

Evergreen Operating Corporation  
CSF 14C-13-4S-104  
843' FNL & 1871' FWL  
Sec. 13, T. 4 S., R. 104 W.  
Rio Blanco County, Colorado



Drilling Program

1. ESTIMATED FORMATION TOPS

<u>Formation Name</u>	<u>KB Depth</u>
Mesa Verde	11'
Top Main Coal Interval	1,500'
Base Cameo Coal	1,700'
Total Depth (TD)*	1,900'

\* all elevations reflect the ungraded ground level of 6,116'

2. NOTABLE ZONES

Oil or Gas Zones

Mesa Verde - TD

Water Zones

Mesa Verde - TD

Coal Zones

Mesa Verde - TD

Water zones will be protected with casing, cement, and weighted mud. Fresh water encountered during drilling will be recorded by depth, cased, and cemented. Oil and gas shows will be tested for commercial potential based on the well site geologist's recommendations.

3. PRESSURE CONTROL

Typical BOP stack and manifold models follow on PAGE 3. This  $\geq 2,000$  psi working pressure system will consist of:

*Stack*

An 8-5/8" x 11" SOW  $\geq 2,000$  psi working pressure casing head will be installed as the starting head.

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A 9" x 11"  $\geq 2,000$  psi working pressure drilling spool will be installed on the starting head.

A 9" x  $\geq 2,000$  psi working pressure double gate hydraulic type ram preventer with pipe rams over blind rams will be installed above the drilling spool.

#### *Manifold*

A 2" x  $\geq 2,000$  psi choke manifold & kill line will be tied into opposite sides of the drilling spool.

A 2" x  $\geq 2,000$  psi working pressure full opening gate valve will be upstream of the manifold assembly. This valve will be in the open position during normal drilling operations.

Choke manifold will consist of 2" x  $\geq 2,000$  psi working pressure pipe and two 2" x  $\geq 2,000$  psi working pressure full opening adjustable chokes with 2" x  $\geq 2,000$  psi working pressure full opening valves upstream. These valves will be closed during normal air and mud drilling operations. A single 2" x  $\geq 2,000$  psi working pressure full opening gate valve will be between the flow tee and the  $\geq 2$ " bleed line. This valve will be open during normal air and mud drilling operations. In board of the gate valves in the manifold assembly there will be a 2" x  $\geq 2,000$  psi working pressure flow tee with bull plug, needle valve, and gauge for well control operations.

Bleed line will be staked and chained down to the flare pit.

Kill line will be 2" x  $\geq 2,000$  psi working pressure line pipe.

