

APD rec'd from FMS
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UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☒ DRILL ☐ REENTER

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

2. Name of Operator
Synergy Operating, LLC

3a. Address PO Box 5513
Farmington, NM 87499

3b. Phone No. (include area code)
(505) 325-5449

4. Location of Well (Report location clearly and in accordance with any State requirements.)
At surface 1950' FNL, 740' FEL, Sec 10, T26N, R12W, Lat. 36.50460907 N
At proposed prod. zone Same (Nad 1983) Long. 108.09250222 W

14. Distance in miles and direction from nearest town or post office*
5 miles northwest of Bloomfield

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)
1950' from North Line

16. No. of acres in lease

17. Spacing Unit dedicated to this well

321.21 (N/2)

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
740' from East Line

19. Proposed Depth
1500'

20. BLM/BIA Bond No. on file
NM-2559

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
6084' Ground Level

22. Approximate date work will start*
03/31/2006

23. Estimated duration
30 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 *Patricia Hegarty*

Name (Printed/Typed)
Clara O. Papp PATRICIA Hegarty

Date
1-23-06

Title
Operations Manager, Cell (505) 330-1582 OFC (505) 566-3729

Approved by (Signature) *[Signature]*

Name (Printed/Typed)

Date
5/31/06

Title
AFM

Office
FFO

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.

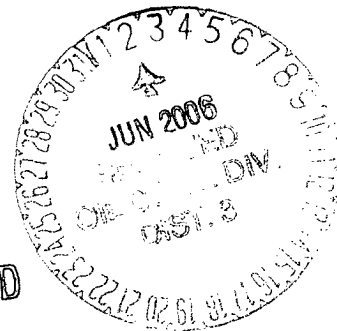
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

*(Instructions on page 2)

This action is subject to technical and procedural review pursuant to 43 CFR 3165.3 and appeal pursuant to 43 CFR 3165.4

DRILLING OPERATIONS AUTHORIZED ARE
SUBJECT TO COMPLIANCE WITH ATTACHED
"GENERAL REQUIREMENTS".

NMOCED



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

DISTRICT II
611 South First, Artesia, N.M. 88210

DISTRICT III
1000 Rio Brazos Ed., Aztec, N.M. 87410

DISTRICT IV
2040 South Pacheco, Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 15, 2000

OIL CONSERVATION DIVISION

2040 South Pacheco
Santa Fe, NM 87505

Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30-045033 (66)	*Pool Code 71629	*Pool Name Basin	*Well Number 2
*Property Code 35751	*Property Name BARTRYLEY FC		*Elevation 6084'
*OGRID No. 163458	*Operator Name SYNERGY OPERATING, L.L.C.		

