

ATS-11-339

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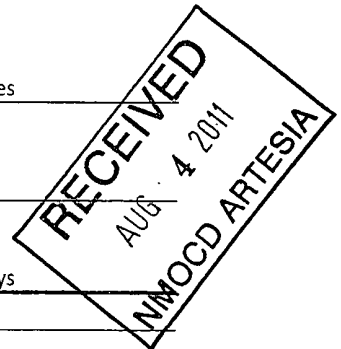
Form 3160-3
(April 2004)

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

1a Type of Work ☒ DRILL ☐ REENTER		5. Lease Serial No' 5#6 NM-120888, NM-121936 BHL
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. Pending
3a Address 600 N. Marienfeld St., Ste. 600; Midland, TX 79701		8. Lease Name and Well No Sarvis 3 Federal Com No. 2 (30710)
3b Phone No. (include area code) 432-571-7800		9. API Well No 30-015- 39538
4 Location of Well (Report location clearly and in accordance with any State requirements) At Surface 1980 FNL & 450 FEL (H) Surface LOCATION At proposed prod Zone 1880 FNL & 660 FWL Horizontal Wolfcamp Test		10. Field and Pool, or Exploratory SAFE DAM, WC, EAST Wolfcamp Wildcat
14. Distance in miles and direction from nearest town or post office*		11. Sec., T. R. M. or Blk and Survey or Area 3-26S-26E
15 Distance from proposed* location to nearest property or lease line, ft (Also to nearest drig unit line if any) 450		12. County or Parish Eddy
16. No of acres in lease NM-120888 - 400 acres NM-121936 - 80 acres		13 State NM
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. 1291		20. BLM/BIA Bond No on File NM-2575
19 Proposed Depth Pilot Hole 10400 MD 13745, TVD 9633		
21. Elevations (Show whether DF, KDB, RT, GL, etc') 3374' GR		22. Estimated duration 30-35 days
22 Approximate date work will start* 05.15.11		
23. 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 01.24.11
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Title Manager Operations Administration		
Approved By (Signature) /s/ Don Peterson	Name (Printed/Typed)	Date JUL 22 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.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)

APPROVAL FOR TWO YEARS

SEE ATTACHED FOR
CONDITIONS OF APPROVAL

KZ 08/24/11 CARLSBAD CONTROLLED WATER BASIN
APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED

100

Application to Drill
Sarvis 3 Federal Com No. 2
Cimarex Energy Co. of Colorado
Unit H, 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 1980 FNL & 450 FEL
BHL 1880 FNL & 660 FWL
2. Elevation above sea level: 3374' 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 10400 MD 13745, TVD 9633

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 0-9816 and 2½" fiberglass tubing from 9816-10400 and cement. Using FG/cmt as a kick off plug, kick off 6½" lateral @ 9421 and drill to MD 13745, TVD 9633. Run 4½" 11.6# P110 BTC liner from 9700 to EOC @ 9876 and BTC from 9876 to 13745. Cement liner. Request 100' tieback in order to set sub pump as deep as possible. ETC

Application to Drill
Sarvis 3 Federal Com No. 2
 Cimarex Energy Co. of Colorado
 Unit H, Section 3
 T26S-R26E, Eddy County, NM

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.
9,421' to 13,745'	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 13½"	48#	STC	H-40
Intermediate	12½"	0' to 1900'	New 9½"	40#	LTC	J-55
Production	8½"	0' to 9361'	New 7"	26#	LTC	P-110
Fiberglass	8½"	9361' to 10400'	New 2½"	2.18#		II
Liner	6½"	9261' to 13745'	New 4½"	11.6#	LTC/87C	P-110

11. Cementing Program:

Surface Excess 101%	Lead: 100 sx Halcem C + 2% S1 + D46, 14.2ppg, 1.97 yield. Tail: 350 sx C + 1% 1.34 yld 14.8 ppg. Centralizers per Onshore Order 2.III.B.2.f TOC Surface
Intermediate Excess 75 %	Lead: 360 SX. (C) 4% D20 + .2% D46 + 1% S1. 0.125 pps D130, YIELD 1.96, 12.9 ppg Tail: 220 SX. (C) + .2% D13. YIELD 1.33, WT. 14.8 TOC Surface
Production & Fiberglass Excess 28%	Lead: 500 sx Interfill H with 0.3% HR-601, 5 lb/sx Gilsonite, 0.125 lb/sx Poly-E-Flake, mixed at 11.9 ppg. Yield 2.47 cf/sx. Tail: 650 sx Super H with 0.5% Halad ® 344, 0.25% D-Air 3000, 0.4% CFR-3, 1 lb/sx Salt, 5 lb/sx Gilsonite, 0.125 lb/sx Poly-E-Flake, 0.35% HR-7 mixed at 13.2 ppf. Yield 1.61 cf/sx TOC Surface
Liner Excess 29%	450 sx 50:50 Poz:H + 2%D20 + 0.2% D112 + 0.2% D65, Yield 1.24, 14.58 ppg Centralizers every 3rd joint if hole conditions warrant TOC 9261

According to the State Engineer, depth to groundwater is 12.' Fresh water zones will be protected by setting 13½" casing at 450' and cementing to surface. Hydrocarbon zones will be protected by setting 9½" casing at 1900' and 7" and fiberglass to 10400 and cementing to surface.

