

ATS-10-811
EA-11-317

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

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	3b. Phone No. (include area code) 432-571-7800	8. Lease Name and Well No. Oracle 21 Federal No. 3
4. Location of Well (Report location clearly and in accordance with any State requirements. *) At Surface 690 FNL & 820 FWL ✓ ULD At proposed prod. Zone 660 FSL & 660 FWL ✓ ULD Horizontal Wolfcamp Test		9. API Well No. 30-015- 39024 ✓
14. Distance in miles and direction from nearest town or post office*		10. Field and Pool, or Exploratory Sage Draw; Wolfcamp, E
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line if any) 690		11. Sec., T. R. M. or Blk. and Survey or Area 21-25S-26E ✓
16. No of acres in lease 1480		12. County or Parish Eddy
17. Spacing Unit dedicated to this well W2 320 acres		13. State NM
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. N/A		19. Proposed Depth MD 13410, TVD 9490
20. BLM/BIA Bond No. on File NM-2575		21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3405' GR ✓
22. Approximate date work will start* 02.15.11		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:

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

25. Signature <i>Zeno Farris</i>	Name (Printed/Typed) Zeno Farris	Date 12.15.10
Title Manager Operations Administration		
Approved By (Signature) <i>/s/ Don Peterson</i>	Name (Printed/Typed) Don Peterson	Date APR 19 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 APPROVAL**

**APPROVAL SUBJECT TO
GENERAL REQUIREMENTS
AND SPECIAL STIPULATIONS
ATTACHED**

(Handwritten mark)

Application to Drill
Oracle 21 Federal No. 3
Cimarex Energy Co. of Colorado
Unit D, Section 21
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 690 FNL & 820 FWL
 BHL 660 FSL & 660 FWL
2. Elevation above sea level: 3405' 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: MD 13410, TVD 9490
6. Estimated tops of geological markers:

Top Salt	1037'	2nd Bone Spring Ss	6847'
Base Salt	1632'	2nd BS Ss Lower	7579'
Delaware	1842'	3rd Bone Spring Ss	8123'
Cherry Canyon	2796'	Wolfcamp	8486'
Brushy Canyon	3789'	Wolfcamp B	9074'
Bone Spring	5363'	Wolfcamp C	9261'
Bone Spring "A" Shale	5534'	Wolfcamp D	9380'
Bone Spring "C" Shale	5775'	Wolfcamp E	9844'
1st Bone Spring Ss	6292'		
7. Possible mineral bearing formations:

Wolfcamp	Gas
Bone Spring	Gas
Delaware	Oil
8. Proposed drilling Plan

After setting 7" casing at 9150, drill out with a 6½" bit to KOP @ 9224. Drill curve landing @ 9675 to TD @ 13410 MD, 9490 TVD. Run 4½" liner from 9050-TD and cement. Request a 100' tieback for lateral liner in order to set pump as deep as possible.

Application to Drill
Oracle 21 Federal No. 3
 Cimarex Energy Co. of Colorado
 Unit D, Section 21
 T25S-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 1,817'	9.8 - 10.0	28-29	NC	Saturated Brine. Sweep as needed to clean hole.
1,817' to 9,150'	9.0 - 9.0	28-30	NC	Cut brine. Sweep as needed to clean hole.
9,050' to 13,410'	11.7	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 13¾"	48#	STC	H-40
Intermediate	12¾"	0' to 1817'	New 9¾"	40# 48#	LTC	J-55
Production	8¾"	0' to 9150'	New 7"	26#	LTC	P-110
Lateral	6¾"	9050' to 13410'	New 4½"	11.6#	BTC	P-110

11. Cementing Program: *See COA*

Surface Casing	Lead: /100SX CL. (C) +2% S1+2%D46 YIELD 1.97 Tail: 390SX. CL. (C) +1% S1 YIELD 1.34. TOC Surface
Intermediate	Lead: 360SX. (C) 4% D20 + .2% D46 + 1% S1. YIELD 1.96, MIX WATER 10.85, WT. 12.9 Tail: 220SX. (C) + .1% D13. YIELD 1.33, MIX WATER 3.36, WT. 14.8 TOC Surface
Production	Lead: 380 sks 11.8 # Yield 2.55 H2O 15.13 gal/sk + P/H + 5%D44 BWOW + 10% D220 + 1.5% D112 + 0.2% D46 Tail: 715 sks 13# gal Yield 1.4 H2O 7.25 gal/sk + PVL + 1% D44 BWOW + 0.3% D167 + 0.1% D65 + 0.2% D800 TOC Surface
Lateral	470 sx. Versacem H, 14.5 wgt., 1.22 Yield, 5.37 fresh water, .1%HR 601, 1 lbm. Salt TOC 1617 TOL 9050'