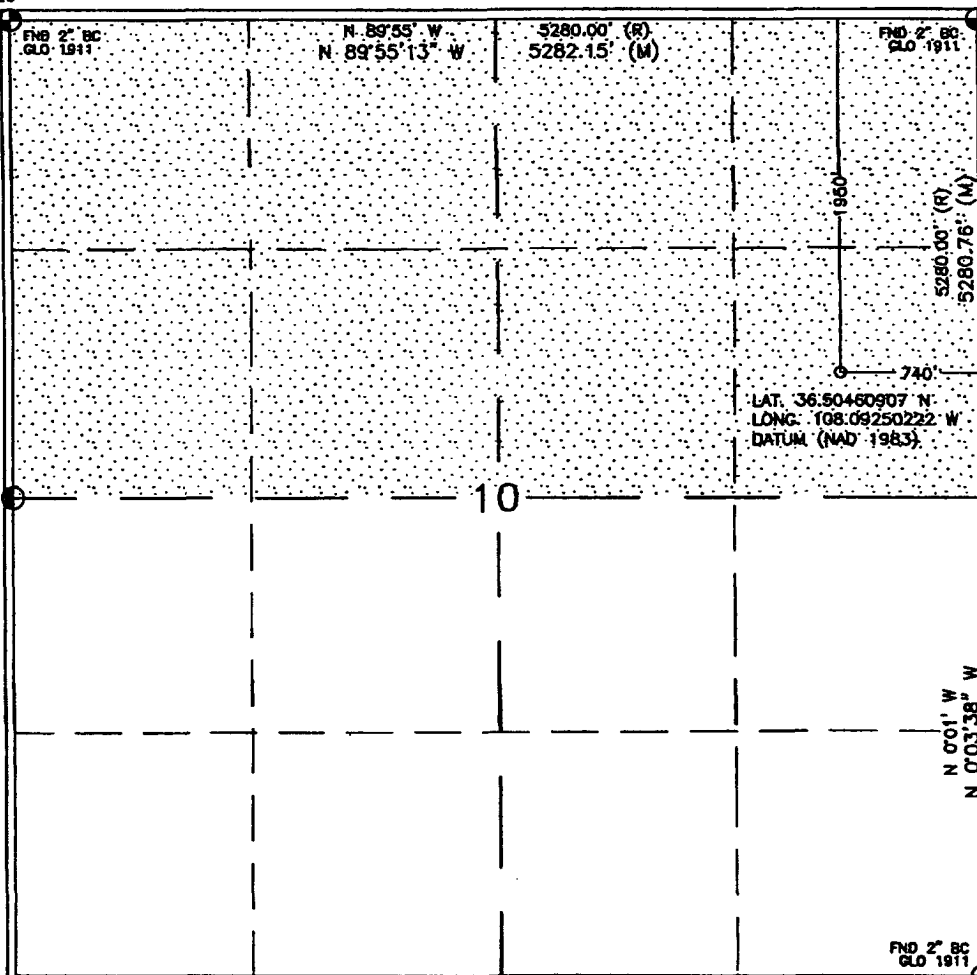
¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	10	26N	12W		1950'	NORTH	740'	EAST	SAN JUAN

¹¹ 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
*Dedicated Acres 321.21 Acres - (N/2)			*Joint or Infill		*Consolidation Code		*Order No.		

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



17 OPERATOR CERTIFICATION

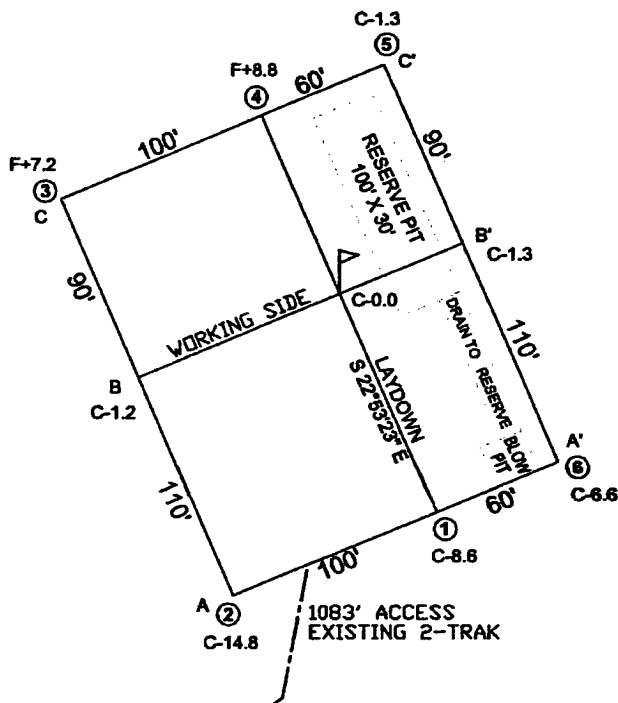
I hereby certify that the information contained herein
is true and complete to the best of my knowledge and
belief

Signature: *Patrick Hegarty*
Printed Name: Patrick Hegarty
Title: Principal
Date: 1-23-06

18 SURVEYOR CERTIFICATION

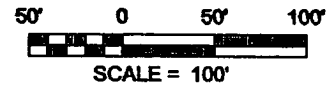
I hereby certify that the well location shown on this plat
was plotted from field notes of actual surveys made by
me or under my supervision, and that the same is true
and correct to the best of my belief.

