

PKRV0312748988 MS

NSL

5/27/03

*Sup.*

RECEIVED

MAY 07 2003

OIL CONSERVATION  
DIVISION

May 2, 2003

**DJ SIMMONS, INC.**

1009 Ridgeway Place  
Suite 200  
Farmington,  
New Mexico 87401

505-326-3753  
505-327-4659 FAX  
info@djsimmonsinc.com  
www.djsimmonsinc.com

New Mexico Oil Conservation Division  
1220 So. St. Francis Dr.  
Santa Fe, New Mexico 87505

RE: Application for Administrative Approval  
Unorthodox Well Location  
Byrne Federal 24-1  
Undesignated Tapacito- Pictured Cliffs Prorated Gas Pool  
NW/4, Section 24, T25N, R3W  
Rio Arriba County, NM

(30-039-27262)

~~30-039-05985~~

2 85720

Gentlemen:

DJ Simmons, Inc. requests administrative approval of this non-standard footage location pursuant to Rule 104. C (3). Affected parties would be 3 operators and 2 lessees in the Pictured Cliffs interval in the E/ 2 of Section 23 and SE/4 of Section 14.

The Byrne Federal 24-1 well was originally permitted and drilled as a West Lindrith Gallup Dakota pool test. Attached map 1-A shows archaeological sites and one isolated locus identified by Mr. Roger Moore of Moore Anthropological Research and Ms. Patricia Hester of Bureau of Land Management Albuquerque District Office. The well pad was selected in an area where archaeological sites and features were not present due to an existing constructed stock pond. Attempts were made to position the well site in a standard drilling window but the presents of numerous archaeological features to the east of the site precluded moving the site in that direction.

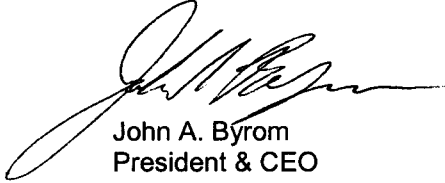
This well was spudded on March 26, 2003; Drilling operations were suspended after setting the 9 5/8" intermediate casing through the Picture Cliffs Formation. Severe hole conditions encountered below the 9 5/8" casing shoe resulted in sticking 2000' of drill string and hole collapse. Fishing operations were not successful. DJ Simmons, Inc. proposes to re-enter the well and complete in the Tapacito-Picture Cliffs.

As required by Rule 104.F (3) the following items are attached:

- A C-102 Showing the well location and proposed spacing unit.
- A plat showing offset Tapacito-Picture Cliffs spacing units or leases if the sections are not spaced.
- A list of the operators or lessee of record for the offsetting proration unit with their addresses.

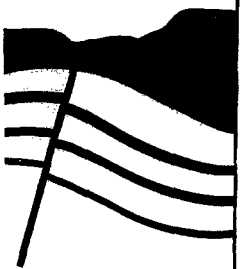
In accordance with Rule 104. F (3) and Rule 1207. A (2), a complete copy of this application was sent by certified mail-return receipt, on the same date as this application to the operators/lessees on the attached list. A copy of the cover letter is attached.

Sincerely

A handwritten signature in black ink, appearing to read "John A. Byrom", with a long horizontal flourish extending to the right.

John A. Byrom  
President & CEO

Enclosures



**DJ SIMMONS, INC.**

1009 Ridgeway Place  
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New Mexico 87401

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505-327-4659 FAX  
info@djsimmonsinc.com  
www.djsimmonsinc.com

**SENT CERTIFIED MAIL – RECEIPT REQUESTED**

May 2, 2003

A.G. Hill & Margaret Hunt Hill  
1601 Elm Street  
Dallas, TX. 75201

Re: Application for Administrative Approval  
Unorthodox Well Location  
Byrne Federal 24-1  
Undesignated Tapacito-Pictured Cliffs Prorated Gas Pool  
NW/4, Section 24, T25N, R3W  
Rio Arriba County, NM

To All Interested Parties:

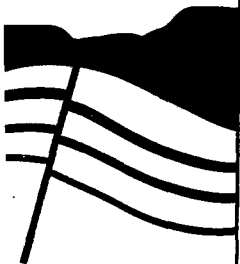
DJ Simmons, Inc. has made application to the New Mexico Oil Conservation Division for administrative approval of the above referenced unorthodox well location. In accordance with Rule 104.F (3) and 1207.A (2), we are advising you of this application as an "Affected person" of an adjoining spacing unit. A copy of the application is attached for your review. If you have no objection to the application, please sign the attached wavier letter and return to the NMOCD in the enclosed self-addressed stamped envelope. If you do not sign the wavier or enter an objection within twenty days, The Division Director may approve this application.