According to the State Engineer, depth to groundwater is 30.' Fresh water zones will be protected by setting 9¾" casing at 450' and cementing to surface. Hydrocarbon zones will be protected by setting 9¾" casing at 1817' and 7" at 9150' and 4½" in lateral to 13410 and cementing to 1617.

<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 $\frac{5}{8}$ " 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 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.

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 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 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 21 - T25S - R26E

Oracle 21 Fed #3

Wellbore #1

Plan: Plan #1

Standard Planning Report

17 November, 2010



Great White Directional Services

Planning Report

Database:	EDM 5000.1 Single User Db	Local Co-ordinate Reference:	Well Oracle 21 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 21 - T25S - R26E	North Reference:	Grid
Well:	Oracle 21 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 21 - T25S - R26E		
Site Position:		Northing:	408,062.90 usft
From:	Map	Easting:	551,684.00 usft
Position Uncertainty:	0.0 usft	Slot Radius:	13-3/16 "
		Latitude:	32° 7' 18.622 N
		Longitude:	104° 17' 59.683 W
		Grid Convergence:	0.02 °

Well	Oracle 21 Fed #3		
Well Position	+N/-S	-299.4 usft	Northing:
	+E/-W	-1,071.4 usft	Easting:
Position Uncertainty	0.0 usft	Wellhead Elevation:	
		Latitude:	32° 7' 15.663 N
		Longitude:	104° 18' 12.143 W
		Ground Level:	0.0 usft

Wellbore	Wellbore #1		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF200510	10/06/10	7.98
			Dip Angle
			(°)
			60.00
			Field Strength
			(nT)
			48,601

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
			(°)
			183.84

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	
9,223.6	0.00	0.00	9,223.6	0.0	0.0	0.00	0.00	0.00	0.00	
9,675.0	90.30	183.84	9,510.0	-287.3	-19.3	20.01	20.01	0.00	183.84	
13,410.0	90.30	183.84	9,490.4	-4,013.9	-269.4	0.00	0.00	0.00	0.00	Oracle #3