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

Application to Drill
Sarvis 3 Federal Com No. 2
Cimarex Energy Co. of Colorado
Unit H, Section 3
T26S-R26E, Eddy County, NM

12. Pressure control Equipment:

Exhibit "E". A 13 3/4" 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 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 2500 psi high.

See COA
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.

Manufacturer: Midwest Hose & Specialty

Serial Number: 211964 See attached hydrostatic 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. DSTs or Cores:

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.



Cimarex Energy Co.

Eddy County (NM83E)

Sec 3 - T26S - R26E

Sarvis 3 Fed Com #2

Wellbore #1

Plan: Plan #1

Standard Planning Report

04 January, 2011

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Sarvis 3 Fed Com #2
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 #2	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:	Map	Northing:	391,803.80 usft
From:		Easting:	559,802.40 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 4' 37.683 N
		Longitude:	104° 16' 25.381 W
		Grid Convergence:	0.03 °

Well:	Sarvis 3 Fed Com #2		
Well Position	+N/-S	-1,290.2 usft	Northing:
	+E/-W	-85.9 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	390,513.60 usft
		Ground Level:	0.0 usft
			Latitude:
			Longitude:

Wellbore:	Wellbore #1		
Magnetics:	Model Name	Sample Date	Declination
	IGRF200510	01/04/11	(°)
			Dip Angle
			(°)
			Field Strength
			(nT)
			7.94
			59.96
			48,552

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
			(°)
			271.29

Plan Sections										
Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
9,420.6	0.00	0.00	9,420.6	0.0	0.0	0.00	0.00	0.00	0.00	
9,876.1	91.10	271.29	9,707.0	6.6	-291.9	20.00	20.00	0.00	271.29	
13,745.4	91.10	271.29	9,632.7	93.7	-4,159.5	0.00	0.00	0.00	0.00	Sarvis #2