Please contact the undersigned at the letterhead telephone number if you have any questions.

Sincerely,

John A. Byrom  
President & CEO

Enclosures:



**SENT CERTIFIED MAIL – RECEIPT REQUESTED**

**DJ SIMMONS, INC.**

1009 Ridgeway Place  
Suite 200  
Farmington,  
New Mexico 87401

505-326-3753  
505-327-4659 FAX  
info@djsimmonsinc.com  
www.djsimmonsinc.com

May 2, 2003

Dugan Production Corp.  
P.O. Box 420  
Farmington, NM. 87499

Re: Application for Administrative Approval  
Unorthodox Well Location  
Byrne Federal 24-1  
Undesignated Tapacito-Pictured Cliffs Prorated Gas Pool  
NW/4, Section 24, T25N, R3W  
Rio Arriba County, NM

To All Interested Parties:

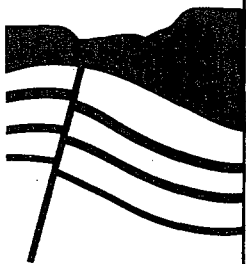
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Sincerely,

John A. Byrom  
President & CEO

Enclosures:



**SENT CERTIFIED MAIL - RECEIPT REQUESTED**

May 2, 2003

**DJ SIMMONS, INC.**

1009 Ridgeway Place  
Suite 200  
Farmington,  
New Mexico 87401

Redwolf Production Inc.  
P.O. Box 5382  
Farmington, NM. 87499

Re: Application for Administrative Approval  
Unorthodox Well Location  
Byrne Federal 24-1  
Undesignated Tapacito- Pictured Cliffs Prorated Gas Pool  
NW/4, Section 24, T25N, R3W  
Rio Arriba County, NM

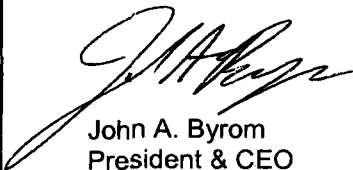
505-326-3753  
505-327-4659 FAX  
info@djsimmonsinc.com  
www.djsimmonsinc.com

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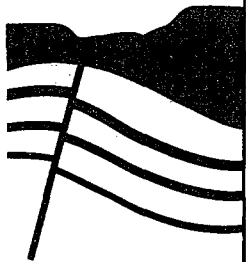
Please contact the undersigned at the letterhead telephone number if you have any questions.

Sincerely,



John A. Byrom  
President & CEO

Enclosures:



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**DJ SIMMONS, INC.**

1009 Ridgeway Place  
Suite 200  
Farmington,  
New Mexico 87401

505-326-3753

505-327-4659 FAX

info@djsimmonsinc.com

www.djsimmonsinc.com

May 2, 2003

B&M Construction Corp.  
1900 Mercantile Bank Bldg.  
Dallas, TX. 75221  
C/O Benson Montin -Greer Drilling Corp.  
4900 College Blvd.  
Farmington, NM. 87401

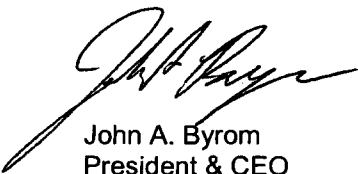
Re: Application for Administrative Approval  
Unorthodox Well Location  
Byrne Federal 24-1  
Undesignated Tapacito-Pictured Cliffs Prorated Gas Pool  
NW/4, Section 24, T25N, R3W  
Rio Arriba County, NM

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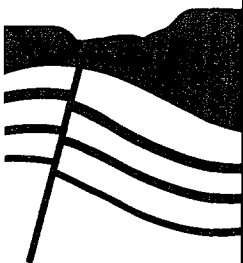
Please contact the undersigned at the letterhead telephone number if you have any questions.

