

Form 3160-3
(August 1999)

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

FORM APPROVED
OMB No. 1004-0136
Expires November 30, 2000

01 JUN 27 AM 8:24

5578

DEC 2002 RECEIVED ON CONS. DIV. DIST. 8

30-039-27262

30996

320 W/2 MV

7299' GL

09/20/01

60 days

drilling plan, surface use plan

the following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, shall be attached to this form:

1. Well plat certified by a registered surveyor.

2. A Drilling Plan.

3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO shall be filed with the appropriate Forest Service Office).

4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).

5. Operator certification.

6. Such other site specific information and/or plans as may be required by the authorized officer.

25. Signature *Robert R. Griffie* Name (Printed/Typed) Robert R. Griffie Date 06/21/01

Title Operations Engineer

Approved by (Signature) *David R. Sitzler* Name (Printed/Typed) David R. Sitzler Date JUN 6 2002

Title Acting Asst. Field Mgr Office AUFO

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 reverse)

Along string slurry volumes will be pumped
@ 50% excess - no log run
② casing strings will be centralized
③ Attached.

AFMSS

Adjud	<i>amy</i>
Engr	<i>amy</i>
Geol	<i>pat</i>
Surf	<i>pat</i>
Appvl	<i>pat</i>

HOLD C104 FOR:

1. NSL in Mesquite
2. Directional survey
3. New Mesquite plat

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

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102

Revised February 21, 1994

Instructions on back

Submit to Appropriate District Office

State Lease - 4 Copies

Fee Lease - 3 Copies

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

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

OIL CONSERVATION DIVISION

P.O. Box 2088

Santa Fe, NM 87504-2088

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

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30039-27262	² Pool Code 39189	³ Pool Name W. Lindwith Gallup/Dakota
⁴ Property Code 30996	⁵ Property Name BYRNE FED 24-1	
⁶ OCRD No. 5578	⁷ Operator Name D. J. SIMMONS INC.	⁸ Well Number 1
		⁹ Elevation 7298.73

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot No.	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 No.	Feet from the	North/South line	Feet from the	East/West line	County
FF	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: <u>Robert R. Giff</u> Printed Name: <u>Robert. Giff</u> Title: <u>Operations Manager</u> Date: <u>9/2/00</u>
	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: <u>MAY 15, 2001</u> Signature and Seal of Professional Surveyor: <u>[Signature]</u> Certificate Number: <u>N.M. PLS #9673</u>

OPTIONAL FORM 99 (7-99)

FAX TRANSMITTAL

of pages 10

To <u>Steve Hayden</u>	From <u>David S. Taylor</u>
Dept/Agency	Phone # <u>(505) 761-8919</u>
Fax #	Fax #

Form 3180-6
June 1990)FORM APPROVED
Budget Bureau No. 1004-0135
Expires: March 31, 1993DEPA
BUREAU OF LAND MANAGEMENT
NSN 7540-01-317-7388 5089-101 GENERAL SERVICES ADMINISTRATION5. Lease Designation and Serial No.
NM 105189

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

6. If Indian, Allottee or Tribe Name

30-039-27262

7. If Unit or CA, Agreement Designation

SUBMIT IN TRIPLICATE

1. Type of Well

☐ Oil ☒ Gas ☐ Other

2. Name of Operator

D.J. Simmons Co.

3. Address and Telephone No.

1009 Ridgeway Place, Suite 200, Farmington NM 87401 (505) 326-3753

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

Surface Location: 1909' FNL x 1934' FWL, Section 24, T25N, R3W
BHL: 1909' FNL x 1934' FWL, Section 24, T25N, R3W

8. Well Name and No.

Byrne Federal 24-1

9. API Well No.

10. Field and Pool, or Exploratory Area

West Lindreth Gallup / Blanco MV

11. County or Parish, State

Rio Arriba County, NM

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

TYPE OF SUBMISSION

TYPE OF ACTION

☒ Notice of Intent☐ Abandonment☒ Change of Plans☐ Subsequent Report☐ Recompletion☐ New Construction☐ Final Abandonment Notice☐ Plugging Back☐ Non-Routine Fracturing☐ Casing Repair☐ Water Shut-Off☐ Altering Casing☐ Conversion to Injection☐ 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.

