

DISTRICT I
1625 N. French Dr., Hobbs, NM 88240

DISTRICT II
1301 W. Grand Avenue, Artesia, NM 88210

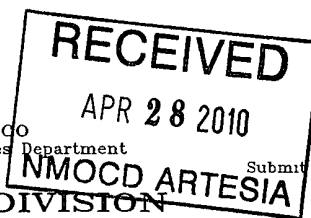
DISTRICT III
1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, New Mexico 87505



Form C-102
Revised October 15, 2009

Submit one copy to appropriate
District Office

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number 30-015-37804	Pool Code 96403	Pool Name Wildcat; Bone Spring
Property Code 38145	Property Name HAYHURST "23" STATE COM	Well Number 1H
OGRID No. 147179	Operator Name CHESAPEAKE OPERATING CO.	Elevation 3065'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
O	3	25 S	27 E		100	SOUTH	2270	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	23	25 S	27 E		330	NORTH	2270	EAST	EDDY

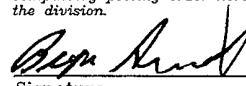
Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160			

NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

	PROPOSED BOTTOM HOLE LOCATION Lat - N 32.12180343° Long - W 104.1597335° NMSPCE- N 408086.174 E 595081.968 (NAD-83)
	Penetration Point & SURFACE LOCATION Lat - N 32.10840796° Long - W 104.1597220° NMSPCE- N 403213.273 E 595093.376 (NAD-83)

OPERATOR CERTIFICATION

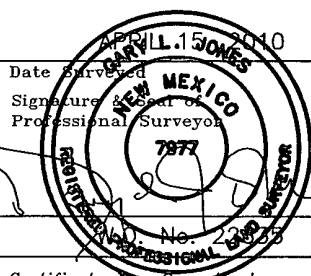
I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

 4/27/2010
Signature Date

Bryan Arrant
Printed Name

SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

APR 15 2010
Date Surveyed
Signature & Seal of Professional Surveyor

Certificate No. Gary L. Jones 7977

BASIN SURVEYS

DS



RIG 120 SPECIFICATIONS



HOISTING & ROTATING EQUIPMENT

Drawworks	Oilwell 760 rated @ 1000 hp driven by (2) Caterpillar D379 rated @ 550 hp / 1200 rpm
Auxiliary Brake	Parmac 342 hydromatic
Rotary Table	National C-275 (27-1/2") chain-driven by drawworks
Traveling Block	Continental Emsco RA-44 (350 ton)
Hook	Web Wilson Hydra Hook (350 ton), unitized with traveling block
Swivel	Oilwell PC-300 (300 ton)
Pipe-Handling	Varco ST-80 "Iron Roughneck" powered by Aberdeen Dynamics 18114-2 hydraulic power unit rated @ 60 hp

MAST & SUBSTRUCTURE

Mast Design	Veristic Technologies Cantilever
Height	142'
Capacity	573k Static Hook Load (10 lines)
Substructure Design	Veristic Technologies Box-on-Box
Floor Height	23'
Clear Height	19'
Capacities	573k Casing / 370k Setback

TRANSPORT

Estimated Loads	30 (less tubulars)
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POWER PACKAGE

Drawworks	(2) Cat D379 rated @ 550 hp
Mud Pumps	(2) Cat 3508B rated @ 900 hp
Light Plant	(2) Cat C-18 rated @ 630 hp
Generators	(2) Marathon rated @ 425 kW / 607 kVA / 0.7 pf

BOP EQUIPMENT

Annular	Shaffer 13-5/8" 5M Spherical
Single Ram	None
Double Ram	Shaffer 13-5/8" 5M SL
Accumulator	Koomey 6-station / 200 gallon
Choke Manifold	Cameron 4-1/16" 5M