Great White Directional Services

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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 21 - T25S - R26E	North Reference:	Grid
Well:	Oracle 21 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 (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
9,223.6	0.00	0.00	9,223.6	0.0	0.0	0.0	0.00	0.00	0.00	
KOP 20°/100 DLS @ 183.84° AZI										
9,225.0	0.28	183.84	9,225.0	0.0	0.0	0.0	20.01	20.01	0.00	
9,250.0	5.28	183.84	9,250.0	-1.2	-0.1	1.2	20.01	20.01	0.00	
9,261.1	7.50	183.84	9,261.0	-2.4	-0.2	2.5	20.01	20.01	0.00	
Wolfcamp C										
9,275.0	10.28	183.84	9,274.7	-4.6	-0.3	4.6	20.01	20.01	0.00	
9,300.0	15.28	183.84	9,299.1	-10.1	-0.7	10.1	20.01	20.01	0.00	
9,325.0	20.29	183.84	9,322.9	-17.7	-1.2	17.8	20.01	20.01	0.00	
9,350.0	25.29	183.84	9,345.9	-27.4	-1.8	27.4	20.01	20.01	0.00	
9,375.0	30.29	183.84	9,368.0	-39.0	-2.6	39.1	20.01	20.01	0.00	
9,389.0	33.10	183.84	9,380.0	-46.4	-3.1	46.5	20.01	20.01	0.00	
Wolfcamp D										
9,400.0	35.29	183.84	9,389.1	-52.5	-3.5	52.6	20.01	20.01	0.00	
9,425.0	40.29	183.84	9,408.8	-67.8	-4.6	67.9	20.01	20.01	0.00	
9,450.0	45.29	183.84	9,427.1	-84.7	-5.7	84.9	20.01	20.01	0.00	
9,475.0	50.29	183.84	9,443.9	-103.2	-6.9	103.4	20.01	20.01	0.00	
9,500.0	55.29	183.84	9,459.0	-123.1	-8.3	123.3	20.01	20.01	0.00	
9,525.0	60.30	183.84	9,472.4	-144.2	-9.7	144.5	20.01	20.01	0.00	
9,550.0	65.30	183.84	9,483.8	-166.3	-11.2	166.7	20.01	20.01	0.00	
9,575.0	70.30	183.84	9,493.2	-189.4	-12.7	189.9	20.01	20.01	0.00	
9,600.0	75.30	183.84	9,500.6	-213.2	-14.3	213.7	20.01	20.01	0.00	
9,625.0	80.30	183.84	9,505.9	-237.6	-15.9	238.2	20.01	20.01	0.00	
9,650.0	85.30	183.84	9,509.0	-262.4	-17.6	262.9	20.01	20.01	0.00	
9,675.0	90.30	183.84	9,510.0	-287.3	-19.3	287.9	20.01	20.01	0.00	
EOC - Hold to TD										
9,700.0	90.30	183.84	9,509.9	-312.2	-21.0	312.9	0.00	0.00	0.00	
9,800.0	90.30	183.84	9,509.3	-412.0	-27.7	412.9	0.00	0.00	0.00	
9,900.0	90.30	183.84	9,508.8	-511.8	-34.4	512.9	0.00	0.00	0.00	
10,000.0	90.30	183.84	9,508.3	-611.5	-41.0	612.9	0.00	0.00	0.00	
10,100.0	90.30	183.84	9,507.8	-711.3	-47.7	712.9	0.00	0.00	0.00	
10,200.0	90.30	183.84	9,507.3	-811.1	-54.4	812.9	0.00	0.00	0.00	
10,300.0	90.30	183.84	9,506.7	-910.9	-61.1	912.9	0.00	0.00	0.00	
10,400.0	90.30	183.84	9,506.2	-1,010.6	-67.8	1,012.9	0.00	0.00	0.00	
10,500.0	90.30	183.84	9,505.7	-1,110.4	-74.5	1,112.9	0.00	0.00	0.00	
10,600.0	90.30	183.84	9,505.2	-1,210.2	-81.2	1,212.9	0.00	0.00	0.00	
10,700.0	90.30	183.84	9,504.6	-1,310.0	-87.9	1,312.9	0.00	0.00	0.00	
10,800.0	90.30	183.84	9,504.1	-1,409.7	-94.6	1,412.9	0.00	0.00	0.00	
10,900.0	90.30	183.84	9,503.6	-1,509.5	-101.3	1,512.9	0.00	0.00	0.00	
11,000.0	90.30	183.84	9,503.1	-1,609.3	-108.0	1,612.9	0.00	0.00	0.00	
11,100.0	90.30	183.84	9,502.5	-1,709.1	-114.7	1,712.9	0.00	0.00	0.00	
11,200.0	90.30	183.84	9,502.0	-1,808.8	-121.4	1,812.9	0.00	0.00	0.00	
11,300.0	90.30	183.84	9,501.5	-1,908.6	-128.1	1,912.9	0.00	0.00	0.00	
11,400.0	90.30	183.84	9,501.0	-2,008.4	-134.8	2,012.9	0.00	0.00	0.00	
11,500.0	90.30	183.84	9,500.4	-2,108.2	-141.5	2,112.9	0.00	0.00	0.00	
11,600.0	90.30	183.84	9,499.9	-2,207.9	-148.2	2,212.9	0.00	0.00	0.00	
11,700.0	90.30	183.84	9,499.4	-2,307.7	-154.9	2,312.9	0.00	0.00	0.00	
11,800.0	90.30	183.84	9,498.9	-2,407.5	-161.6	2,412.9	0.00	0.00	0.00	
11,900.0	90.30	183.84	9,498.3	-2,507.2	-168.3	2,512.9	0.00	0.00	0.00	
12,000.0	90.30	183.84	9,497.8	-2,607.0	-175.0	2,612.9	0.00	0.00	0.00	
12,100.0	90.30	183.84	9,497.3	-2,706.8	-181.7	2,712.9	0.00	0.00	0.00	
12,200.0	90.30	183.84	9,496.8	-2,806.6	-188.4	2,812.9	0.00	0.00	0.00	
12,300.0	90.30	183.84	9,496.3	-2,906.3	-195.1	2,912.9	0.00	0.00	0.00	
12,400.0	90.30	183.84	9,495.7	-3,006.1	-201.8	3,012.9	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 21 - T25S - R26E	North Reference:	Grid
Well:	Oracle 21 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 (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,500.0	90.30	183.84	9,495.2	-3,105.9	-208.5	3,112.9	0.00	0.00	0.00
12,600.0	90.30	183.84	9,494.7	-3,205.7	-215.2	3,212.9	0.00	0.00	0.00
12,700.0	90.30	183.84	9,494.2	-3,305.4	-221.9	3,312.9	0.00	0.00	0.00
12,800.0	90.30	183.84	9,493.6	-3,405.2	-228.6	3,412.9	0.00	0.00	0.00
12,900.0	90.30	183.84	9,493.1	-3,505.0	-235.3	3,512.9	0.00	0.00	0.00
13,000.0	90.30	183.84	9,492.6	-3,604.8	-242.0	3,612.9	0.00	0.00	0.00
13,100.0	90.30	183.84	9,492.1	-3,704.5	-248.7	3,712.9	0.00	0.00	0.00
13,200.0	90.30	183.84	9,491.5	-3,804.3	-255.3	3,812.9	0.00	0.00	0.00
13,300.0	90.30	183.84	9,491.0	-3,904.1	-262.0	3,912.9	0.00	0.00	0.00
13,400.0	90.30	183.84	9,490.5	-4,003.9	-268.7	4,012.9	0.00	0.00	0.00
13,410.0	90.30	183.84	9,490.4	-4,013.9	-269.4	4,022.9	0.00	0.00	0.00
TD at 13410.0 - Oracle #3									