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

Signed

Robert R. GriffesTitle Operations Manager

Date: 12/18/02

Robert R. Griffes

(This space for Federal or State office use)

Approved by

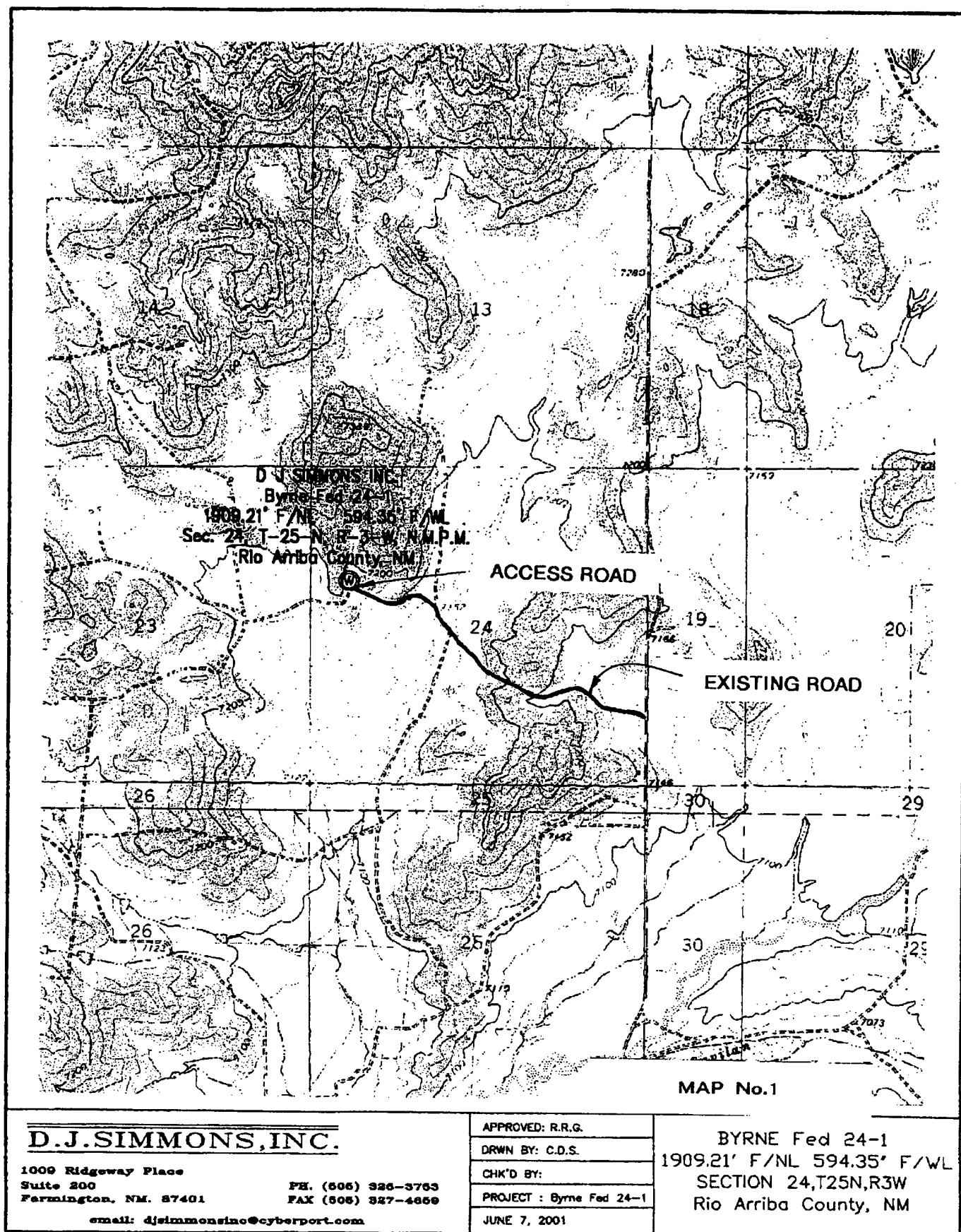
David S. TaylorTitle Acting AFM, Multi ResourceDate 12/23/2002