Date of Survey: JANUARY 12, 2006
Signature and Seal of Professional Surveyor:
David R. Russell
DAVID R. RUSSELL
Certificate Number: 10201

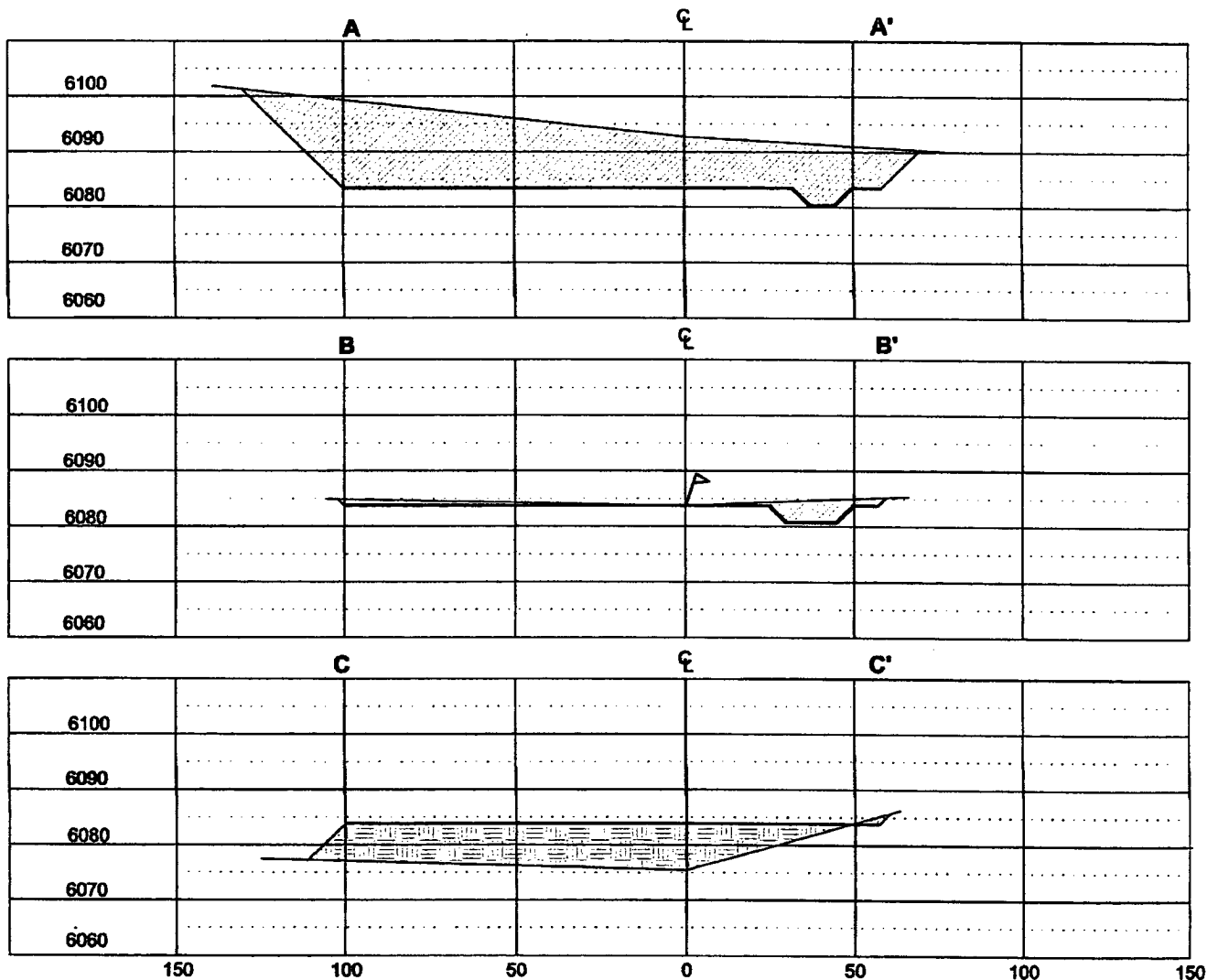


SYNERGY OPERATING, L.L.C.

