Form 3160-5
(June 1990)

RECEIVED
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02 DEC 20 AM 11: 14
070 FARMINGTON, N.M.

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to deepen or reentry to a different reservoir.
Use "APPLICATION FOR PERMIT---" for such proposals

SUBMIT IN TRIPLICATE

5. Lease Designation and Serial No.
NM 105189

6. If Indian, Allottee or Tribe Name

7. If Unit or CA, Agreement Designation

1. Type of Well
☐ Oil X Gas ☐ Other

8. Well Name and No.
Byrne Federal 24-1

2. Name of Operator
D.J. Simmons Co.

9. API Well No.

3. Address and Telephone No.
1009 Ridgeway Place. Suite 200, Farmington NM 87401 (505) 326-3753

10. Field and Pool, or Exploratory Area
West Lindreth Gallup / Blanco MV

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)
Surface Location: 1909' FNL x ~~1934~~ 924' FWL, Section 24, T25N, R3W
BHL: 1909' FNL x 1934' FWL, Section 24, T25N, R3W

11. County or Parish, State
Rio Arriba County, NM

12. CHECK APPROPRIATE BOX(s) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION	
X Notice of Intent	☐ Abandonment	X Change of Plans
	☐ Recompletion	☐ New Construction
	☐ Plugging Back	☐ Non-Routine Fracturing
☐ Subsequent Report	☐ Casing Repair	☐ Water Shut-Off
	☐ Altering Casing	☐ Conversion to Injection
☐ Final Abandonment Notice	☐ Other	☐ Dispose Water

(Note: Report results of multiple completion on Well Completion or Recompletion Report and Log form.)

13. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depth for all markers and zones pertinent to this work.)*

D.J. Simmons Inc. desires to amend the drilling plan portion of the previously approved AFE. The revised plan is attached.

HOLD C104 FOR Directional Survey
NSL for Mesaverde

14. I hereby certify that the foregoing is true and correct

Signed Robert R. Griffee Title Operations Manager Date: 12/18/02

(This space for Federal or State office use)

Approved by Title Acting AFM, Multi Resources Date 12/23/2002
Conditions of approval, if any:

Same as original APD

Title 18 U.S.C. Section 1001, makes 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.

*See Instruction on Reverse Side

(Sundry 8-14-96 Temp Aband.doc)

DISTRICT I
P.O. Box 1980, Hobbs, N.M. 88241-1980

DISTRICT II
P.O. Drawer DD, Artesia, N.M. 88211-0719

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

DISTRICT IV
PO Box 2088, Santa Fe, NM 87504-2088

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised Febuary 21, 1994
Instructions on back
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

OIL CONSERVATION DIVISION
P.O. Box 2088
Santa Fe, NM 87504-2088

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name

[4] Property Code	[5] Property Name	[6] Well Number
	BYRNE FED 24-1	1

[7] OGRID No.	[8] Operator Name	[9] Elevation
	D. J. SIMMONS INC.	7298.73

[10] Surface Location

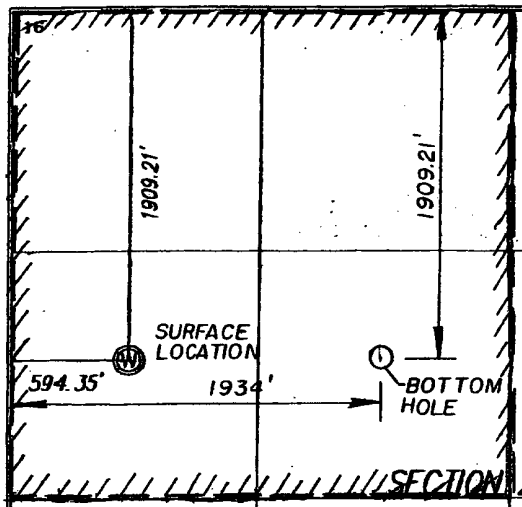
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
E	24	25N	3W		1909.21	NORTH	594.35	WEST	RIO ARRIBA

[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
E	24	25N	3W		1909.21	NORTH	1934	WEST	RIO ARRIBA

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] 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: Robert R. Griffee

Printed Name: Robert Griffee

Title: Operations Manager

Date: 9/9/2001

[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.

MAY 15, 2001

Date of Survey

Signature and Seal of Professional Surveyor:

9/25/01

Certificate Number N.M. PLS #9673

D.J. SIMMONS, INC.