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



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
Mesa Verde	5377	5377	gas
Menefee	5489	5489	gas
Point Lookout	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

rrg\ByrneFed241drillingplanAPD2.doc

Page 1 of 5

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 1/4"	4 1/2"	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 1/4 #/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 bottom 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 1/2" 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 (minimum 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
▪ Mesa Verde	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. Griffec
Operations Engineer
Date: 12/18/02

Attachment 1

* * * NAUTICAL (Version 4.0) * * *

Well: Byrne Federal 24-1 DESIGN DATA

Target Azimuth: 90

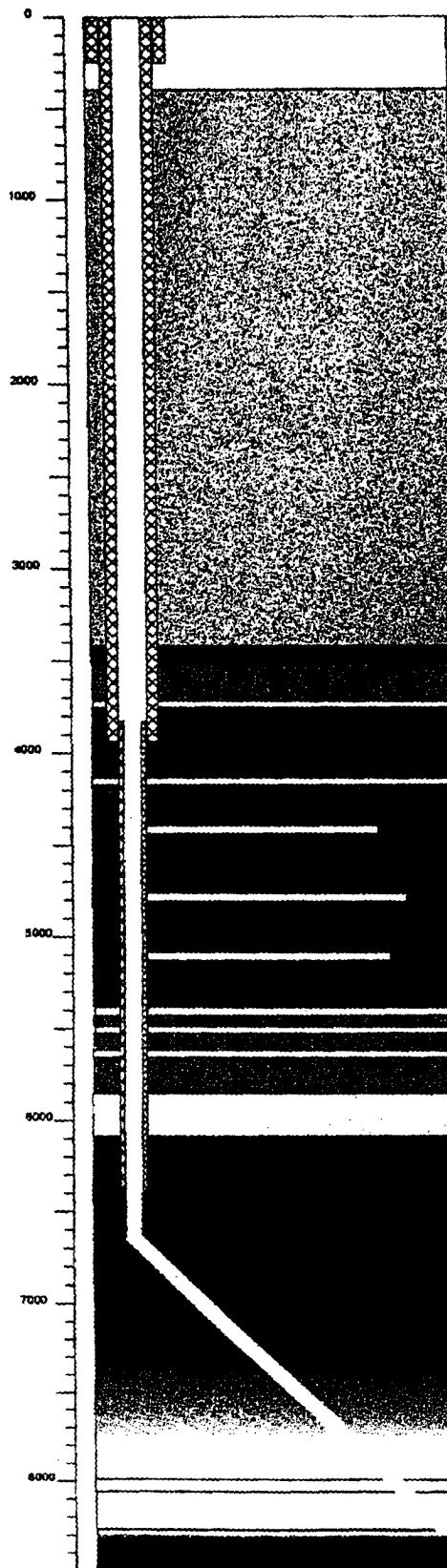
Closure Direction: 90

Target TVD: 8250

Calculation Method - Minimum Curvature

Measured	Inclination	Azimuth	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	7,368.66	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	8,283.27	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 34-1

DESIGN #2
Zone Protection Well DesignFormation Tops
Descriptions
TVO

San Jose

Casing Program

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

Necamiente

12 1/4" diameter hole

Ojo Alamo 3413' - 3613'
Conservative Water

Fruitland 3613' - 3708' - Gas

Pictured Cliffs 3708' - Gas

Lewis Shale

Cheaca 4127' - Gas

Lewis Shale - possible gas zones

Cliff House 5377' - Gas and Water

Mesquite 5488' - Gas and water

Point Lookout 5847' - Gas

Very Possible Lost Circulation

BHP = 1850 psi +/-

Normal Pressure - 8.4 ppg gradient

Mancos Shale 6085' - 6897'

Gallup 6887' - 7887' - Gas and Oil

Graneros 7889' - 8103' - Gas and Oil

Dakota 8103' - 8263'

Barr Canyon 8283' - Gas and Water
MartinezDrilling Fluid
SystemsFresh Water
Spud MudFresh Water Gel / Polymer
LSPD Mud System
8.5 to 8.0 ppgAir or Air/Mist
Drilling System
2000' sectionFresh Water Gel / Polymer
LSPD Mud System
8.8 to 8.2 ppg
Fluid Loss 6 to 10 cc