Great White Directional Services

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Sarvis 3 Fed Com #2
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 #2	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)
9,420.6	0.00	0.00	9,420.6	0.0	0.0	0.0	0.00	0.00	0.00
KOP 20°/100 DLS @ 271.29° AZI									
9,425.0	0.88	271.29	9,425.0	0.0	0.0	0.0	20.00	20.00	0.00
9,450.0	5.88	271.29	9,449.9	0.0	-1.5	1.5	20.00	20.00	0.00
9,464.2	8.71	271.29	9,464.0	0.1	-3.3	3.3	20.00	20.00	0.00
Wolfcamp C									
9,475.0	10.88	271.29	9,474.7	0.1	-5.1	5.1	20.00	20.00	0.00
9,500.0	15.88	271.29	9,499.0	0.2	-10.9	10.9	20.00	20.00	0.00
9,525.0	20.88	271.29	9,522.7	0.4	-18.8	18.8	20.00	20.00	0.00
9,550.0	25.88	271.29	9,545.6	0.6	-28.7	28.7	20.00	20.00	0.00
9,568.5	29.58	271.29	9,562.0	0.8	-37.3	37.3	20.00	20.00	0.00
Wolfcamp D									
9,575.0	30.88	271.29	9,567.6	0.9	-40.6	40.6	20.00	20.00	0.00
9,600.0	35.88	271.29	9,588.5	1.2	-54.3	54.4	20.00	20.00	0.00
9,625.0	40.88	271.29	9,608.1	1.6	-69.9	69.9	20.00	20.00	0.00
9,650.0	45.88	271.29	9,626.3	2.0	-87.0	87.0	20.00	20.00	0.00
9,675.0	50.88	271.29	9,642.9	2.4	-105.7	105.7	20.00	20.00	0.00
9,700.0	55.88	271.29	9,657.8	2.8	-125.8	125.8	20.00	20.00	0.00
9,725.0	60.88	271.29	9,670.9	3.3	-147.0	147.1	20.00	20.00	0.00
9,750.0	65.88	271.29	9,682.1	3.8	-169.4	169.4	20.00	20.00	0.00
9,775.0	70.88	271.29	9,691.3	4.3	-192.6	192.6	20.00	20.00	0.00
9,800.0	75.88	271.29	9,698.4	4.9	-216.5	216.6	20.00	20.00	0.00
9,825.0	80.88	271.29	9,703.5	5.4	-241.0	241.1	20.00	20.00	0.00
9,850.0	85.88	271.29	9,706.3	6.0	-265.8	265.9	20.00	20.00	0.00
9,876.1	91.10	271.29	9,707.0	6.6	-291.9	292.0	20.00	20.00	0.00
EOC - Hold to TD									
9,900.0	91.10	271.29	9,706.6	7.1	-315.8	315.9	0.00	0.00	0.00
10,000.0	91.10	271.29	9,704.6	9.4	-415.8	415.9	0.00	0.00	0.00
10,100.0	91.10	271.29	9,702.7	11.6	-515.7	515.8	0.00	0.00	0.00
10,200.0	91.10	271.29	9,700.8	13.9	-615.7	615.8	0.00	0.00	0.00
10,300.0	91.10	271.29	9,698.9	16.1	-715.6	715.8	0.00	0.00	0.00
10,400.0	91.10	271.29	9,697.0	18.4	-815.6	815.8	0.00	0.00	0.00
10,500.0	91.10	271.29	9,695.0	20.6	-915.5	915.8	0.00	0.00	0.00
10,600.0	91.10	271.29	9,693.1	22.9	-1,015.5	1,015.7	0.00	0.00	0.00
10,700.0	91.10	271.29	9,691.2	25.1	-1,115.4	1,115.7	0.00	0.00	0.00
10,800.0	91.10	271.29	9,689.3	27.4	-1,215.4	1,215.7	0.00	0.00	0.00
10,900.0	91.10	271.29	9,687.4	29.6	-1,315.4	1,315.7	0.00	0.00	0.00
11,000.0	91.10	271.29	9,685.4	31.9	-1,415.3	1,415.7	0.00	0.00	0.00
11,100.0	91.10	271.29	9,683.5	34.1	-1,515.3	1,515.7	0.00	0.00	0.00
11,200.0	91.10	271.29	9,681.6	36.4	-1,615.2	1,615.6	0.00	0.00	0.00
11,300.0	91.10	271.29	9,679.7	38.6	-1,715.2	1,715.6	0.00	0.00	0.00
11,400.0	91.10	271.29	9,677.8	40.9	-1,815.1	1,815.6	0.00	0.00	0.00
11,500.0	91.10	271.29	9,675.9	43.1	-1,915.1	1,915.6	0.00	0.00	0.00
11,600.0	91.10	271.29	9,673.9	45.4	-2,015.0	2,015.6	0.00	0.00	0.00
11,700.0	91.10	271.29	9,672.0	47.6	-2,115.0	2,115.5	0.00	0.00	0.00
11,800.0	91.10	271.29	9,670.1	49.9	-2,215.0	2,215.5	0.00	0.00	0.00
11,900.0	91.10	271.29	9,668.2	52.1	-2,314.9	2,315.5	0.00	0.00	0.00
12,000.0	91.10	271.29	9,666.3	54.4	-2,414.9	2,415.5	0.00	0.00	0.00
12,100.0	91.10	271.29	9,664.3	56.6	-2,514.8	2,515.5	0.00	0.00	0.00
12,200.0	91.10	271.29	9,662.4	58.9	-2,614.8	2,615.5	0.00	0.00	0.00
12,300.0	91.10	271.29	9,660.5	61.1	-2,714.7	2,715.4	0.00	0.00	0.00
12,400.0	91.10	271.29	9,658.6	63.4	-2,814.7	2,815.4	0.00	0.00	0.00
12,500.0	91.10	271.29	9,656.7	65.6	-2,914.7	2,915.4	0.00	0.00	0.00