Drilling Plan

Well Name: Byrne Federal 24-1

Surface Location: 1909 FNL x 594 FWL, Section 24, T25N, R3W
Rio Arriba County, NM

Bottom Hole Location: 1909' FNL x 1934' FWL, Section 24

Formation: Gallup/Dakota

Elevation: 7299' GL

Geology:

Formation	Top True Vertical Depth	Top Measured Depth	Probable Content
San Jose	Surface	Surface	
Ojo Alamo	3413	3413	salt water
Fruitland	3513	3513	gas/water
Pictured Cliffs	3709	3709	gas
Chacra	4127	4127	gas
MesaVerde	5377	5377	gas
Menefee	5489	5489	gas
PointLookout	5847	5847	gas
Mancos	6095	6095	gas/oil
Gallup	6897	6905	gas/oil
Graneros	7989	8380	gas/oil
Dakota	8103	8542	gas/oil
Burro Canyon	8263	8768	gas/water

Logging Program: Schlumberger Platform Express Suite from 3950' to base of Surface Casing. Platform Express Suite from 6400' to 3950' (air hole). Platform Express Suite from 8855' to 6400'. Mud Logger on from 3400' to TD.

Drilling Fluid Program:

* Note: all depths are Measured Depths

Interval	Fluid Type	Weight	Viscosity	Fluid Loss
0' – 250'	fresh water spud mud	8.4 – 9.0 ppg	30 - 50 sec	no control
250' – 3950'	fresh water LSND gel/poly	8.5 – 9.0 ppg	30 - 50 sec	no control
3950' – 6400'	air or air/mist			
6400' – 8855'	3% KCL / PHPA polymer	8.6 – 9.2 ppg	30 – 50 sec	8 to 10

D.J. Simmons, Inc. P.O. Box 1469 3005 Northridge Dr. Farmington, New Mexico 87499 87401
(505) 326-3753 FAX (505) 327-4659

Casing Program:

* Note: all depths are Measured Depths

Interval	Hole Diameter	Csg Size	Wt.	Grade	Thread
0' – 250'	17 1/2"	13 3/8"	48 ppf	H-40	STC
0' – 3750'	12 1/4"	9 5/8"	36 ppf	J-55	STC
3750' – 3950'	12 1/4"	9 5/8"	47 ppf	J-55	STC
3800' – 6280'	8 1/2"	7"	20 ppf	J-55	LTC
6280' – 6400'	8 1/2"	7"	26 ppf	J-55	LTC
8855' – 6250'	6 ¼"	4 ½"	11.6 ppg	N-80	LTC

(The heavier weight casing on the bottom of the 9 5/8" and 7" casing strings is to facilitate existing liner hanger inventories only)

Tubing Program: 0 – 8800', 2 3/8", 4.7 ppf, J55, EUE

BOPE and Wellhead Specifications and Testing:

From surface casing shoe to 3950': 13 3/8" 2000 psi threaded casing head with two 2" outlets. 13 5/8", 2000 psi double gate BOP and 2000 psi choke manifold (see figures 1 and 2). Pressure test BOPE to 2000 psi and 13 3/8" surface casing to 600 psi prior to drilling surface casing shoe.

From 3950' to 6400': 9 5/8" 3000 threaded casing head. 11" 3000 psi double gate BOP with rotating head and 3000 psi choke manifold (see figures 3 and 4). Pressure test BOPE to 2000 psi and 9 5/8" casing to 1000 psi prior to drilling shoe.

From 6400' – TD: 11" 3000 psi double gate BOP with rotating head and 3000 psi choke manifold (see figures 3 and 4). Pressure test BOPE to 3000 psi and 7" casing to 1500 psi prior to drilling shoe.

For completion operations: 7" x 2 3/8", 3000 psi tree assembly. 7 1/16", 3000 psi double gate BOP system (see figure 5).

General Operation:

- Actuate pipe rams once each day during drilling operations. Actuate blind rams once each trip.
- An upper Kelly cock valve, with handle, will be available on the rig floor to fit each drilling string.
- BOP pit level drill will be conducted weekly for each drilling crew.
- All BOP tests and drills will be recorded in the daily drilling report.
- Blind and pipe rams will be equipped with extension hand wheels.

Cementing Program:

13 3/8" Surface Casing String: Run casing with saw tooth guide shoe on bottom, insert float valve one joint from bottom, and install bowspring centralizers as per Onshore Order #2. Cement with 330 sks class 'G' with ¼ #/sk flocele and 2% CaCl2 (384 cf slurry, 100% excess to circulate to surface).