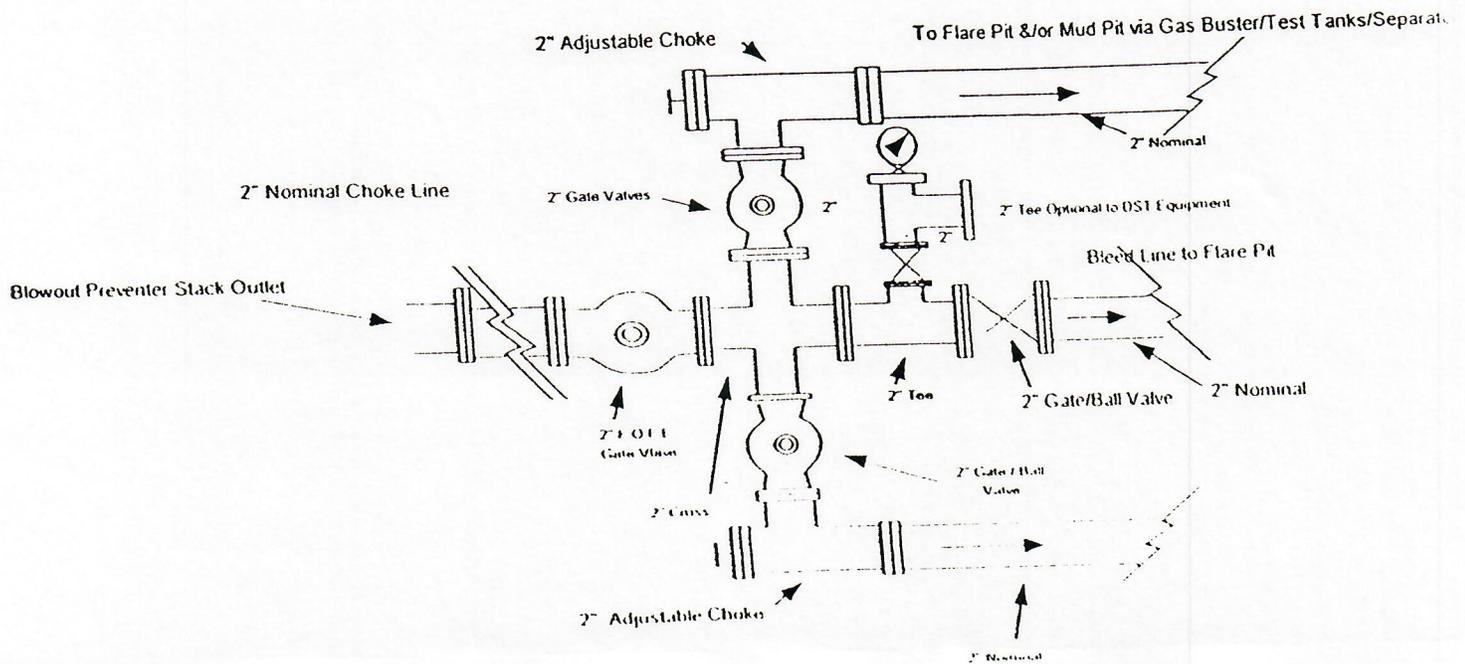
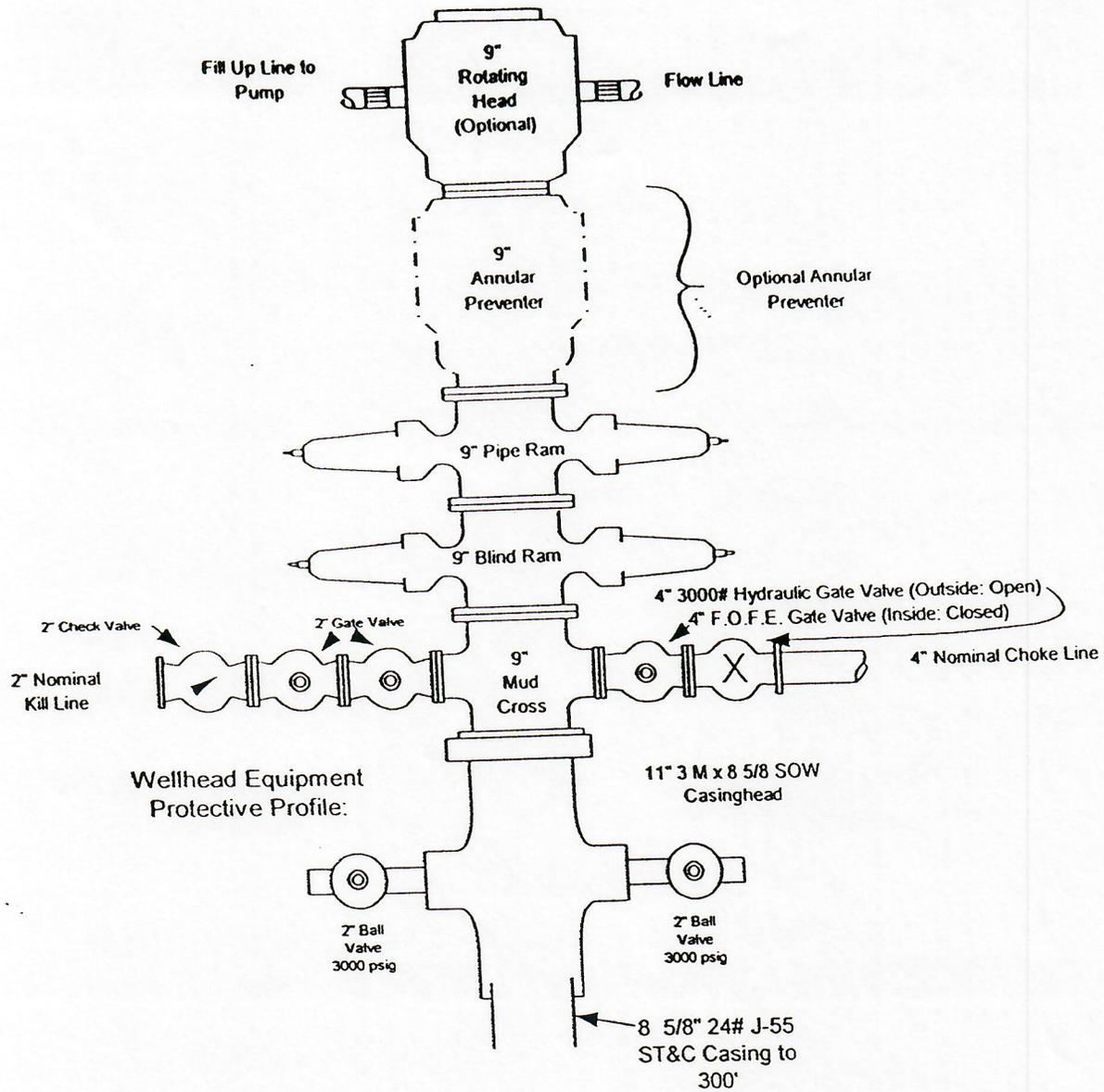
A 2" x  $\geq 2,000$  psi working pressure full opening gate valve will be upstream of the choke manifold.