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									
Oracle #3	0.00	0.00	9,490.0	-4,013.9	-269.2	403,749.61	550,343.35	32° 6' 35.941 N	104° 18' 15.287 W
- plan misses target center by 0.5usft at 13410.0usft MD (9490.4 TVD, -4013.9 N, -269.4 E)									
- Point									

Formations						
Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)	
8,486.0	8,486.0	Wolfcamp		0.00		
9,074.0	9,074.0	Wolfcamp B		0.00		
9,261.1	9,261.0	Wolfcamp C		0.00		
9,389.0	9,380.0	Wolfcamp D		0.00		

Plan Annotations					
Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates		Comment	
		+N/-S (usft)	+E/-W (usft)		
9,223.6	9,223.6	0.0	0.0	KOP 20°/100 DLS @ 183.84° AZI	
9,675.0	9,510.0	-287.3	-19.3	EOC - Hold to TD	
13,410.0	9,490.4	-4,013.9	-269.4	TD at 13410.0	



Project: Eddy County (NM83E)
Site: Sec 21 - T25S - R26E
Well: Oracle 21 Fed #3
Wellbore: Wellbore #1
Design: Plan #1

WELL DETAILS: Oracle 21 Fed #3

+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
0.0	0.0	407763.50	550612.60	32° 7' 15.663 N	104° 18' 12.143 W
SHL: 660' FNL / 910' FWL					
BHL: 660' FSL / 660' FWL					



Azimuths to Grid North

Total Correction: 7.97°

Magnetic Field
Strength: 48600.6mT
Dip Angle: 60.00°
Date: 10/06/2010
Model: IGRF200510

WELLBORE TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting
Oracle #3	9490.0	-4013.9	-269.2	403749.61	550343.35