9 5/8" Intermediate Casing String: Run casing with float shoe on bottom, float collar one joint from bottm and install bowspring centralizers as per Onshore Order #2. Cement with 975 sks 65/35 poz plus additives followed with 100 sks Class 'G' (1850 cf slurry, 50% excess to circulate to surface).

7" Protection Liner: Run casing with float shoe on bottom, float collar one joint from bottom, ECP tool and stage collar at top of Point Lookout (5847'), and centralizers every other joint from 6400' to 3950'. Cement in two stages. Stage 1 (6400' – 5850'); 40 sks class 50/50 poz plus additives followed by 50 sks Class 'G' neat. WOC 8 hours. Stage 2 (5850' – 3700'); 275 sks class 'G' 50/50 poz plus additives followed by 100 sks Class 'G' neat. Precise slurry volumes to be calculated from open hole log caliper plug 25% excess. Top of cement to be at liner top.

4 ½" Production Liner: Run casing with float shoe on bottom, float collar two joints from bottom. Centralize with one centralizer in the middle of the first joint and one centralizer every other collar. Cement with 200 sks of class 'G' 50/50 poz plus additives followed by 100 sks Class 'G' neat. Precise slurry volumes to be calculated from open hole log caliper plus 25% excess. Top of cement to be at liner top.

Special Drilling Operations:

Air/mist drilling

While drilling with air and air/mist the following will apply:

- An anchored blooie line will be utilized to discharge cuttings and mist to a blow pit located 100 ft (mimimum distance) from the well head.
- The blooie line will be equipped with an automatic igniter or pilot.
- Air package will be located a minimum of 100 ft from the well head in a direction opposite to the blooie line.
- Engines will be equipped with spark arresters or water cooled exhaust.
- If dusting, a de-duster will be utilized at the end of the blooie line.
- The rotating head will be properly lubricated and maintained.
- Mud materials, equipment, and water will be available on location to maintain control of the well during all operations.

Directional Drilling

This well will be directionally drilled to the bottom hole location specified above. A detailed directional plan is supplied as Attachment #1. Directional surveying will be primarily performed with MWD (measurement while drilling) tools.

Additional Information:

- This well is to be completed in the Gallup and Dakota formations.
- No abnormal temperature or pressure, or other hazards are anticipated.
- LCM will be added to the mud system as required to maintain circulation.
- Estimated formation pressures:
    - Fruitland Coal 300 psi
    - Pictured Cliffs 300 psi
    - MesaVerde 600 psi
    - Gallup 650 psi
    - Dakota 800 psi

Completion Information:

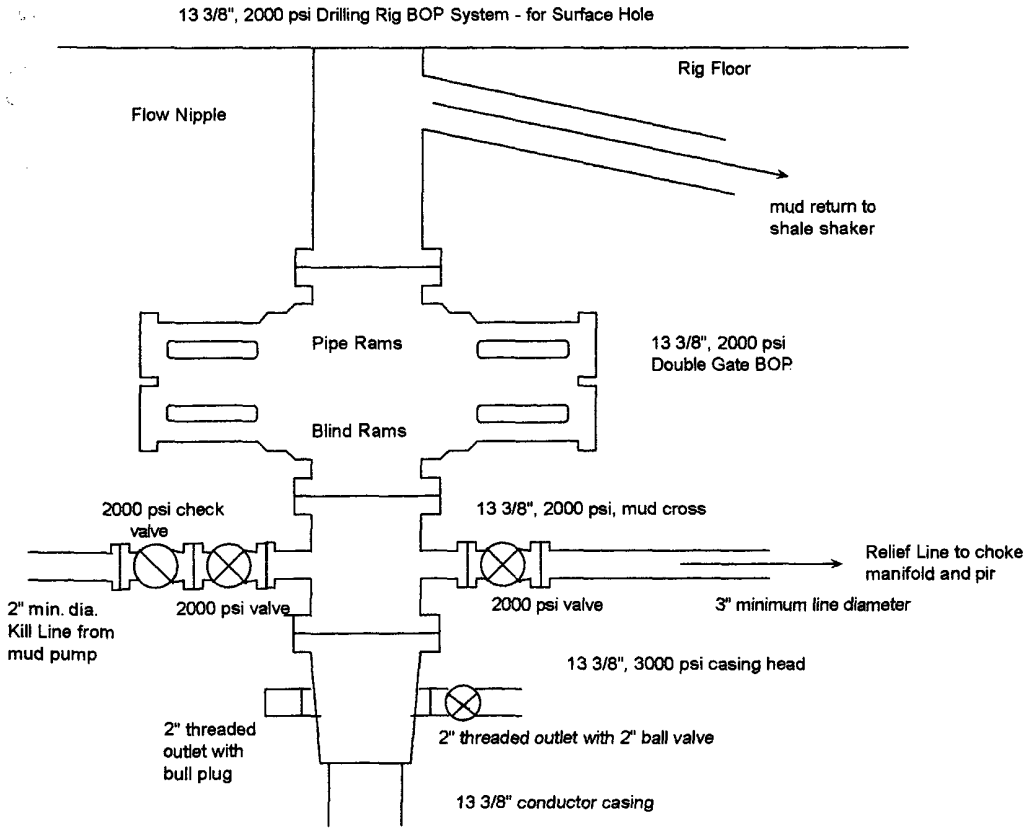
The completion procedure will be prepared after open hole logs are analyzed. The well will probably be completed by hydraulic frac in two to three stages.