#### *Surface Drill String Valves*

A  $\geq 2,000$  psi working pressure full opening safety valve with subs to fit all drill strings in use will be kept on the drill floor after the surface casing is set.

A  $\geq 2,000$  psi working pressure upper kelly valve with handle will be used throughout drilling operations.

**All 2000 PSI WP Equipment (Min)  
(Except Casinghead & Spools as Noted  
Below)**



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#### *Accumulator System*

An accumulator with sufficient capacity to operate the BOP equipment against a  $\geq 2,000$  psi well pressure will be used to operate the BOP system. It shall contain enough fluid capacity to close all BOP equipment and retain accumulator pressure at 200 psi over the pre-charge pressure. A nitrogen bottle system may be used to provide independent (reserve) power to operate the system if rig motors must be shut down.

#### *Testing Procedures & Frequency*

All of the pressure side BOP equipment previously specified will be nipped up on the surface casing.

All pressure side components and the surface casing will be hydraulically tested for  $\geq 15$  minutes to 2,000 psi before drilling out the surface casing shoe. These components will be retested, if needed, each 30 days after drill out at an appropriate time with a bridge plug set in the surface casing.

Pipe rams will be operationally checked each 24 hour period.

Blind rams will be operationally checked each time the pipe is pulled from hole.

All pressure testes and function tests will be noted on the daily drilling report.

#### *Tripping Procedures*

The well will be drilled with  $\geq 6$ " drill collars.

Well will be monitored each 9-10 joints on trips out of the hole to insure that the BHA is not swabbing in the well. The well will be filled after each 30 joints of drill pipe and as each drill collar is pulled from the hole. Pits will be monitored in order to insure that the well is taking fluid on the trip.

The fill up line will be used to fill the well on trips.

The kill line will not be used to fill the well on trips.

If the bit is plugged on a trip, then the well will be filled after each 15 joints of drill pipe are pulled from the well and as each drill collar is pulled from the well. Swabbing will be checked each 6 joints.

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#### 4. CASING & CEMENT

Hole Size	O. D.	Weight (lb/ft)	Grade	Type	Age	GL Setting Depth
12-1/4"	8-5/8"	24	J-55	S T & C	New	150'
7-7/8"	5-1/2"	15.5	J-55	S T & C	New	1,900'

Surface casing will be equipped with centralizers and cemented to the surface with  $\approx$ 140 sacks of Class G + 2% CaCl<sub>2</sub> + 1/4 pound per sack cello flake mixed at 1.17 cubic feet per sack and 15.8 pounds per gallon. Excess = >100%.

Production casing will be equipped with centralizers. Production casing will be cemented to the surface. Lead with  $\approx$ 75 sacks Premium Lite II cement + 3% KCl + 10% gel mixed at 3.33 cubic feet per sack and 11 pounds per gallon. Tail with  $\approx$ 185 sacks 50-50 poz + 2% gel + 3% KCl mixed at 1.24 cubic feet per sack and 14.4 pounds per gallon. Total (75 sacks lead + 185 sacks tail = 260 sacks) excess = >20%. Actual cement volume will be based on caliper log.

#### 5. MUD PROGRAM

Interval	Type	ppg	Viscosity	Fluid Loss
0' - 150'	spud mud	8.3	29	No Control
150' - TD	Air & Air mist			

Will follow Onshore Order 2 III. E. However, request variance from 100' compressor rule and 100' blooie line rule to minimize surface disturbance (see attached Rig 19 plan view). Change will reduce pad length from 290' to 225'.

#### 6. CORING, TESTING, & LOGGING

No cores or drill stem tests are planned. AIT/GR/SP and CNL-FDC (high resolution) logs will be run from TD to base of surface casing. Cuttings will be

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collected every  $\approx 30'$ .

#### 7. DOWN HOLE CONDITIONS

No abnormal pressures, temperatures, or hydrogen sulfide are expected. Maximum pressure will be  $\leq 760$  psi.

#### 8. OTHER INFORMATION

Operator will call BLM at (970) 878-3800 at least 24 hours before:

- spud of any type
- running & cementing all casing strings
- pressure testing BOPE or any casing string
- surface reclamation work

Closest hospital is in Rangely at 511 South White Avenue (south of stoplight). Phone number is (970) 675-5011.

The anticipated spud date is upon approval. It is expected it will take  $\approx 5$  days to drill and  $\approx 10$  days complete the well.