STORAGE CAPACITIES

Drilling Water	400 bbl
Diesel	11,250 gallons

MUD SYSTEM

Mud Pumps	(2) Oilwell A-1100-PT triplex rated @ 1100 hp, each driven by (1) Caterpillar 3508B rated @ 900 hp
Charging Pumps	(2) 6x5x14 @ 60 hp / 1200 rpm
Process Pit	(424 bbl) three-compartment w/ (2) 10 hp mud agitators
Suction Pit	(473 bbl) three-compartment w/ (4) 10 hp mud agitators
Trip Tank	(128 bbl) one-compartment w/ (1) 10 hp mud agitator
Trip Tank Pump	4x3x13 @ 30 hp / 1200 rpm
Shale Shakers	(2) Derrick FLC-503 linear-motion
Degasser	Double Life DAD-DP atmospheric
Desander	NOV 2-cone / 10"
Desander Pump	6x5x14 @ 75 hp / 1200 rpm
Desilter	NOV 16-cone / 4"
Desilter Pump	6x5x14 @ 75 hp / 1200 rpm
Mud Mixing Pumps	(2) 6x5x14 @ 75 hp / 1200 rpm

TUBULARS

Drill Pipe	5" 19.50# G-105
	5" 19.50# S-135
	5" HWDP

Drill Collars	As needed for normal drilling operations
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Permian District

NM -Eddy [Non-PLU Avalon Project]
Hayhurst 23 State Com 1H (Geoprog)
Hayhurst 23 State Com 1H (Geoprog)
Hayhurst 23 State Com 1H (Geoprog)

Plan: Hayhurst 23 State Com 1H (Geoprog)

Standard Planning Report

27 April, 2010

Accepted for record
NMOCD *DD*

Chesapeake Operating

Planning Report

Database:	Drilling Database	Local Co-ordinate Reference:	Site Hayhurst 23 State Com 1H (Geoprog)
Company:	Permian District	TVD Reference:	WELL @ 3080 0ft (Original Well Elev)
Project:	NM -Eddy [Non-PLU Avalon Project]	MD Reference:	WELL @ 3080 0ft (Original Well Elev)
Site:	Hayhurst 23 State Com 1H (Geoprog)	North Reference:	Grid
Well:	Hayhurst 23 State Com 1H (Geoprog)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hayhurst 23 State Com 1H (Geoprog)		
Design:	Hayhurst 23 State Com 1H (Geoprog)		

Project	NM -Eddy [Non-PLU Avalon Project]		
Map System:	US State Plane 1927 (Exact solution)	System Datum:	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Site	Hayhurst 23 State Com 1H (Geoprog)		
Site Position:		Northing:	403,159.48 ft
From:	Lat/Long	Easting:	553,847.73 ft
Position Uncertainty:	0.0 ft	Slot Radius:	0.000 in
		Latitude:	32° 6' 29.80800000 N
		Longitude:	104° 9' 33.93720000 W
		Grid Convergence:	0.09 °

Well	Hayhurst 23 State Com 1H (Geoprog)		
Well Position	+N/-S	0.0 ft	Northing: 403,159.48 ft
	+E/-W	0.0 ft	Easting: 553,847.73 ft
Position Uncertainty	0.0 ft	Wellhead Elevation:	3,060.0 ft
		Latitude:	32° 6' 29.80800000 N
		Longitude:	104° 9' 33.93720000 W
		Ground Level:	3,060.0 ft

Wellbore	Hayhurst 23 State Com 1H (Geoprog)		
Magnetics	Model Name	Sample Date	Declination
			(°)
	IGRF200510	4/27/2010	7.97
			Dip Angle
			(°)
			60.02
			Field Strength
			(nT)
			48,629

Design	Hayhurst 23 State Com 1H (Geoprog)		
Audit Notes:			
Version:	Phase:	PROTOTYPE	Tie On Depth: 0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W
	(ft)	(ft)	(ft)
	0.0	0.0	0.0
			Direction
			(°)
			0.44

Plan Sections										
Measured Depth	Inclination	Azimuth	Vertical Depth	+N/-S	+E/-W	Dogleg Rate	Build Rate	Turn Rate	TFO	Target
(ft)	(°)	(°)	(ft)	(ft)	(ft)	(°/100ft)	(°/100ft)	(°/100ft)	(°)	
0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.00	0.00	
5,869.4	0.00	0.00	5,869.4	0.0	0.0	0.00	0.00	0.00	0.00	
6,513.7	90.20	0.44	6,278.6	410.7	3.1	14.00	14.00	0.00	0.44	
10,992.2	90.20	0.44	6,263.0	4,889.1	37.3	0.00	0.00	0.00	0.00	Hayhurst 23 State Co