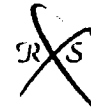
BARTRYLEY FC #2
1950' FNL & 740' FEL
LOCATED IN THE SE/4 NE/4 OF SEC. 10,
T26N, R12W, N.M.P.M.,
SAN JUAN COUNTY, NEW MEXICO
ELEVATION: 6084', NAVD 88



LATITUDE: 36.50460907 N
LONGITUDE: 108.09250222 W
DATUM: NAD 83



HORIZ. SCALE: 1"=50'
VERT. SCALE: 1"=30'



Russell Surveying
1409 W. Aztec Blvd. #5
Aztec, New Mexico 87410
Office Ph. 505-334-8637

Synergy Operating, LLC
Drilling Plan

Well Name: BartRyley FC#2

Location: 1950' FNL, 740' FEL, Sec. 10, T26N, R12W, San Juan County, New Mexico
Latitude 36.50460907 N, Longitude 108.09250222 W (Nad 1983)

Field: Basin Fruitland Coal

Elevation: 6084' GL

GEOLOGIC PROGRAM

Formations	Tops/Depth	Fluids
Ojo Alamo	<100'	Possible fresh water aquifer
Kirtland	240'	None
Fruitland	915'	Natural gas & produced water
Pictured Cliffs	1269'	Natural gas & produced water
TOTAL Depth	1500'	

Logging Program:

A) Open Hole:	Density + Neutron: TD to Surface Csg Shoe
B) Cased Hole:	GR-CCL-CBL

Mudlogs, Cores, DST's:

No mudlogs, coring or drill-stem testing (DST's) are scheduled.

Anticipated Downhole Conditions:

It is not anticipated that any abnormal temperatures, abnormal pressures or hydrogen sulfide gas will be encountered. The maximum anticipated formation pressures are expected to be less than 1000-PSIG.

DRILLING PROGRAM

Contractor: A local rotary drilling company is yet to be determined.

Mud Program: Freshwater based mud system will be utilized. Water sourced from commercial suppliers.

Depth	Type	Viscosity	PPG
0-220'	Spud	40-50	8.4-8.9
220' - TD	Low Solids, Non-dispersed	30-60	8.4-9.5*

* Barite will be used as a weighting material if needed

Wellhead Equipment:

A 8-5/8" x 5-1/2" 2000# bradenhead will be screwed on to the top joint of the 8-5/8" surface casing.

Cementing Program:

8-5/8" Surface Casing: Pump 150-sxs (213-ft³) Type III Cement w/ 3% CaCl₂ + 1/4"-#/sx Celloflake. Yield = 1.42 ft³/sx, Slurry weight = 14.5 PPG. Cement volume is 100 % of annular excess to ensure circulation to surface. Wait on Cement (WOC) for 8-Hours. Pressure test surface casing to 1000# for 30-Minutes.

5-1/2" Production Casing:

Lead Slurry: Pump 190-sxs (409-ft³) Premium Lite FM Cement w/ 3% CaCl₂ - 1/4#/sx Celloflake + 0.4% FL-52 + 8% Bentonite + 0.4% Sodium Metasilicate + 3-#/sx Pheno-Seal. . Yield = 2.15 ft³/sx, Slurry Weight = 12.1 PPG.

Tail Slurry: Pump 100-sxs (139-ft³) Type III Cement w/ 1 % CaCl₂ + 1/4#/sx Celloflake + 0.2% FL-52 + 2-#/sx Pheno-Seal. Yield = 1.39 ft³/sx, Slurry Weight = 14.6 PPG. Total slurry volume is 547.5-ft³.

The projected annular open hole volume from 1500' to surface is: 267-ft³. Cement volume is 100% excess of annular open hole volume for the lead cement slurry, to ensure circulation to surface. The job is designed to circulate the cement to surface.