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Sarvis 3 Fed Com #2
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 #2	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)	
12,600.0	91.10	271.29	9,654.7	67.9	-3,014.6	3,015.4	0.00	0.00	0.00	
12,700.0	91.10	271.29	9,652.8	70.1	-3,114.6	3,115.4	0.00	0.00	0.00	
12,800.0	91.10	271.29	9,650.9	72.4	-3,214.5	3,215.3	0.00	0.00	0.00	
12,900.0	91.10	271.29	9,649.0	74.6	-3,314.5	3,315.3	0.00	0.00	0.00	
13,000.0	91.10	271.29	9,647.1	76.9	-3,414.4	3,415.3	0.00	0.00	0.00	
13,100.0	91.10	271.29	9,645.1	79.1	-3,514.4	3,515.3	0.00	0.00	0.00	
13,200.0	91.10	271.29	9,643.2	81.4	-3,614.3	3,615.3	0.00	0.00	0.00	
13,300.0	91.10	271.29	9,641.3	83.6	-3,714.3	3,715.2	0.00	0.00	0.00	
13,400.0	91.10	271.29	9,639.4	85.9	-3,814.3	3,815.2	0.00	0.00	0.00	
13,500.0	91.10	271.29	9,637.5	88.1	-3,914.2	3,915.2	0.00	0.00	0.00	
13,600.0	91.10	271.29	9,635.5	90.4	-4,014.2	4,015.2	0.00	0.00	0.00	
13,700.0	91.10	271.29	9,633.6	92.6	-4,114.1	4,115.2	0.00	0.00	0.00	
13,745.4	91.10	271.29	9,632.7	93.7	-4,159.5	4,160.6	0.00	0.00	0.00	
TD at 13745.4 - Sarvis #2										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
Sarvis #2	0.00	0.00	9,632.0	94.0	-4,159.5	390,607.61	555,556.98	32° 4' 25.866 N	104° 17' 14.732 W	
- hit/miss target										
- Shape										
- Point										
- plan misses target center by 0.8usft at 13745.4usft MD (9632.7 TVD, 93.7 N, -4159.5 E)										

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
8,697.0	8,697.0	Wolfcamp		0.00		
9,295.0	9,295.0	Wolfcamp B		0.00		
9,464.2	9,464.0	Wolfcamp C		0.00		
9,568.5	9,562.0	Wolfcamp D		0.00		

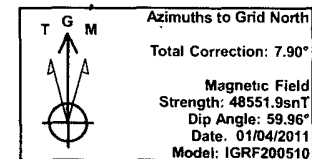
Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates	Comment		
9,420.6	9,420.6	0.0	0.0	KOP 20°/100 DLS @ 271.29° AZI	
9,876.1	9,707.0	6.6	-291.9	EOC - Hold to TD	
13,745.4	9,632.7	93.7	-4,159.5	TD at 13745.4	

CIMAREX

Cimarex Energy Co.
Project: Eddy County (NM83E)
Site: Sec 3 - T26S - R26E
Well: Sarvis 3 Fed Com #2
Wellbore: Wellbore #1

WELL DETAILS: Sarvis 3 Fed Com #2

+N/-S	+E/-W	Northing	Ground Level:	Easting	Latitude	Longitude
0.0	0.0	390513.60	0.0	559716.50	32° 4' 24.916 N	104° 16' 26.387 W
SHL: 1980' FNL / 450' FEL						
BHL: 1880' FNL / 660' FWL						



WELLBORE TARGET DETAILS (LAT/LONG)

Name	TVD	+N/-S	+E/-W	Latitude	Longitude
Sarvis #2	-9632.0	94.0	-4159.5	32° 4' 25.866 N	104° 17' 14.732 W