Sincerely,



John A. Byrom  
President & CEO

Enclosures:



**SENT CERTIFIED MAIL – RECEIPT REQUESTED**

**DJ SIMMONS, INC.**

May 2, 2003

1009 Ridgeway Place  
Suite 200  
Farmington,  
New Mexico 87401

Benson Montin-Greer Drilling Corp.  
1900 Mercantile Bank Bldg.  
Dallas, TX. 75221  
C/O Benson Montin- Greer Drilling Corp  
4900 College Blvd.  
Farmington, NM. 87401

505-326-3753

505-327-4659 FAX

info@djsimmonsinc.com  
www.djsimmonsinc.com

Re: Application for Administrative Approval  
Unorthodox Well Location  
Byrne Federal 24-1  
Undesignated Tapacito Pictured Cliffs Prorated Gas Pool  
NW/4, Section 24, T25N, R3W  
Rio Arriba County, NM

To All Interested Parties:

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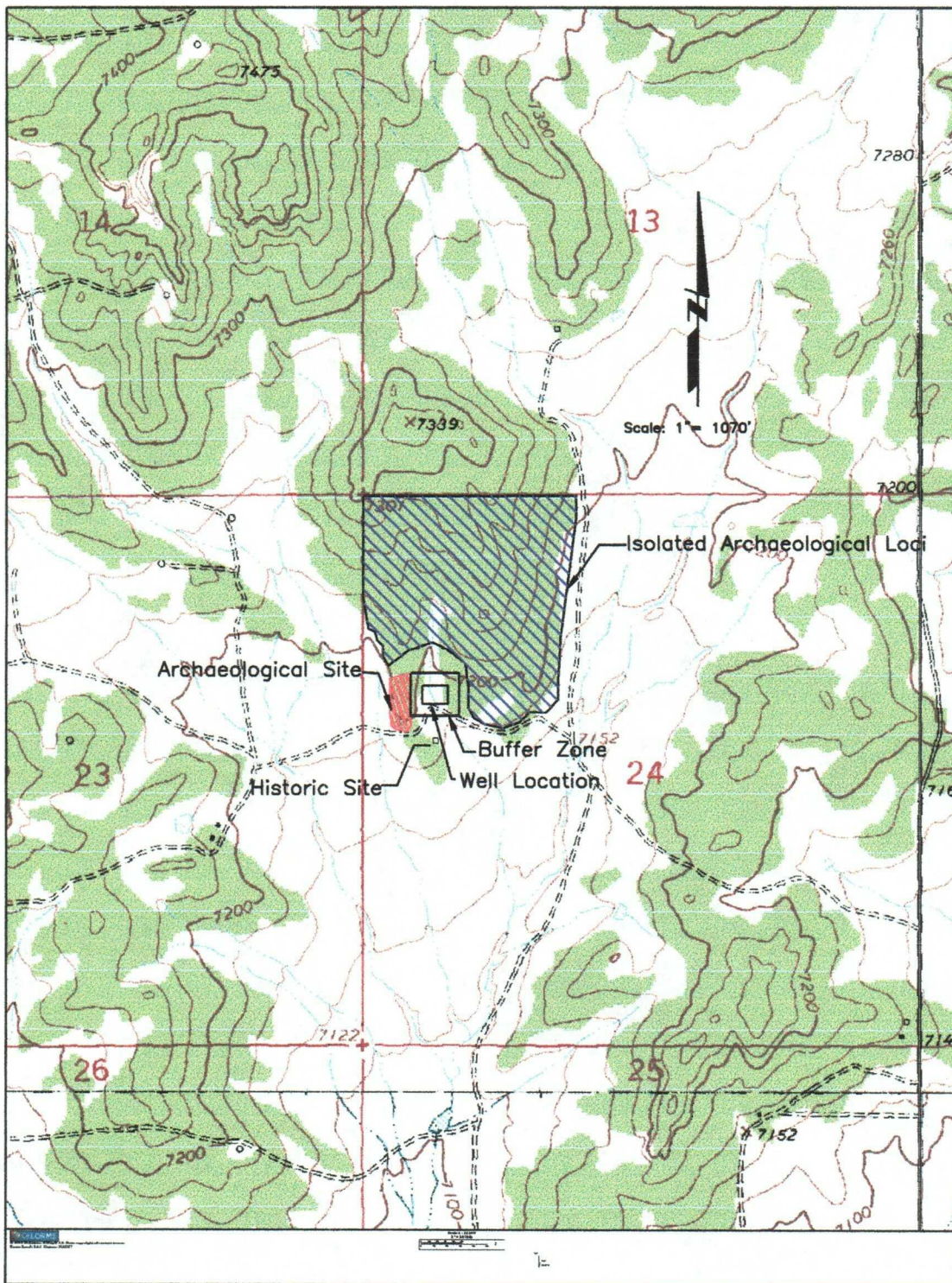
Please contact the undersigned at the letterhead telephone number if you have any questions.