Prepared by: Robert R. Griffee
Operations Engineer
Date: 12/18/02

General Drilling Procedure

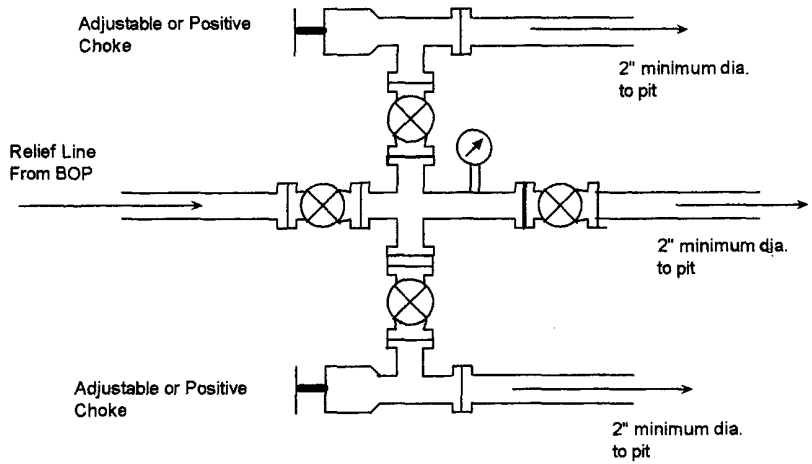
1. Build location with flare pit and reserve. Set and test anchors. Drill and develop water source well.
2. MIRU drilling rig.
3. Spud with 12 ¼" bit. Drill surface hole to 250'. Ream hole out to 17 ½" diameter with a bit. Use fresh water lime / gel spud mud.
4. Run 13 3/8", 48 ppf, H40, STC casing to 250'. Cement with 330 sks Class 'G' + 3% CaCl2 (100 % excess). Circulate cement to surface. Perform top job if necessary.
5. NU 13 3/8", 2000 psi threaded casing head with two 2" outlets. NU 13 5/8", 2000 psi double gate BOPE and 2000 psi choke manifold. Pressure test BOPE to 2000 psi and 13 3/8" casing to 600 psi.
6. Drill out of surface casing with a 12 ¼" bit. Drill 12 ¼" hole to 3950' (150' below Pictured Cliffs formation). Use fresh water LSND gel/polymer mud system with mud weights from 8.5 to 9.0 ppg. Rig up mud logger at 3400'.
7. Run Schlumberger Platform Express log suite from 3950' to surface casing shoe.
8. Run 9 5/8" Intermediate casing as per above casing program. Cement with 975 sks 65/35 Poz followed by 100 sks Class 'G' neat. Circulate cement to surface.
9. Cut off casing and 13 3/8" well head. Install 9 5/8", 3000 psi casing head. NU 11", 3000 psi double gate BOP with rotating head and 3000 psi choke manifold. Pressure test casing head and BOPE to 3000 psi.
10. Drill out of Intermediate casing with an 8 ½" bit. Drill 8 ½" hole to 6400' (300' into the Mancos below the Point Lookout formation). Use air or air/mist circulating system. Install fire float in drill string. Be prepared to change system to aerated mud if needed because of oil in returns.
11. Run Schlumberger Platform Express log suite from 6400' to 3950'.
12. Run 7" Protection string as per above casing program. Cement in two stages as per above cementing program. Circulate cement to liner top.
13. Pressure test liner to 1500 psi.
14. Drill out of Protection liner with a 6 ¼" bit. Drill 45 degree directional hole to 8855' MD, 8325' TVD. Use fresh water, 3% KCL, LSND gel/polymer mud system with mud weights from 8.6 to 9.2 ppg. Maintain water loss at 8 to 10 through the Gallup and Dakota formations.
15. Run Schlumberger Platform Express log suite from 8855' to 6400'.
16. Run 4 ½" Production liner as per above casing program. Cement to liner top in one stage.
17. Release drilling rig. Evaluate well and logs to develop completion program.