Chesapeake Operating

Planning Report

Database:	Drilling Database	Local Co-ordinate Reference:	Site Hayhurst 23 State Com 1H (Geoprog)
Company:	Permian District	TVD Reference:	WELL @ 3080.0ft (Original Well Elev)
Project:	NM -Eddy [Non-PLU Avalon Project]	MD Reference:	WELL @ 3080.0ft (Original Well Elev)
Site:	Hayhurst 23 State Com 1H (Geoprog)	North Reference:	Grid
Well:	Hayhurst 23 State Com 1H (Geoprog)	Survey Calculation Method:	Minimum Curvature
Wellbore:	Hayhurst 23 State Com 1H (Geoprog)		
Design:	Hayhurst 23 State Com 1H (Geoprog)		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.0	0.00	0.00	0.0	0.0	0.0	0.0	0.00	0.00	0.00
1,000.0	0.00	0.00	1,000.0	0.0	0.0	0.0	0.00	0.00	0.00
2,000.0	0.00	0.00	2,000.0	0.0	0.0	0.0	0.00	0.00	0.00
3,000.0	0.00	0.00	3,000.0	0.0	0.0	0.0	0.00	0.00	0.00
4,000.0	0.00	0.00	4,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,000.0	0.00	0.00	5,000.0	0.0	0.0	0.0	0.00	0.00	0.00
5,869.4	0.00	0.00	5,869.4	0.0	0.0	0.0	0.00	0.00	0.00
6,000.0	18.29	0.44	5,997.8	20.7	0.2	20.7	14.00	14.00	0.00
6,513.7	90.20	0.44	6,278.6	410.7	3.1	410.7	14.00	14.00	0.00
7,000.0	90.20	0.44	6,276.9	897.0	6.8	897.0	0.00	0.00	0.00
8,000.0	90.20	0.44	6,273.4	1,897.0	14.5	1,897.0	0.00	0.00	0.00
9,000.0	90.20	0.44	6,270.0	2,896.9	22.1	2,897.0	0.00	0.00	0.00
10,000.0	90.20	0.44	6,266.5	3,896.9	29.7	3,897.0	0.00	0.00	0.00
10,992.2	90.20	0.44	6,263.0	4,889.1	37.3	4,889.2	0.00	0.00	0.00

Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
- hit/miss target									
- Shape									
Hayhurst 23 State Com	0.00	0.00	6,280.0	0.0	0.0	403,159.48	553,847.73	32° 6' 29.80800000 N	04° 9' 33.93720000 W
- plan misses target center by 175.0ft at 6158.3ft MD (6134.9 TVD, 97.8 N, 0.7 E)									
- Point									
Hayhurst 23 State Com	0.00	0.00	6,263.0	4,889.1	37.3	408,048.55	553,885.04	32° 7' 18.19200000 N	04° 9' 33.41160000 W
- plan hits target center									
- Point									

**Chesapeake Operating, Inc.'s Closed Loop System
Hayhurst 23 State # 1H
Unit O, Sec. 23, T-25-S R-27-E
Eddy Co., NM
API # TBD**

Equipment & Design:

Chesapeake Operating, Inc. is to use a closed loop system with roll-off steel pits.

(2) Derrick FLC-503 linear motion shale shakers

(1) NOV 2-cone/10" desander

(1) NOV 16-cone/4" desilter

(1) 400 bbl "frac tank" for fresh water

(1) 500 bbl "frac tank" brine water

For additional information, please see attached page.

Operations & Maintenance:

During each and every tour, the rig's drilling crew will inspect and monitor closely the drilling fluids contained within the steel pits and visually monitor any spill which may occur.

Within 48 hours should a spill, release or leak occur, the NMOCD District II office in Artesia (575-748-1283) will be notified. Please note that notifications may be made earlier to the district office should a greater release occur.