SECTION DETAILS

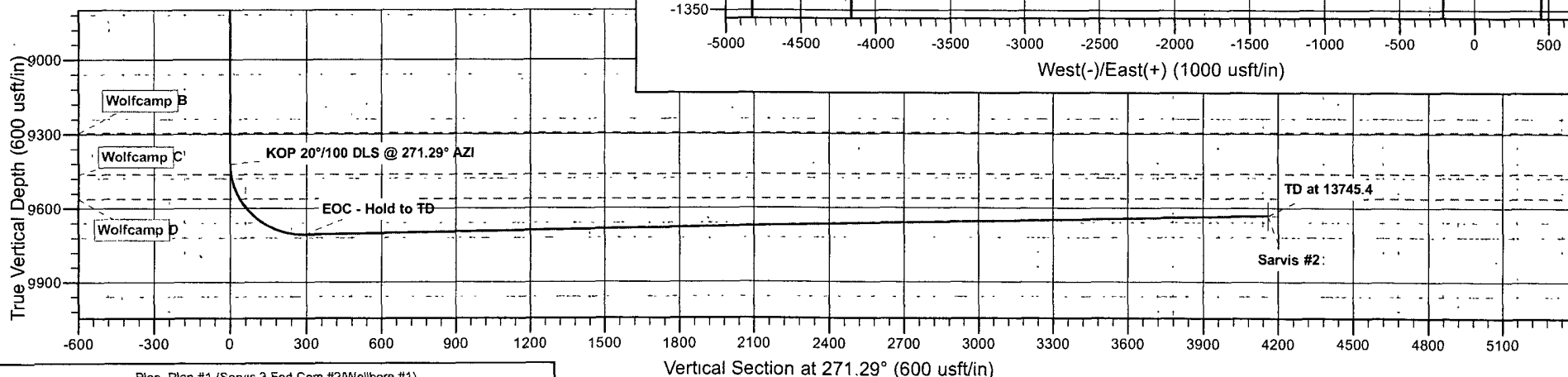
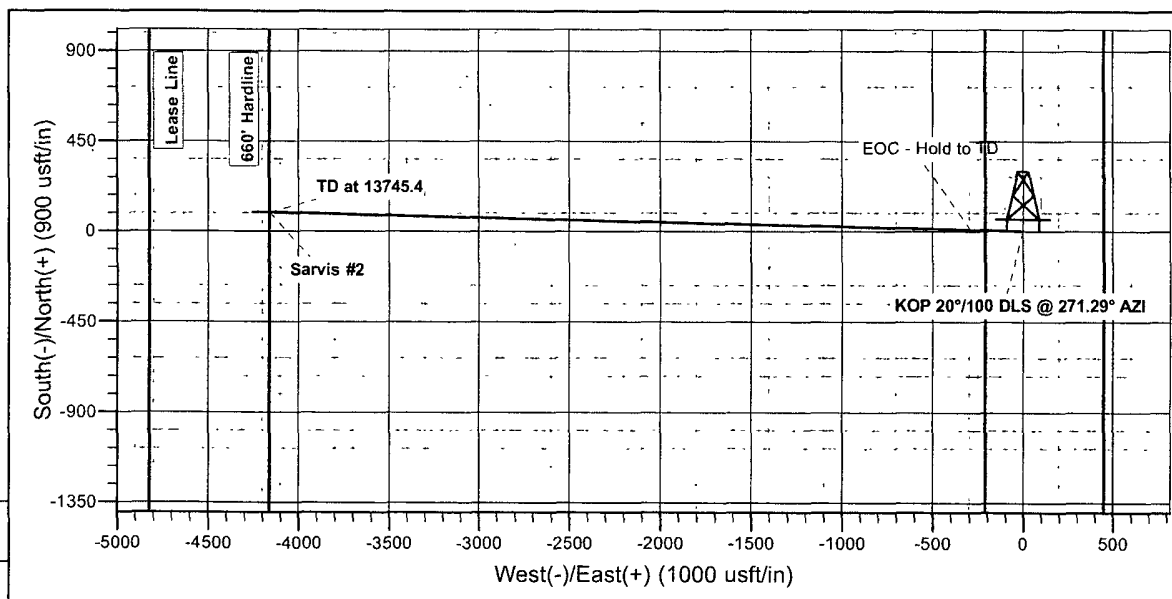
TVD	MD	Inc	Azi	+N/-S	+E/-W	Vsect	Departure	Annotation
9420.6	9420.6	0.00	0.00	0.0	0.0	0.0	0.0	KOP 20°/100 DLS @ 271.29° AZI
9707.0	9876.1	91.10	271.29	6.6	-291.9	292.0	292.0	EOC - Hold to TD
9632.7	13745.4	91.10	271.29	93.7	-4159.5	4160.6	4160.6	TD at 13745.4

FORMATION TOP DETAILS

TVDPATH	MDPATH	Formation	DipAngle	DipDir
8697.0	8697.0	Wolfcamp	0.00	
9295.0	9295.0	Wolfcamp B	0.00	
9464.0	9464.2	Wolfcamp C	0.00	
9562.0	9568.5	Wolfcamp D	0.00	

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
29420.6	0.00	0.00	9420.6	0.0	0.0	0.0	0.00	0.00	0.0	
39876.1	91.10	271.29	9707.0	6.6	-291.9	20.00	271.29	292.0		
43745.4	91.10	271.29	9632.7	93.7	-4159.5	0.00	0.00	4160.6		Sarvis #2



Plan Plan #1 (Sarvis 3 Fed Com #2/Wellbore #1)