Figure 1



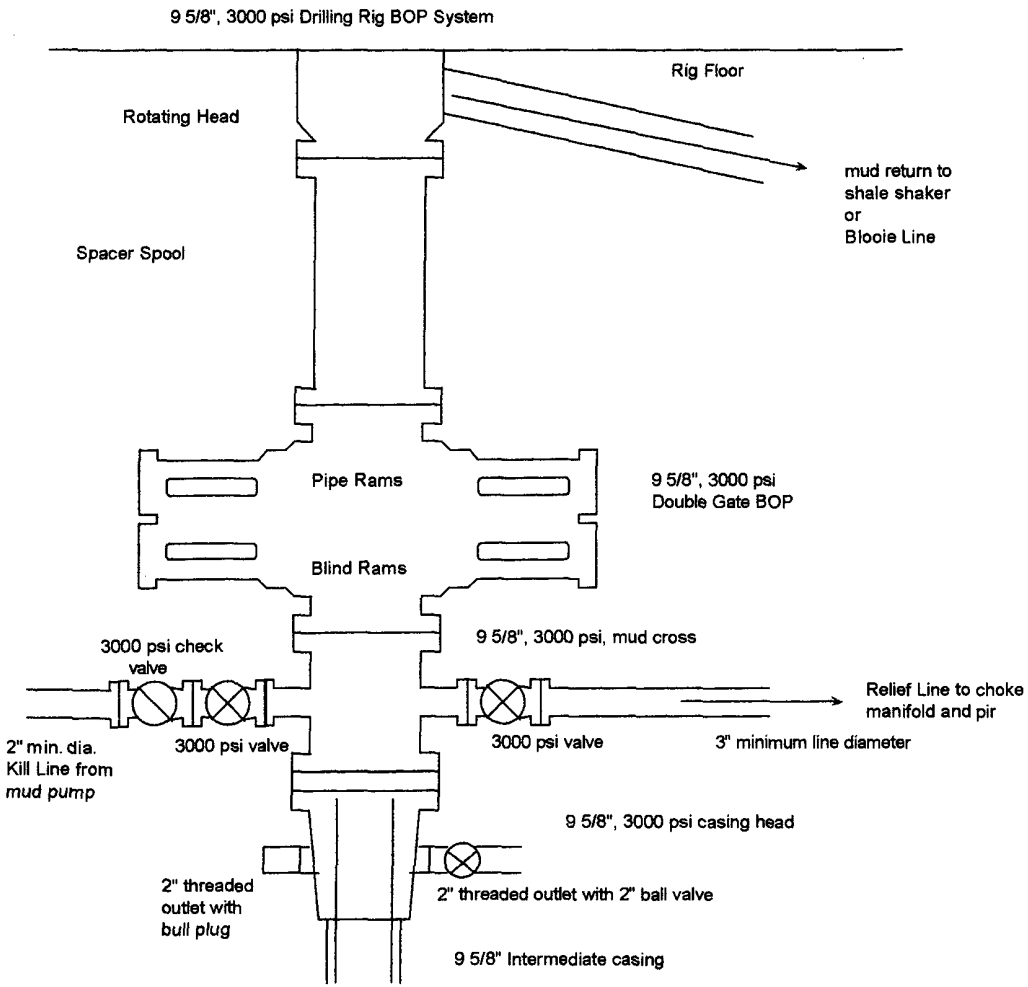
BOP Installation from Surface Casing depth (250') to Intermediate Casing depth (23950'). 13 3/8", 2000 psi double gate BOP equipped with blind and pipe rams. All equipment rated at 2000 psi or greater working pressure.

