

RECEIVED

MARK 10 2004 APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: Secondary Recovery Pressure Maintenance Disposal Storage
Application qualifies for administrative approval? Yes No

II. OPERATOR: Santana Exploration and Production
1220 S. Saint Francis Drive Santa Fe, NM 87505

ADDRESS: One Williams Center, MD 25-3, Tulsa, Ok 74172
CONTACT PARTY: Kirk Place PHONE: 918-573-6250

III. WELL DATA: Complete the data required on the reverse side of this form for each well proposed for injection.
Additional sheets may be attached if necessary.

IV. Is this an expansion of an existing project? Yes No
If yes, give the Division order number authorizing the project: _____
was approved in 1999 already SWD-758

V. Attach a map that identifies all wells and leases within two miles of any proposed injection well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review. See Attached.

VI. Attach a tabulation of data on all wells of public record within the area of review which penetrate the proposed injection zone. Such data shall include a description of each well's type, construction, date drilled, location, depth, record of completion, and a schematic of any plugged well illustrating all plugging detail. There are no wells penetrating the proposed depth interval for injection within the area of review.

VII. Attach data on the proposed operation, including:
1. Proposed average and maximum daily rate and volume of fluids to be injected;
Average injection rate of 3000 Bbbls/day. Maximum injection rate of 4320 Bbbls/day.
2. Whether the system is open or closed;
The System will be closed.
3. Proposed average and maximum injection pressure;
The proposed average injection pressure is 600 psi. The maximum injection pressure will be maintained below 1840 pounds per square inch or 0.2 psi/ft.
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and,
The source of injection fluid will be produced water from the Fruitland Coal formation. (See attached typical water analysis). If Entrada formation water is attainable after completion, a compatibility test with Fruitland Coal water will be submitted.
5. If injection is for disposal purposes into a zone not productive of oil or gas at or within one mile of the proposed well, attach a chemical analysis of the disposal zone formation water (may be measured or inferred from existing literature, studies, nearby wells, etc.).
The injection is for disposal purposes into a zone not productive of oil or gas. There is no production from the Entrada within one mile of the proposed location.

AOR = 0 wells
New well
API NO: 30-039-27055
1640

*VIII. Attach appropriate geologic data on the injection zone including appropriate lithologic detail, geologic name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (aquifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such sources known to be immediately underlying the injection interval.

The proposed injection zones are the Lower Morrison Fm. (est. 8200'-8495', 295 ft.), Bluffs Ss. (est. 8495-8665', 170 ft.), and the Entrada Ss. (est. 8750-9075', 325'). There are no known aquifers below the Entrada Ss., which contain drinking water. The Ojo Alamo Ss. (2325'-2430') is the only known aquifer that is a source of drinking water overlying the injection zone.

IX. Describe the proposed stimulation program, if any.
The proposed stimulation program will consist of an acid/ballout breakdown and a hydraulic sand frac. The fracture treatment will be a 30# Borate fluid system carrying approximately 300,000 lbs 20/40 proppant in concentrations from 1 to 8 ppg.

OGRID = 120782
Property = 32031
Pool = 98162
Turn in CBL to AZTEC

- *X. ✓ Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted).
No logs or test data available at present time.
- *XI. ✓ Attach a chemical analysis of fresh water from two or more fresh water wells (if available and producing) within one mile of any injection or disposal well showing location of wells and dates samples were taken.
There are no fresh water wells within one mile of the proposed injection well. There is only one fresh water well in the same township and range, located approximately two miles away in Sec 32, T31N, R6W. The well was drilled in 1952 by El Paso Natural Gas. The well is not active and has a plate welded over the casing.
- XII. ✓ Applicants for disposal wells must make an affirmative statement that they have examined available geologic and engineering data and find no evidence of open faults or any other hydrologic connection between the disposal zone and any underground sources of drinking water.
An examination of geologic and engineering data indicates no evidence of open faults or any hydrologic connection between the disposal zone (Lower Morrison Fm, Bluff Ss., Entrada Ss.) and the drinking water zone (Ojo Alamo).
- XIII. ✓ Applicants must complete the "Proof of Notice" section on the reverse side of this form.
BLM has surface rights and will be notified by registered mail, there are no other leasehold operators within one-half mile. Proof of publication is attached.
- XIV. Certification: I hereby certify that the information submitted with this application is true and correct to the best of my knowledge and belief.

NAME: Kirk Place TITLE: Senior Drilling Engineer

SIGNATURE: *Kirk Place* DATE: 3/5/04

E-MAIL ADDRESS: Kirk.Place@Williams.com

* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be resubmitted. Please show the date and circumstances of the earlier submittal: The information for the listed sections was previously submitted in the Application For Authorization To Inject and approved by Administrative Order SWD-758

DISTRIBUTION: Original and one copy to Santa Fe with one copy to the appropriate District Office

III. WELL DATA

A. The following well data must be submitted for each injection well covered by this application. The data must be both in tabular and schematic form and shall include:

- (1) Lease name; Well No.; Location by Section, Township and Range; and footage location within the section.
- (2) Each casing string used with its size, setting depth, sacks of cement used, hole size, top of cement, and how such top was determined.
- (3) A description of the tubing to be used including its size, lining material, and setting depth.
- (4) The name, model, and setting depth of the packer used or a description of any other seal system or assembly used.

Division District Offices have supplies of Well Data Sheets which may be used or which may be used as models for this purpose. Applicants for several identical wells may submit a "typical data sheet" rather than submitting the data for each well.

B. The following must be submitted for each injection well covered by this application. All items must be addressed for the initial well. Responses for additional wells need be shown only when different. Information shown on schematics need not be repeated.