Created By: Aaron Pullin

Date: 16:43, January 04 2011

SR & A

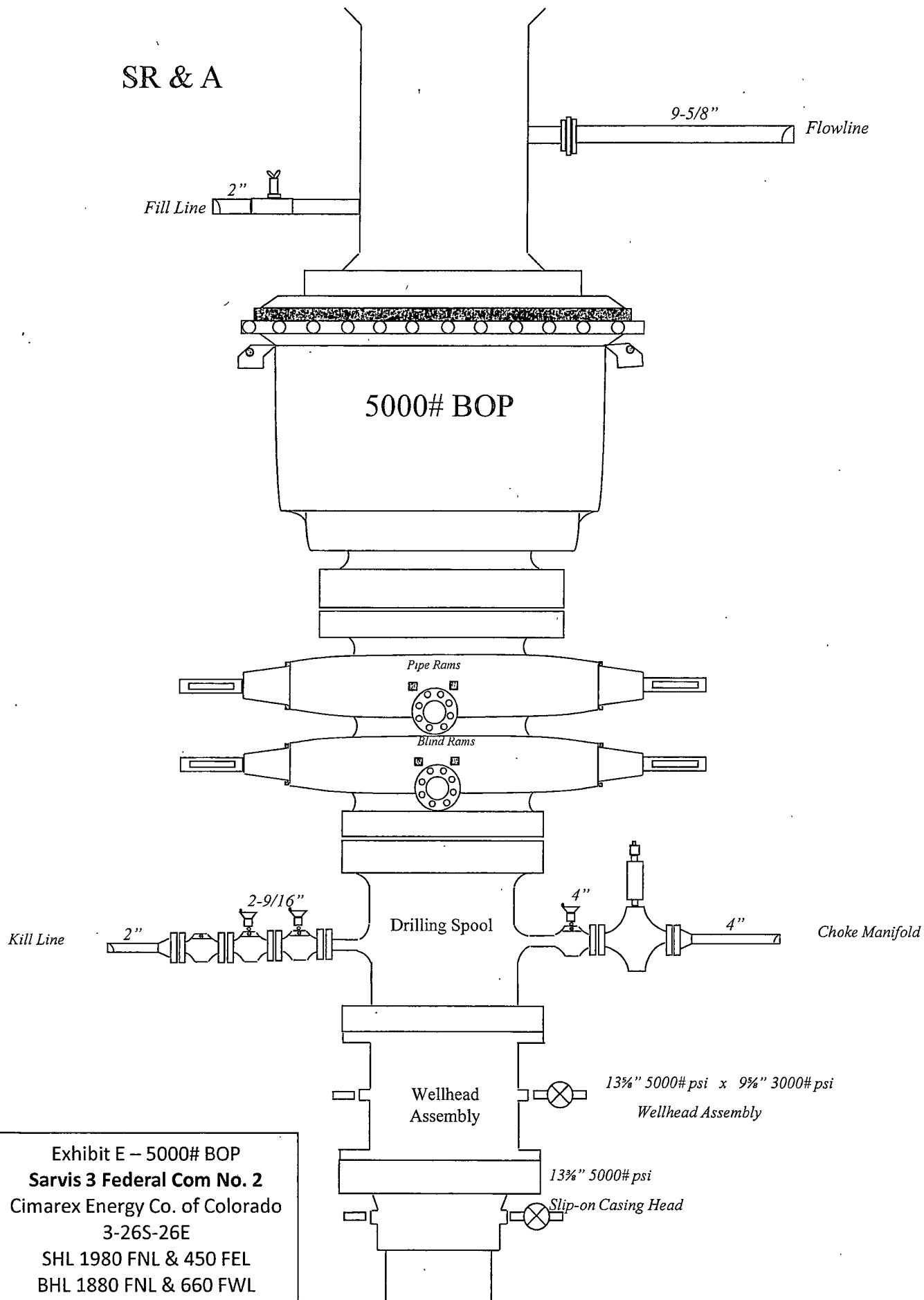


Exhibit E – 5000# BOP
Sarvis 3 Federal Com No. 2
 Cimarex Energy Co. of Colorado
 3-26S-26E
 SHL 1980 FNL & 450 FEL
 BHL 1880 FNL & 660 FWL
 Eddy County, NM