Figure 2



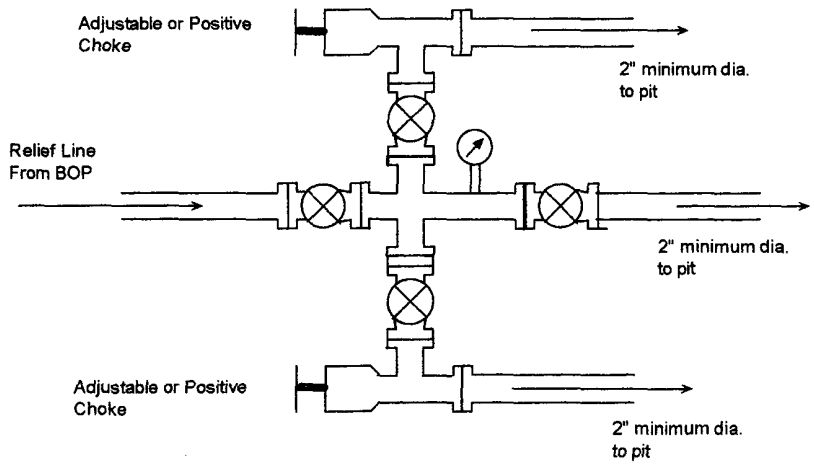
Choke manifold for BOP system shown in Figure 1. All equipment to be rated at 2000 psi or greater.

Figure 3



BOP Installation from Intermediate Casing depth (3950') to TD (8855' MD). 9 5/8", 3000 psi double gate BOP equipped with blind and pipe rams and rotating head. All equipment rated at 3000 psi or greater working pressure.

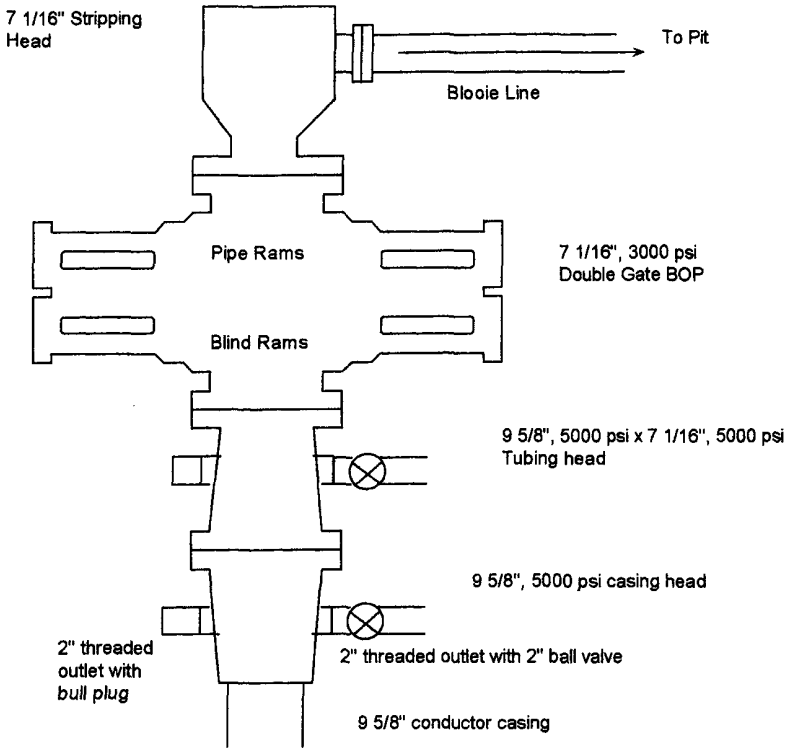
Figure 4



Choke manifold for BOP system shown in Figure 3.
All equipment to be rated at 3000 psi or greater.

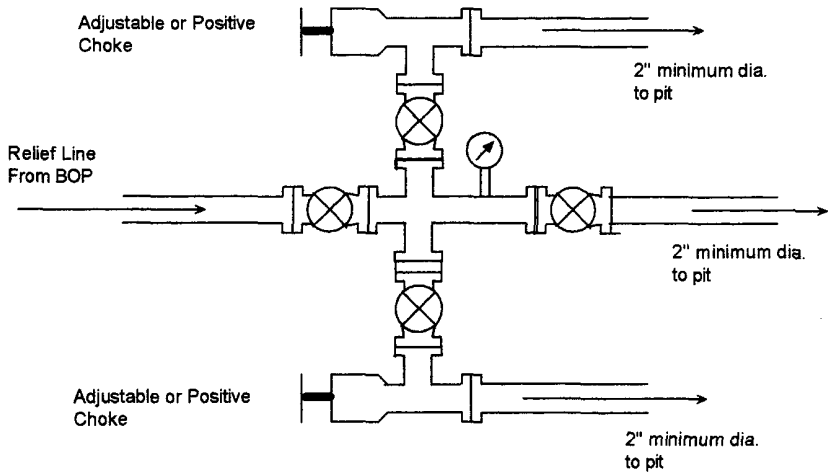
Figure 5

7 1/16", 3000 psi Completion Rig BOP System



BOP Installation for Completion operations. 7 1/16", 3000 psi double gate BOP equipped with blind and pipe rams. All equipment rated at 3000 psi or greater working pressure. If well testing shows higher bottom hole pressures, this system will be configured with 5000 psi equipment.