Closure:

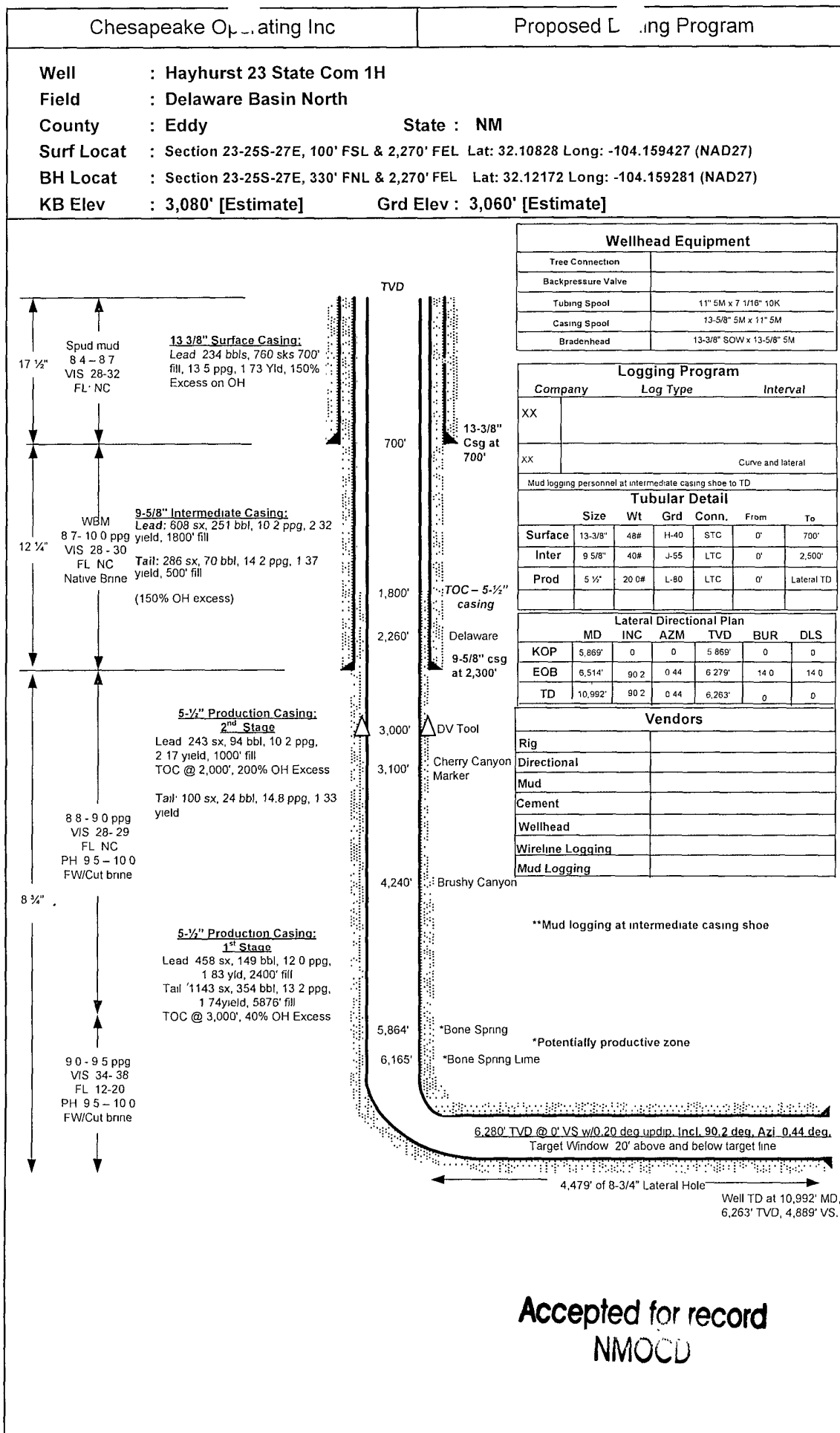
During and after drilling operations, liquids (which apply), all drill cuttings and drilling fluids will be hauled and disposed to the Controlled Recovery, Inc.'s location.

The permit number for Controlled Recovery, Inc. is: NM-01-0006

The alternative disposal facility will be Sundance Disposal.

Their permit # is: NM-01-0003.