Drilling Operations Choke Manifold 5M Service

Exhibit E-1 – Choke Manifold Diagram

Sarvis 3 Federal Com No. 2

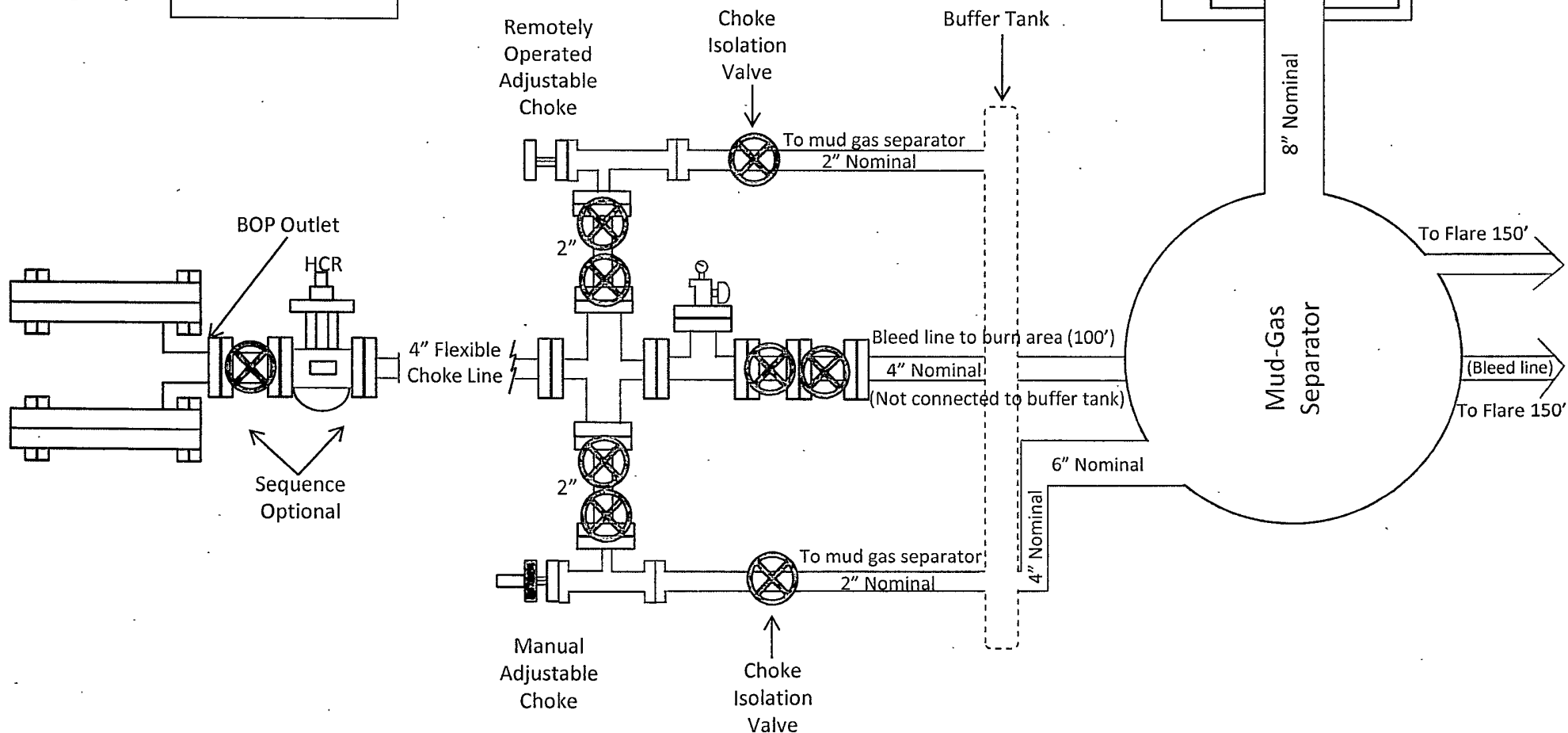
Cimarex Energy Co. of Colorado

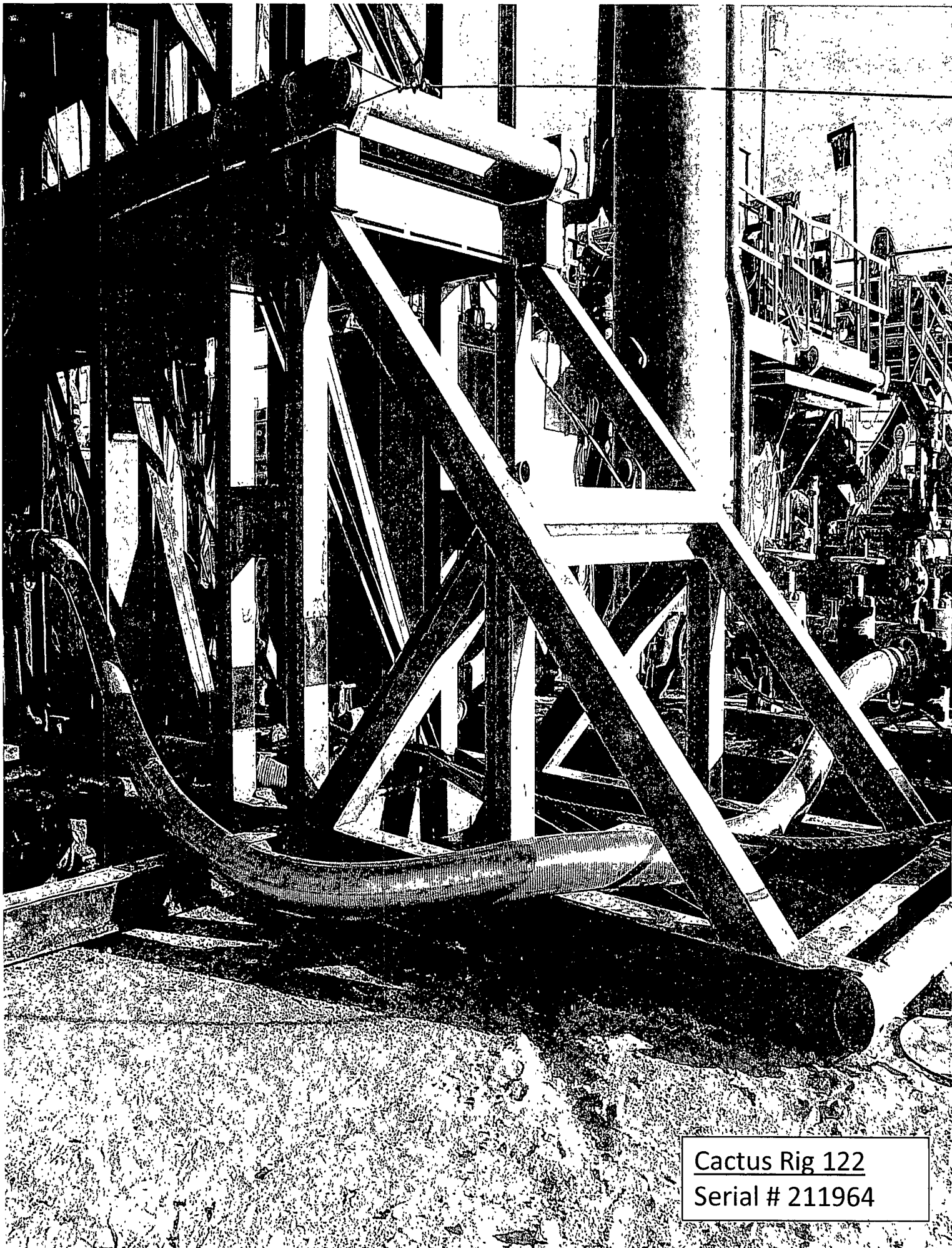
3-26S-26E

SHL 1980 FNL & 450 FEL

BHL 1880 FNL & 660 FWL

Eddy County, NM





Cactus Rig 122
Serial # 211964

M I D W E S T
HOSE AND SPECIALTY INC.

INTERNAL HYDROSTATIC TEST REPORT			
Customer: CACTUS		P.O. Number: Asset#M4812	
HOSE SPECIFICATIONS			
Type: CHOKER 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			
<i>Hose assembly pressure tested with water at ambient temperature.</i>			
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 wrapped 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 components. 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 vermiculite 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, unbolt 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)

DISTRICT I --- CHECKLIST FOR INTENTS TO DRILL

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

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

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

OGRID ☒ BONDING ☒ PROP CODE ☒ WELL # ☒ SIGNATURE _____

2. Inactive Well list as of: 8/26/11 # wells 1216, # Inactive wells 6

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

No Letter required ☒; 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 ☒; Sent Letter to Operator _____, To Santa Fe _____