Figure 6



Choke manifold for BOP system shown in Figure 5. All equipment to be rated at 3000 psi or greater.

Attachment 1

* * * N A U T I C A L (V e r s i o n 4 . 0) * * *

Well: Byrne Federal 24-1 DESIGN DATA

Target Azimuth: 90 Closure Direction: 90

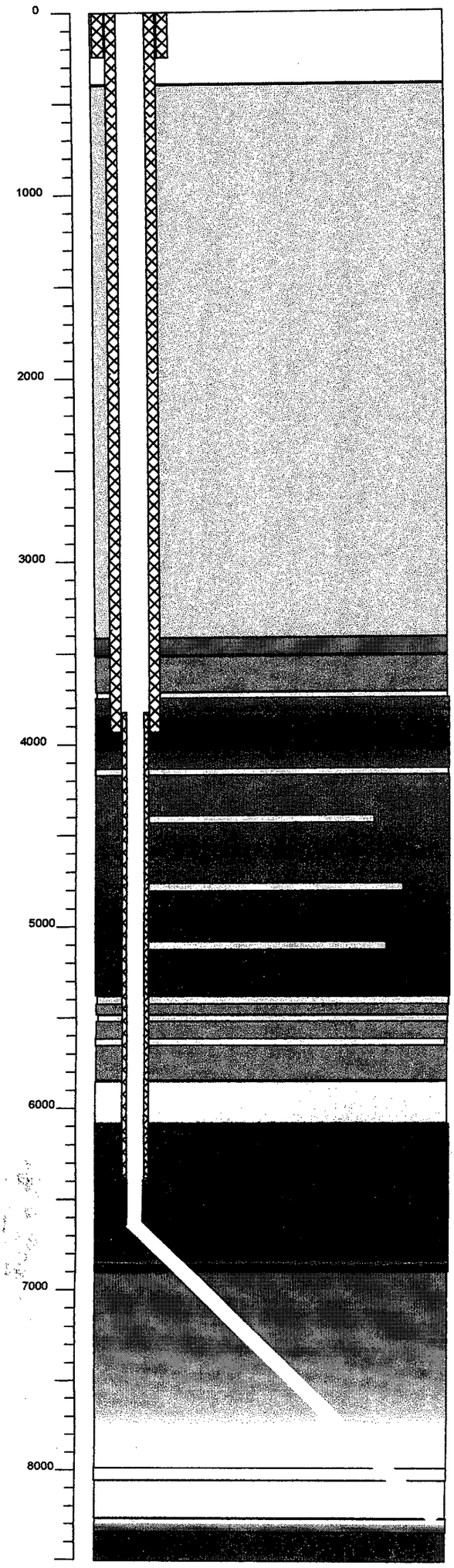
Target TVD: 8250

Calculation Method - Minimum Curvature

Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	True Vertical Depth (ft)	Vertical Section (ft)	North/ South (ft)	East/ West (ft)	Closure (ft)	Build Rate (deg/ft)	Walk Rate (deg/ft)	Dogleg Severity (d/100')	Tool Face (deg)
0.00	0.00	90.00	0.00	0.00	0.00	0.00	<==== Tie-in Data				
6,550.00	0.00	90.00	6,550.00	0.00	0.00	0.00	0.00	0.000	0.000	0.00	
6,650.00	6.00	90.00	6,649.82	5.23	0.00	5.23	5.23	0.060	0.000	6.00	
6,750.00	12.00	90.00	6,748.54	20.87	0.00	20.87	20.87	0.060	0.000	6.00	
6,850.00	18.00	90.00	6,845.09	46.74	0.00	46.74	46.74	0.060	0.000	6.00	
6,905.00	21.30	90.00	6,896.88	65.23	0.00	65.23	65.23	0.060	0.000	6.00	
6,950.00	24.00	90.00	6,938.40	82.56	0.00	82.56	82.56	0.060	0.000	6.00	
7,050.00	30.00	90.00	7,027.46	127.94	0.00	127.94	127.94	0.060	0.000	6.00	
7,150.00	36.00	90.00	7,111.29	182.38	0.00	182.38	182.38	0.060	0.000	6.00	
7,250.00	42.00	90.00	7,188.97	245.28	0.00	245.28	245.28	0.060	0.000	6.00	
7,300.00	45.00	90.00	7,225.24	279.69	0.00	279.69	279.69	0.060	0.000	6.00	
7,400.00	45.00	90.00	7,295.95	350.40	0.00	350.40	350.40	0.000	0.000	0.00	
7,500.00	45.00	90.00	7,366.66	421.11	0.00	421.11	421.11	0.000	0.000	0.00	
7,600.00	45.00	90.00	7,437.37	491.82	0.00	491.82	491.82	0.000	0.000	0.00	
7,700.00	45.00	90.00	7,508.08	562.54	0.00	562.54	562.54	0.000	0.000	0.00	
7,800.00	45.00	90.00	7,578.79	633.25	0.00	633.25	633.25	0.000	0.000	0.00	
7,900.00	45.00	90.00	7,649.50	703.96	0.00	703.96	703.96	0.000	0.000	0.00	
8,000.00	45.00	90.00	7,720.21	774.67	0.00	774.67	774.67	0.000	0.000	0.00	
8,100.00	45.00	90.00	7,790.92	845.38	0.00	845.38	845.38	0.000	0.000	0.00	
8,200.00	45.00	90.00	7,861.63	916.09	0.00	916.09	916.09	0.000	0.000	0.00	
8,300.00	45.00	90.00	7,932.34	986.80	0.00	986.80	986.80	0.000	0.000	0.00	
8,380.00	45.00	90.00	7,988.91	1,043.37	0.00	1,043.37	1,043.37	0.000	0.000	0.00	