Estimated Drilling Time:

Spud date will occur after the APD has been approved, the location built and a drilling contractor selected. Once drilling operations commence, it is anticipated that the drilling phase should be completed within three (3) to five (5) days.

Estimated Completion Time:

Rig completion activities are estimated to take approximately five (5) days. Surface facilities anticipated will include a rod pumping unit, separator, and one four hundred (400) bbl water production tank and a well-site compressor. No oil production is anticipated from this well.

Reserve Pit Construction/Closure:

The attached plat depicts the planned reserve pit and the proposed dimensions. The pit will be lined with an approved lining material, a minimum of a 12 mils in thickness. The pit will be constructed and closed per the November 1, 2004 NMOCD pit guideline information. A form C-144 will be prepared and submitted for the reserve pit in conjunction with this APD submittal

Pressure Control/Blow Out Preventers (BOP's):

All BOP systems will be in accordance with MMS Onshore Oil & gas Order No 2. Until the drilling contract has been let, the exact make, model and pressure rating of BOP's is unknown. A typical double gate BOP with a rotating head is shown in the attached Exhibit #1. A typical Choke & Kill manifold is also shown in the attached Exhibit #1.

An upper kelly cock valve with handle and drill string safety valves for each size of drill pipe will be available on the rig floor.

BOP Testing:

220' (Surface Csg Shoe) - TD: An 11" 2000# or 3000# double gate BOP Stack & choke manifold will be utilized. All BOP systems will be tested in accordance with MMS Onshore Oil & gas Order No 2. A test plug will be used to test the BOPE, and the resultant pressures will be recorded using a test pump, calibrated test gauges and a calibrated chart recorder. A low pressure test of 250 PSIG will be held for 10 minutes, and a high pressure test will be tested to 1000 PSIG for 10-minutes. Prior to drilling out the surface casing, the 8-5/8" 24# surface casing will be tested to 1000 PSIG for 30-minutes.

Pipe rams will be hydraulically actuated at least once a day. The blind rams will be function tested on each pipe trip. All ram function testing and BOP pressure testing will be recorded on the daily IADC drilling logs.

Casing & Tubing Program:

All casing shall be new and constructed to API standards.

<i>Hole Size</i>	<i>OD</i>	<i>Weight</i>	<i>Grade</i>	<i>GL Set Depth</i>	<i>Clearance Hole/Collar</i>
12.250"	8.625"	24 lbs/ft	J-55	0'-220'	1.3125"
7.785"	5.500"	15.5 lbs/ft	J-55	0'-TD (1500'+/-)	0.9125"
2.375"	2.375"	4.7 lbs/ft	J-55	Unknown	