Sincerely,

John A. Byrom  
President & CEO

Enclosures:





MAP -1A



1009 Ridgeway Place  
Suite 200  
Farmington, NM. 87401

PH. (505) 326-3753  
FAX (505) 327-4659

www.djsimmonsinc.com

APPROVED: R.R.G.

DRWN BY: C.D.S.

May 2003

PROJECT : Byrne Fed 24-1

SCALE: As Shown

**UNORTHODOX LOCATION**  
**Byrne Federal 24-1**  
NW/4, Section 24, T25N, R3W  
Rio Arriba County, NM.



**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 & Natural Resources Department  
**OIL CONSERVATION DIVISION**  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Form C-102  
Revised August 15, 2000  
Submit to Appropriate District Office  
State Lease - 4 Copies  
Fee Lease - 3 Copies

☐ AMENDED REPORT

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

<sup>1</sup> API Number		<sup>2</sup> Pool Code 85290		<sup>3</sup> Pool Name Tapacito Pictured Cliffs Prorated Gas Pool	
<sup>4</sup> Property Code 30996		<sup>5</sup> Property Name Byrne Federal 24			<sup>6</sup> Well Number 1
<sup>7</sup> OGRID No. 005578		<sup>8</sup> Operator Name DJ Simmons Inc.			<sup>9</sup> Elevation 7299

<sup>10</sup> **Surface Location**

UL or lot no E	Section 24	Township T25N	Range R3W	Lot Idn	Feet from the 1909	North/South line FNL	Feet from the 594	East/West line FWL	County Rio Arriba
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<sup>11</sup> **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
<sup>12</sup> Dedicated Acres 160		<sup>13</sup> Joint or Infill Infill		<sup>14</sup> Consolidation Code		<sup>15</sup> 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

<sup>16</sup>				<sup>17</sup> <b>OPERATOR CERTIFICATION</b> I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.  Signature JOHN A. BYROM Printed Name PRESIDENT Title 5/2/03 Date	
				<sup>18</sup> <b>SURVEYOR CERTIFICATION</b> 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 Signature and Seal of Professional Surveyor:  Certificate Number	



**Names and Addresses of Affected Persons for Notice Purposes**

**Per Rule 12.07. A (2)**

Unorthodox Location  
Byrne Federal 24-1  
SW/4 NW/4 Section 24, T25N, R3W  
Rio Arriba County, New Mexico

C

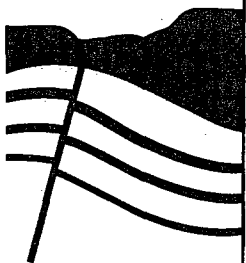
A.G. Hill & Margaret Hunt Hill  
1601 Elm Street  
Dallas, TX. 75201

Redwolf Production Inc.  
P.O. Box 5382  
Farmington, Nm. 87499

B&M Construction Corp  
C/O Benson Montin-Greer Drilling Corp  
4900 College Blvd.  
Farmington, NM. 87401

Benson Montin-Greer Drilling Corp  
4900 College Blvd.  
Farmington, NM. 87401

Dugan Production Corporation  
P.O. Box 420  
Farmington, NM. 87401



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**DJ SIMMONS, INC.**

1009 Ridgeway Place  
Suite 200  
Farmington,  
New Mexico 87401

505-326-3753  
505-327-4659 FAX  
info@djsimmonsinc.com  
www.djsimmonsinc.com

May 2, 2003

TO: Interested Parties Entitled to Notice

RE: Application for Administrative Approval  
Unorthodox Well Location  
Byrne Federal 24-1  
Undesignated Tapacito-Pictured Cliffs Prorated Gas Pool  
NW/4, Section 24, T25N, R3W  
Rio Arriba County, NM.