8,400.00	45.00	90.00	8,003.05	1,057.51	0.00	1,057.51	1,057.51	0.000	0.000	0.00	
8,500.00	45.00	90.00	8,073.77	1,128.22	0.00	1,128.22	1,128.22	0.000	0.000	0.00	
8,542.00	45.00	90.00	8,103.46	1,157.92	0.00	1,157.92	1,157.92	0.000	0.000	0.00	
8,600.00	45.00	90.00	8,144.48	1,198.93	0.00	1,198.93	1,198.93	0.000	0.000	0.00	
8,700.00	45.00	90.00	8,215.19	1,269.64	0.00	1,269.64	1,269.64	0.000	0.000	0.00	
8,768.00	45.00	90.00	8,263.27	1,317.73	0.00	1,317.73	1,317.73	0.000	0.000	0.00	
8,790.00	45.00	90.00	8,278.83	1,333.28	0.00	1,333.28	1,333.28	0.000	0.000	0.00	
8,855.00	45.00	90.00	8,324.79	1,379.24	0.00	1,379.24	1,379.24	0.000	0.000	0.00	

Byrne Federal 24-1

DESIGN #2
Zone Protection Well Design



Formation Tops
Descriptions
TVD

San Jose

Nacimiento

Ojo Alamo 3413' - 3513'
Corrosive Water

Fruitland 3513' - 3709' - Gas

Pictured Cliffs 3709' - Gas

Lewis Shale

Chacra 4127' - Gas

Lewis Shale - possible gas zones

Cliff House 5377', Gas and Water
Menefee 5489', Gas and water

Point Lookout 5847', Gas
Very Possible Lost Circulation
BHP = 1650 psi +/-

Normal Pressure - 8.4 ppg gradient

Mancos Shale 6095' - 6897'

Gallup 6897' - 7989', Gas and Oil

Graneros 7989' - 8103', Gas and Oil

Dakota 8103' - 8263'

Burro Canyon 8263', Gas and Water

Morrison

Casing Program

17 1/2" diameter hole
13 3/8", 48 ppf, H40
Surface Casing set at
250'.

12 1/4" diameter hole

9 5/8", 36 ppf J55 Intermediate
Set at 3950' (200' below PC)
(200' of 47 ppf on bottom for
liner hanger)
Cement to Surface

8 1/2" Hole Diameter

7", 20 ppf, J55 Protection Liner
Set from 6400' to 3850'
ECP tool at top of Point Lookout
(200' of 23 # on bottom for
liner hanger)
Cemented from 6400' to top of
Liner

KOP - 6550'
Build to 45 degrees at
6 deg / 100 ft build rate
Maintain 45 degrees through
Dakota

6 1/4" diameter Hole

4 1/2", 11.60 ppf, J55
Production Liner with shoe
set at 8855' MD and 8325' TVD
and liner top at 6150'

Drilling Fluid
Systems

Fresh Water
Spud Mud

Fresh Water Gel / Polymer
LSND Mud System
8.5 to 9.0 ppg

Air or Air/Mist
Drilling System
2000 scfm

Fresh Water Gel / Polymer
LSND Mud System
8.6 to 9.2 ppg
Fluid Loss 8 to 10 cc