operator in same acreage, Yes____, No X #2
Agreement Letter ____, Disagreement letter____
3. Intent to Directional Drill Yes X, No ____
a. Dedicated acreage 320, What Units AABCDEFGH
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 X,

D. Blowout Preventer Yes X, No _____,

E. H2S Yes X No _____,

F. C144 Pit Registration Yes _____, No _____, 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 ____/____/____ API #30-015-39357
8. Reviewers_____