PLAN DETAILS

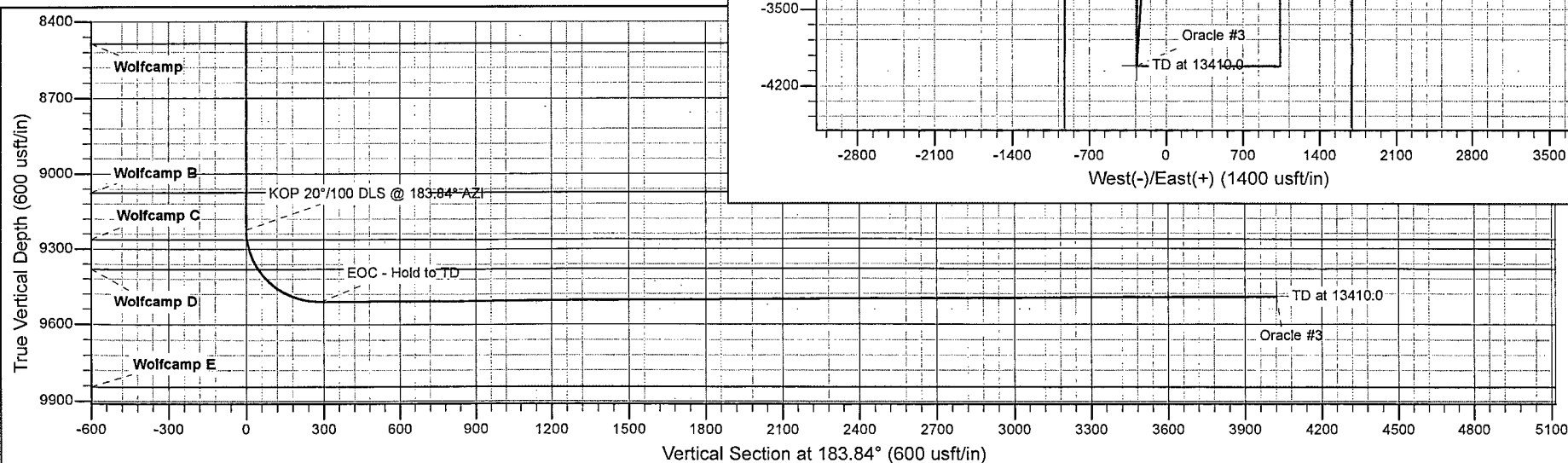
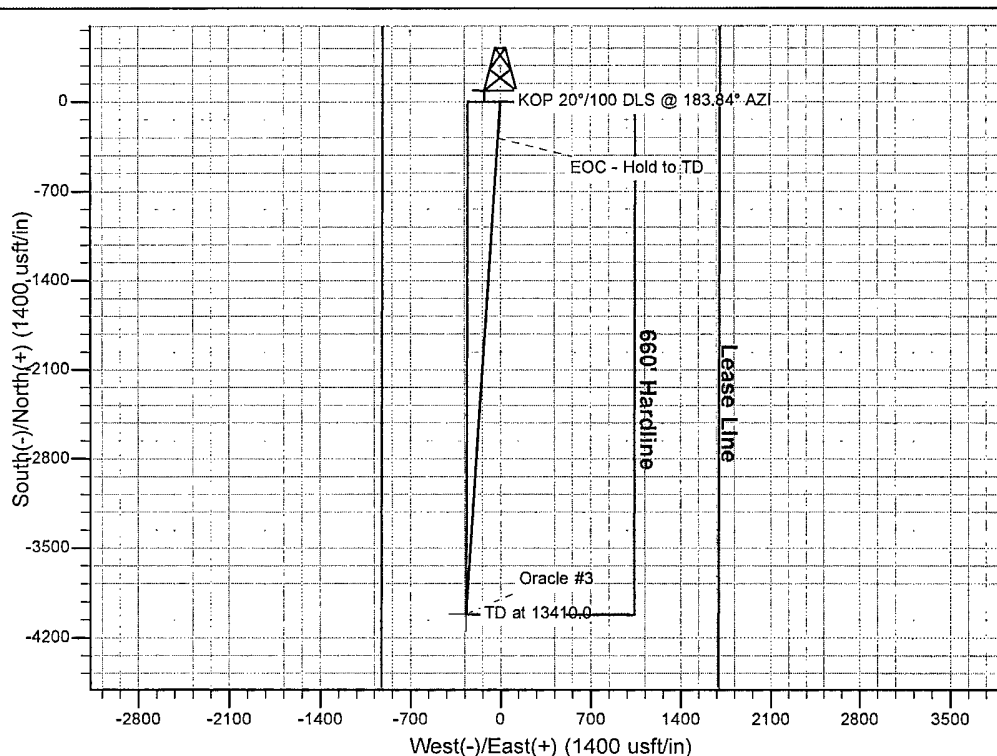
MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	Vsect	Target
0.00	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
9223.6	0.00	0.00	9223.6	0.0	0.0	0.00	0.00	0.0	
9675.0	90.30	183.84	9510.0	-287.3	-19.320	0.1183.84	287.9		
13410.0	90.30	183.84	9490.4	-4013.9	-269.4	0.00	4022.9		Oracle #3