**Accepted for record
NMOCD**



Accepted for record
NMOCD

BLOWOUT PREVENTOR SCHEMATIC

CHESAPEAKE OPERATING INC

WELL : Hayhurst 23 State Com 1H

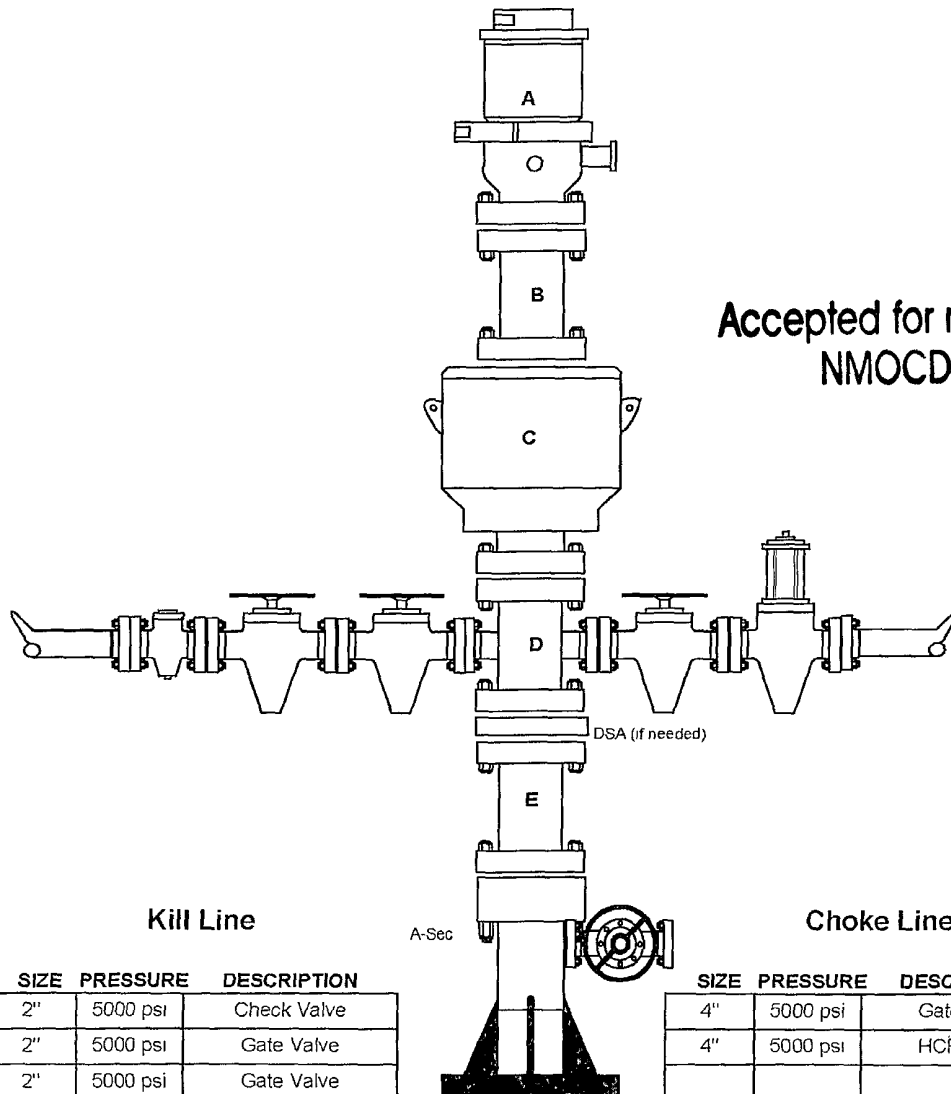
RIG : Cactus 120

COUNTY : Eddy

STATE: New Mexico

OPERATION: Drill out below 13-3/8" Casing (12-1/4" hole size)

	SIZE	PRESSURE	DESCRIPTION
A	13-5/8"	500 psi	Rot Head
B	13-5/8"	5000 psi	Spacer Spool
C	13-5/8"	5000 psi	Annular
D	13-5/8"	5000 psi	Mud Cross
E	13-5/8"	5000 psi	Spacer Spool
DSA	13-5/8" 5M x 13-5/8" 5M	(if needed)	
A-Sec	13-3/8" SOW x 13-5/8" 5M		



SIZE	PRESSURE	DESCRIPTION
2"	5000 psi	Check Valve
2"	5000 psi	Gate Valve
2"	5000 psi	Gate Valve

SIZE	PRESSURE	DESCRIPTION
4"	5000 psi	Gate Valve
4"	5000 psi	HCR Valve