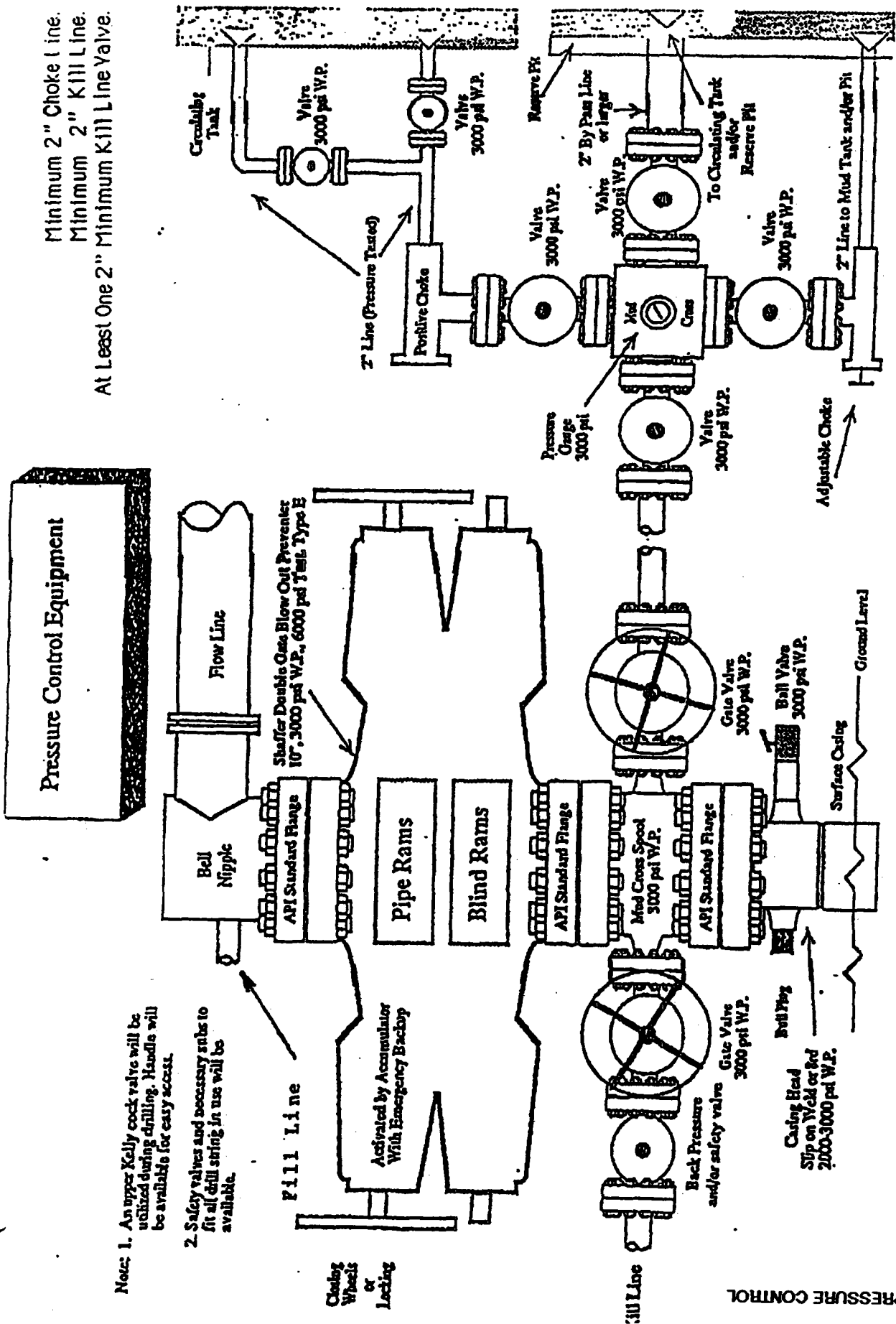
Float Equipment & Centralizers:

8-5/8" Surface Casing: Cement Guide Shoe, 1-Jt 8-5/8" casing as shoe joint and 8-5/8" casing to surface. Centralizers will be on the bottom three joints, the bottom most centralizer will be run 10' above the shoe, secured with a stop ring. The other two centralizers will be secured around the collars. Surface casing will be run to a minimum depth of 220' to ensure protection of surface waters.

5-1/2" Production Casing: A cement nose guide shoe, 1-Jt 5-1/2" casing as shoe joint, float collar w/ auto-fill, and 5-1/2" casing to surface. A centralizer will be run 10' above the shoe, secured with a stop ring, and two more centralizers will be applied around the collars of the bottom most casing joints. Additional centralizers will be deployed every sixth joint from the third most bottom joint to surface. Turbolizers will be used around the first casing collar below the base of the Ojo Alamo and a second on the first casing collar above the base of the Ojo Alamo. The Ojo Alamo will be covered with cement.

John Hyatt 1-23-06

EXHIBIT 1



Note: 1. An upper Kelly cock valve will be utilized during drilling. Handles will be available for easy access.

2. Safety valves and necessary subs to fit all drill string in use will be available.

Note: This equipment is designed to meet requirements for a 2-M rating standard per 43 CFR part 3160 (amended). Proper operation and testing of equipment will be carried out per standard. 2,000 psi equipment can be substituted in the drawing to meet minimum requirements per standard.