ANNOTATIONS

TVD	MD	Inc	Azi	+N/-S	+E/-W	VSD	Departure	Annotation
9223.6	9223.6	0.00	0.00	0.0	0.0	0.0	0.0	KOP 20°/100 DLS @ 183.84° AZ
9510.0	9675.0	90.30	183.84	-287.3	-19.3	287.9	287.9	EOC - Hold to TD
9490.4	13410.0	90.30	183.84	-4013.9	-269.4	4022.9	4022.9	TD at 13410.0

FORMATION TOP DETAILS

TVD	Path	MD	Path	Formation	Dip	Angle
8486.0	8486.0	8486.0	8486.0	Wolfcamp	0.00	
9074.0	9074.0	9074.0	9074.0	Wolfcamp B	0.00	
9261.0	9261.0	9261.0	9261.0	Wolfcamp C	0.00	
9380.0	9380.0	9380.0	9380.0	Wolfcamp D	0.00	



SR & A

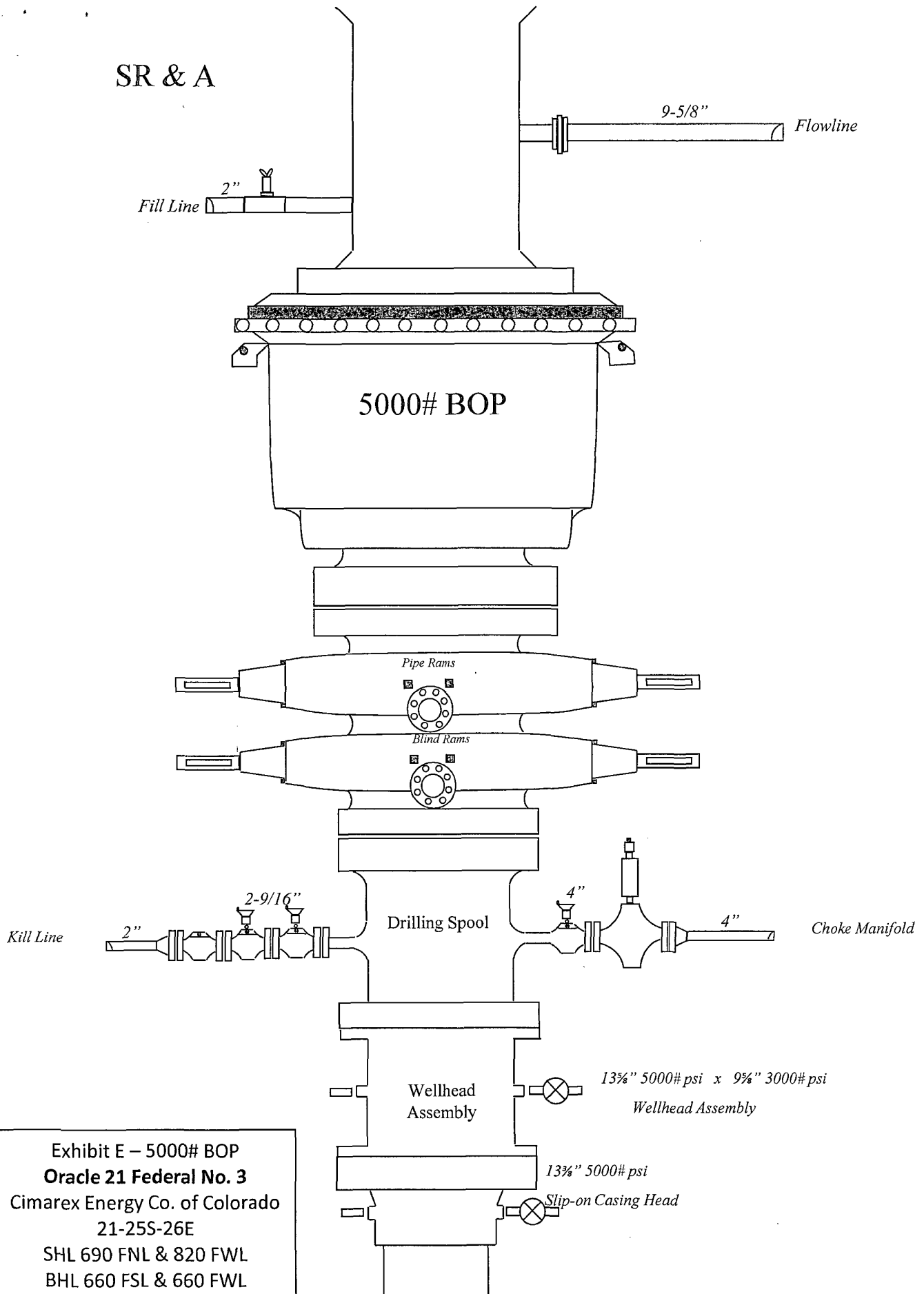
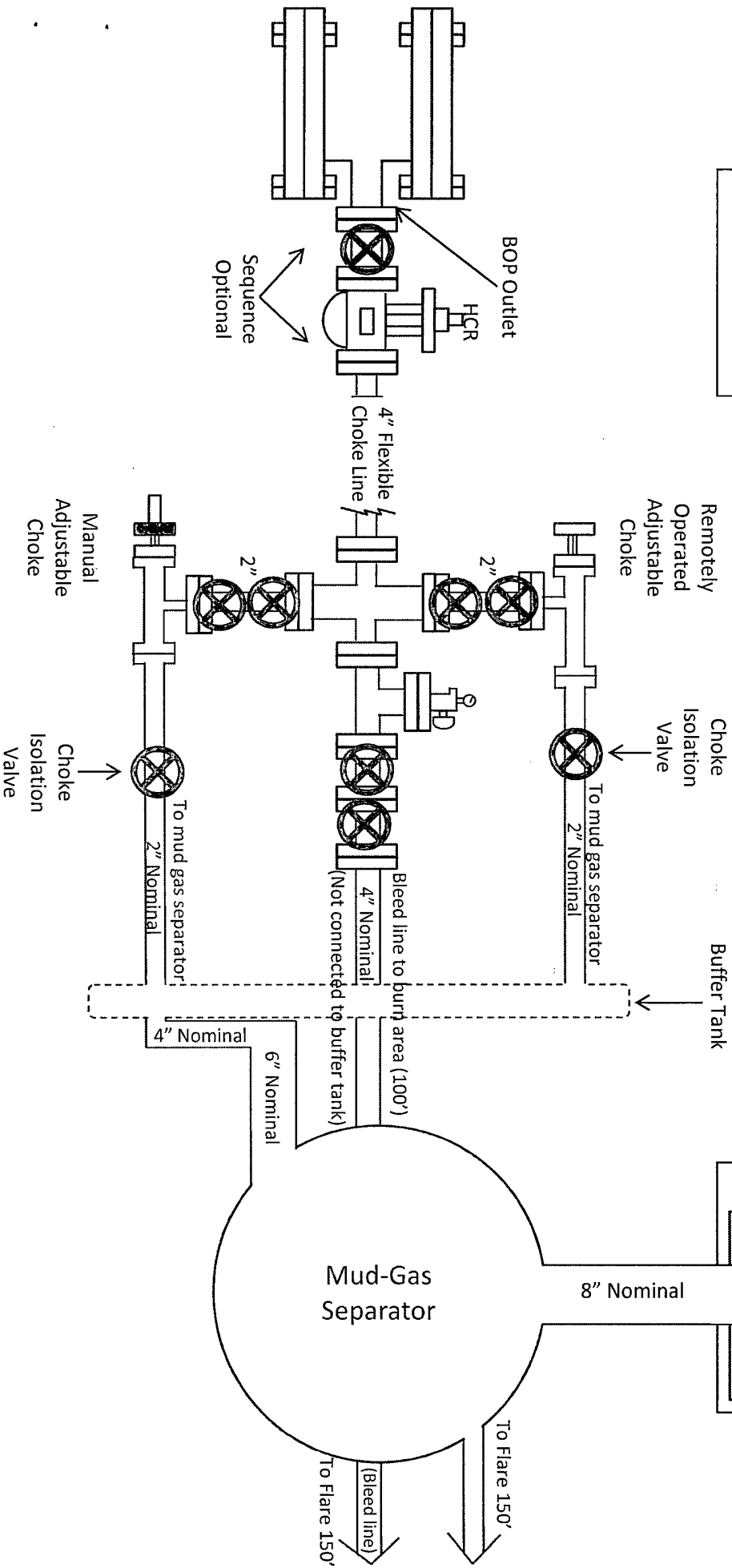
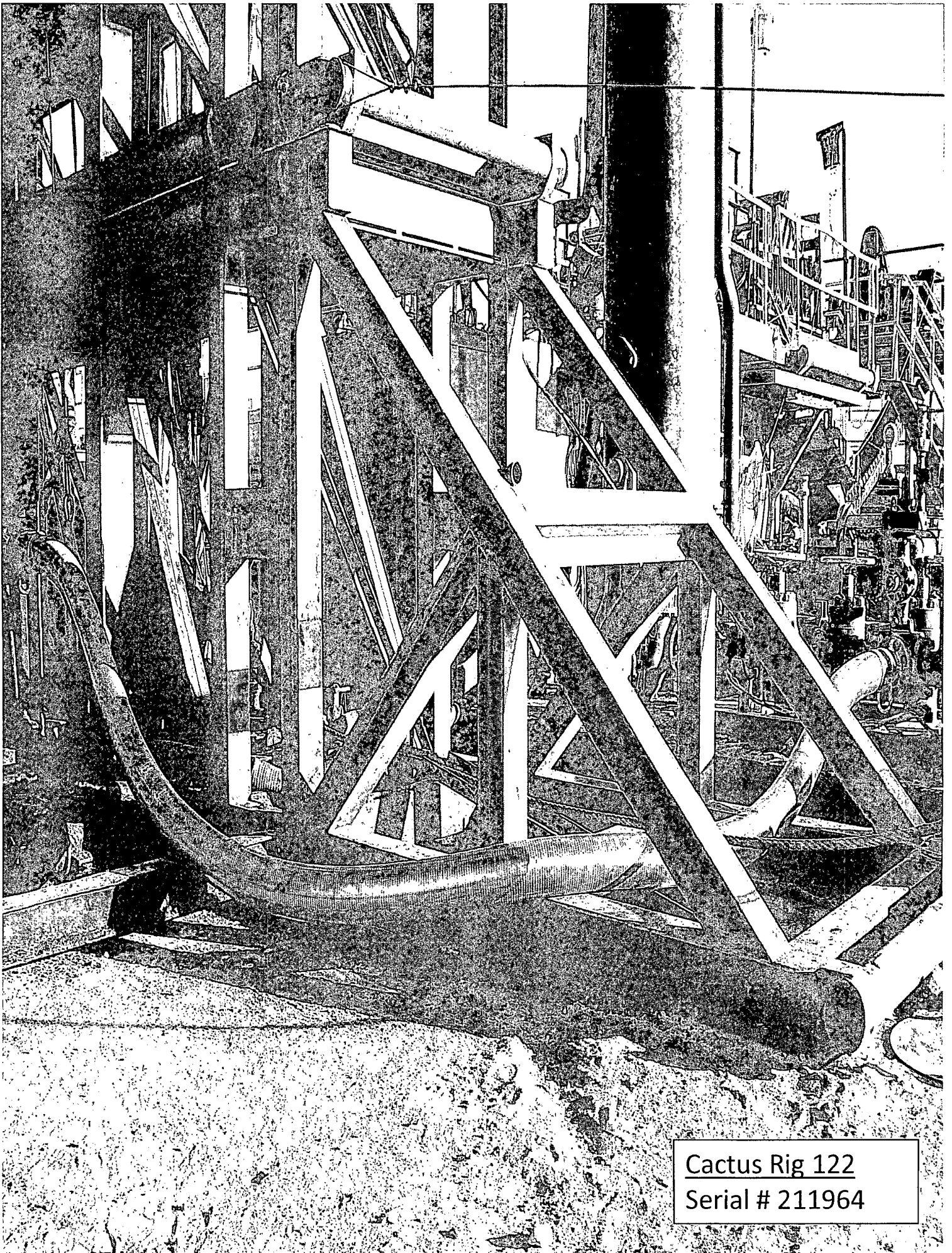


Exhibit E – 5000# BOP
Oracle 21 Federal No. 3
Cimarex Energy Co. of Colorado
21-25S-26E
SHL 690 FNL & 820 FWL
BHL 660 FSL & 660 FWL
Eddy County, NM

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

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	TEST PRESSURE		BURST PRESSURE
10,000 PSI	15,000 PSI		PSI
COUPLINGS			
Type of End Fitting 4 1/16 10K FLANGE			
Type of Coupling: SWEDGED		MANUFACTURED BY MIDWEST HOSE & SPECIALTY	
PROCEDURE			
<i><u>Hose assembly pressure tested with water at ambient temperature.</u></i>			
TIME HELD AT TEST PRESSURE		ACTUAL BURST PRESSURE:	
15 MIN.		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)