DJ Simmons Inc. Requests that you waive objection to its application for administrative approval of the above-referenced unorthodox Undesignated Tapacito-Pictured Cliffs Prorated Gas Pool well location. A copy of the application is enclosed.

If you have an objection to this application, you must notify the New Mexico Oil Conservation Commission at 1220 So. St. Francis Dr., Santa Fe, NM 87505 within 20 days of receiving this notice. If you wish to waive objection to this application, please sign and return one copy of this letter in the attached envelope.

Sincerely,

John A. Byrom  
President & CEO

I/We waive objection in the above matter.

Company \_\_\_\_\_

Name \_\_\_\_\_

Signature \_\_\_\_\_ Date \_\_\_\_\_

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

5. Lease Serial No.  
NM 105189

6. If Indian, Allottee or Tribe Name  
n/a

7. If Unit or CA Agreement, Name and No.

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

9. API Well No.

10. Field and Pool, or Exploratory

West Lindreth Gallup Dk / Blanco MV

11. Sec., T., R., M., or 131k and Survey or Area

Section 24, T25N, R3W

12. County or Parish

Rio Arriba

13. State

NM

14. Spacing Unit dedicated to this well

160 NW 1/4 - Gallup OK

20. BLMIA/BIA Bond No. on file

NM 1577

22. Approximate date work will start

09/20/01

23. Estimated duration

60 days

24. Attachments

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

Name (Printed/Typed)

Robert R. Griffie

Date

06/21/01

Title

Operations Engineer

Approved by (Signature)

Name (Printed/Typed)

David R Sitzler

Date

JUN 6 2002

Title

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)

AFMSS

Adjud	amy
Engr	
Geol	put
Surf	
Apprv	put

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

HOLD C104 FOR 1. NSL in Mesquite  
2. Directional survey

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 00, 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

*API Number 30039-27262	*Pool Code 39189	*Pool Name W. Lindin's Gallup/Dakota
*Property Code 30996	*Property Name BYRNE FED 24-1	*Well Number 1
*OCRD No. 5578	*Operator Name D. J. SIMMONS INC.	*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
F	24	25N	3W		1909.21	NORTH	1934	WEST	RIO ARriba

Dedicated Acres	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

	<b>17 OPERATOR CERTIFICATION</b> I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.  Signature: <u>Robert P. Griffice</u> Printed Name: <u>Robert P. Griffice</u> Title: <u>Operations Manager</u> Date: <u>9/2/2001</u>
	<b>18 SURVEYOR CERTIFICATION</b> 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 98 (7-90)

## FAX TRANSMITTAL

# of pages 10

Form 3160-6  
June 1990)

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

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

DEPA: NSN 7540-01-317-7388 5039-101 GENERAL SERVICES ADMINISTRATION  
BUREAU OF LAND MANAGEMENT, BOULDER, CO, NM

U. 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) 326-3763*

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

☒ Notice of Intent

☐ Subsequent Report

☐ Final Abandonment Notice

## TYPE OF ACTION

☐ Abandonment

☐ Recompletion

☐ Plugging Back

☐ Casing Repair

☐ Altering Casing

☐ Other

☒ Change of Plans

☐ New Construction

☐ Non-Routine Fracturing

☐ Water Shut-Off

☐ Conversion to Injection

☐ 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. Griffes*  
Robert R. Griffes

Title *Operations Manager*

Date: 12/18/02

(This space for Federal or State office use)

Approved by *[Signature]*  
Conditions of approval, if any:

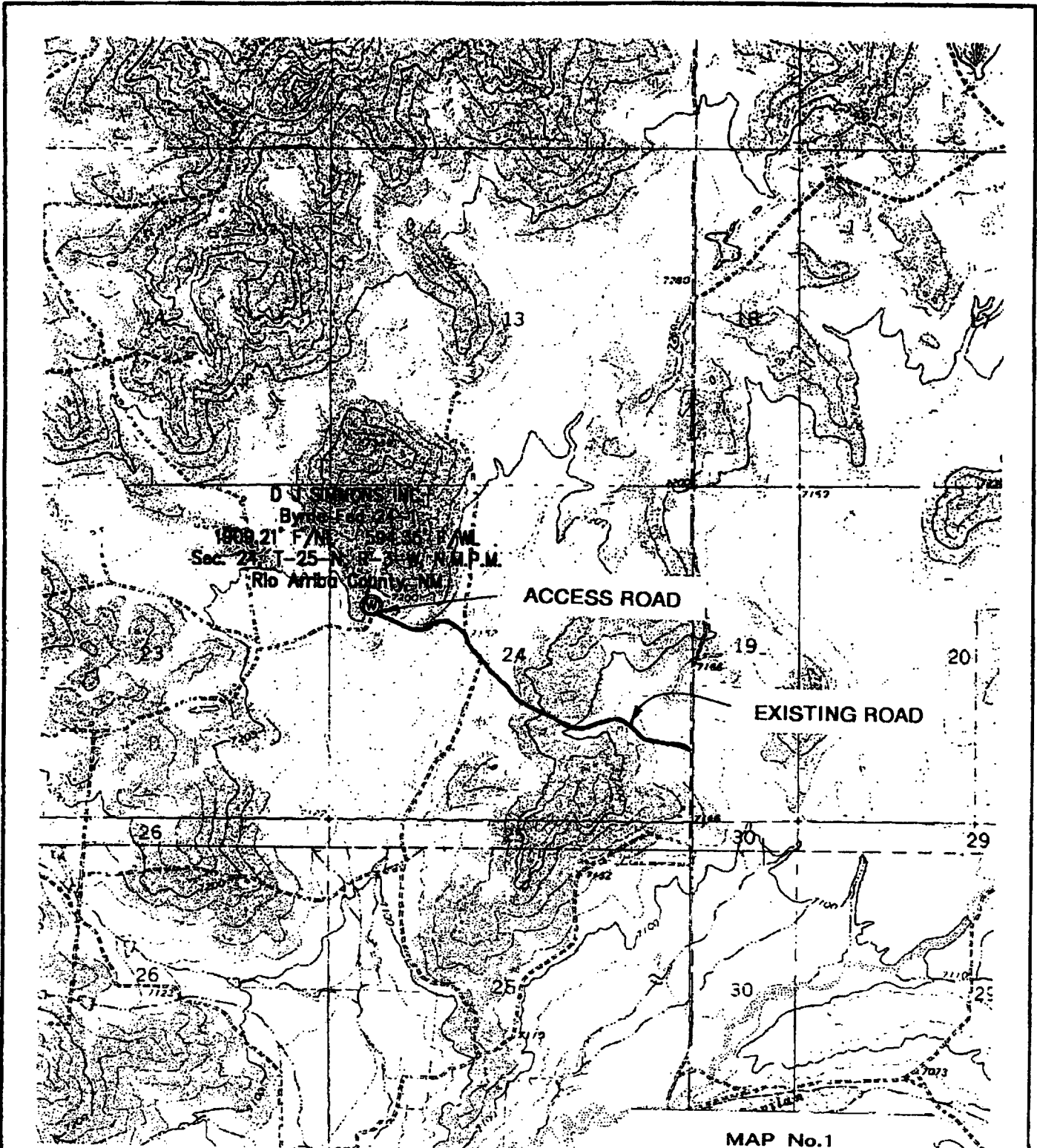
Title *Acting AFM, Multi Resource* Date *12/23/2002*

*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.

1000 Ridgeway Place  
Suite 200  
Farmington, NM. 87401

PH. (505) 326-3763  
FAX (505) 327-4669

email: djsimmonsinc@cyberport.com

APPROVED: R.R.G.

DRWN BY: C.D.S.

CHK'D BY:

PROJECT : Byrne Fed 24-1

JUNE 7, 2001

BYRNE Fed 24-1  
1909.21' F/NL 594.35' F/WL  
SECTION 24, T25N, R3W  
Rio Arriba County, NM

**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

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D.J. Simmons, Inc.

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(505) 326-3753

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**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% CaCl<sub>2</sub> (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. Griffie  
Operations Engineer

Date: 12/18/02

## 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  
Target TVD: 8250

Closure Direction: 90

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	
6,850.00	6.00	90.00	6,648.82	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	6,898.88	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	7,027.48	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	7,368.68	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 Pad 34-1

OBISCH 22  
Zone Protection Well Design