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

No Letter required ☒; Sent Letter to Operator _____, To Santa Fe _____

C. C102 YES ___, NO ___, Signature _____

1. Pool SAGE DRAW. WC, EAS, Code 96890

a. Dedicated acreage 320, What Units A B C D E F G H

b. SUR. Location Standard ☒ Non-Standard Location _____

c. Well shares acres: Yes ___, No ☒ # of wells _____ plus this well # _____

2. 2nd. Operator in same acreage, Yes ___, No ☒ #1

Agreement Letter _____, Disagreement letter _____

3. Intent to Directional Drill Yes ☒ No _____

a. Dedicated acreage 320, What Units A B C D E F G H

b. Bottomhole Location Standard ☒ Non-Standard Bottomhole _____

4. Downhole Commingle: Yes ___, No ☒

a. Pool #2 _____, Code _____, Acres _____

Pool #3 _____, Code _____, Acres _____

Pool #4 _____, Code _____, Acres _____

5. POTASH Area Yes ___, No ☒

D. Blowout Preventer Yes ☒ No _____

E. H2S Yes ☒ No _____

F. C144 Pit Registration Yes ___, No need

G. Does APD require Santa Fe Approval:

1. Non-Standard Location: Yes ___, No ☒ NSL # _____

2. Non-Standard Proration: Yes ___, No ☒ NSP # _____

3. Simultaneous Dedication: Yes ___, No ☒ SD # _____

Number of wells _____ Plus # _____

4. Injection order Yes ___, No ☒; PMX # _____ or WFX # _____

5. SWD order Yes ___, NO ☒; SWD # _____

6. DHC from SF _____; DHC-HOB _____; Holding _____

7. OCD Approval Date ___/___/___

API #30-015 -- 39538

8. Reviewers _____