- (1) The name of the injection formation and, if applicable, the field or pool name.
- (2) The injection interval and whether it is perforated or open-hole.
- (3) State if the well was drilled for injection or, if not, the original purpose of the well.
- (4) Give the depths of any other perforated intervals and detail on the sacks of cement or bridge plugs used to seal off such perforations.
- (5) Give the depth to and the name of the next higher and next lower oil or gas zone in the area of the well, if any.

XIV. PROOF OF NOTICE

All applicants must furnish proof that a copy of the application has been furnished, by certified or registered mail, to the owner of the surface of the land on which the well is to be located and to each leasehold operator within one-half mile of the well location.

Where an application is subject to administrative approval, a proof of publication must be submitted. Such proof shall consist of a copy of the legal advertisement which was published in the county in which the well is located. The contents of such advertisement must include:

- (1) The name, address, phone number, and contact party for the applicant;
- (2) The intended purpose of the injection well; with the exact location of single wells or the Section, Township, and Range location of multiple wells;
- (3) The formation name and depth with expected maximum injection rates and pressures; and,
- (4) A notation that interested parties must file objections or requests for hearing with the Oil Conservation Division, 1220 South St. Francis Dr., Santa Fe, New Mexico 87505, within 15 days.

NO ACTION WILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBMITTED.

INJECTION WELL DATA SHEET

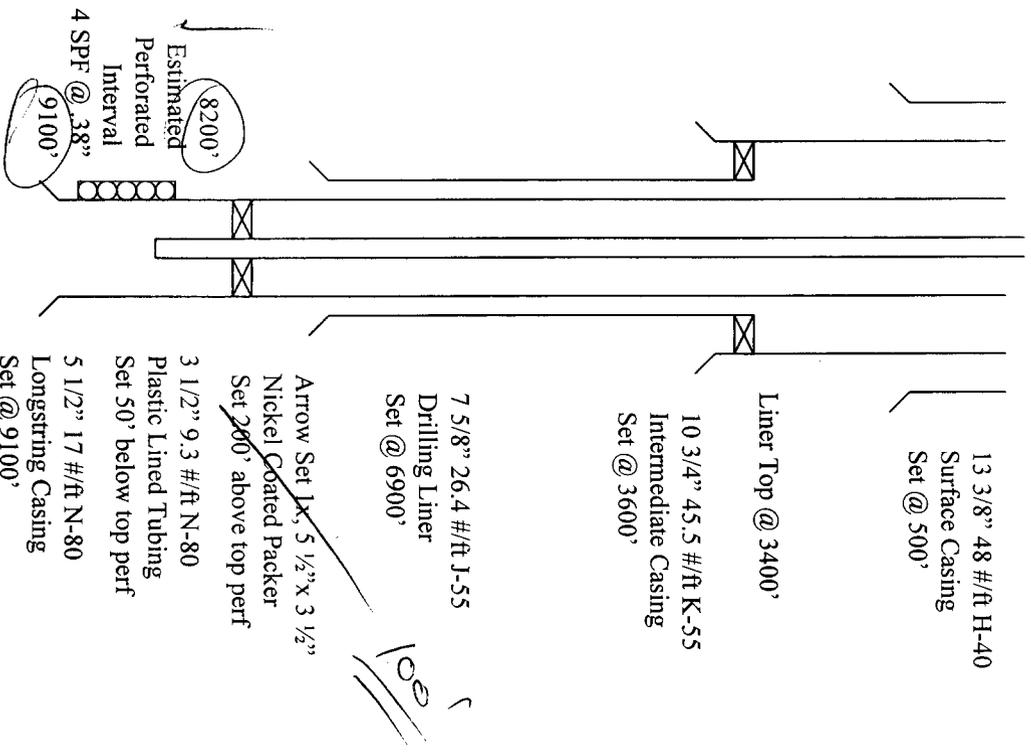
OPERATOR: Williams Exploration and Production Company

WELL NAME & NUMBER: Rosa Unit SWD #1

WELL LOCATION: 2420' FSL, 1210' FEL, I Section 23 - T31N - R6W
 FOOTAGE LOCATION UNIT LETTER SECTION TOWNSHIP RANGE

WELLBORE SCHEMATIC

WELL CONSTRUCTION DATA
Surface Casing



Hole Size: 17-1/2" Casing Size: 13-3/8"
 Cemented with: 440 sx. or 817 ft³
 Top of Cement: Surface Method Determined: Calculation

Intermediate Casing

Hole Size: 12-1/4" Casing Size: 10-3/4"
 Cemented with: 715 sx. or 1314 ft³
 Top of Cement: Surface Method Determined: Calculation

Drilling Liner

Hole Size: 9-7/8" Casing Size: 7-5/8"
 Cemented with: 635 sx. or 1173 ft³
 Top of Cement: 3400' Method Determined: Calculation

See Next Page for Production Casing

District I
PO Box 1980, Hobbs, NM 88241-1980

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised February 21, 1994

District II
PO Drawer DD, Artesia, NM 88211-0719

OIL CONSERVATION DIVISION
PO Box 2088
Santa Fe, NM 87504-2088

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

District III
1000 Rio Brazos Rd., Aztec, NM 87410

AMENDED REPORT

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

WELL LOCATION AND ACREAGE DEDICATION PLAT

*API Number 30039-27055		*Pool Code 96162	*Pool Name SWD; Morrison, Bluff, Entrada
*Property Code 32031	*Property Name ROSA UNIT SWD		*Well Number 1
*OGRID No. 120782	*Operator Name WILLIAMS PRODUCTION COMPANY		*Elevation 6243'

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
I	23	31N	6W		2420	SOUTH	1210	EAST	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

¹² Dedicated Acres: **NA** 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

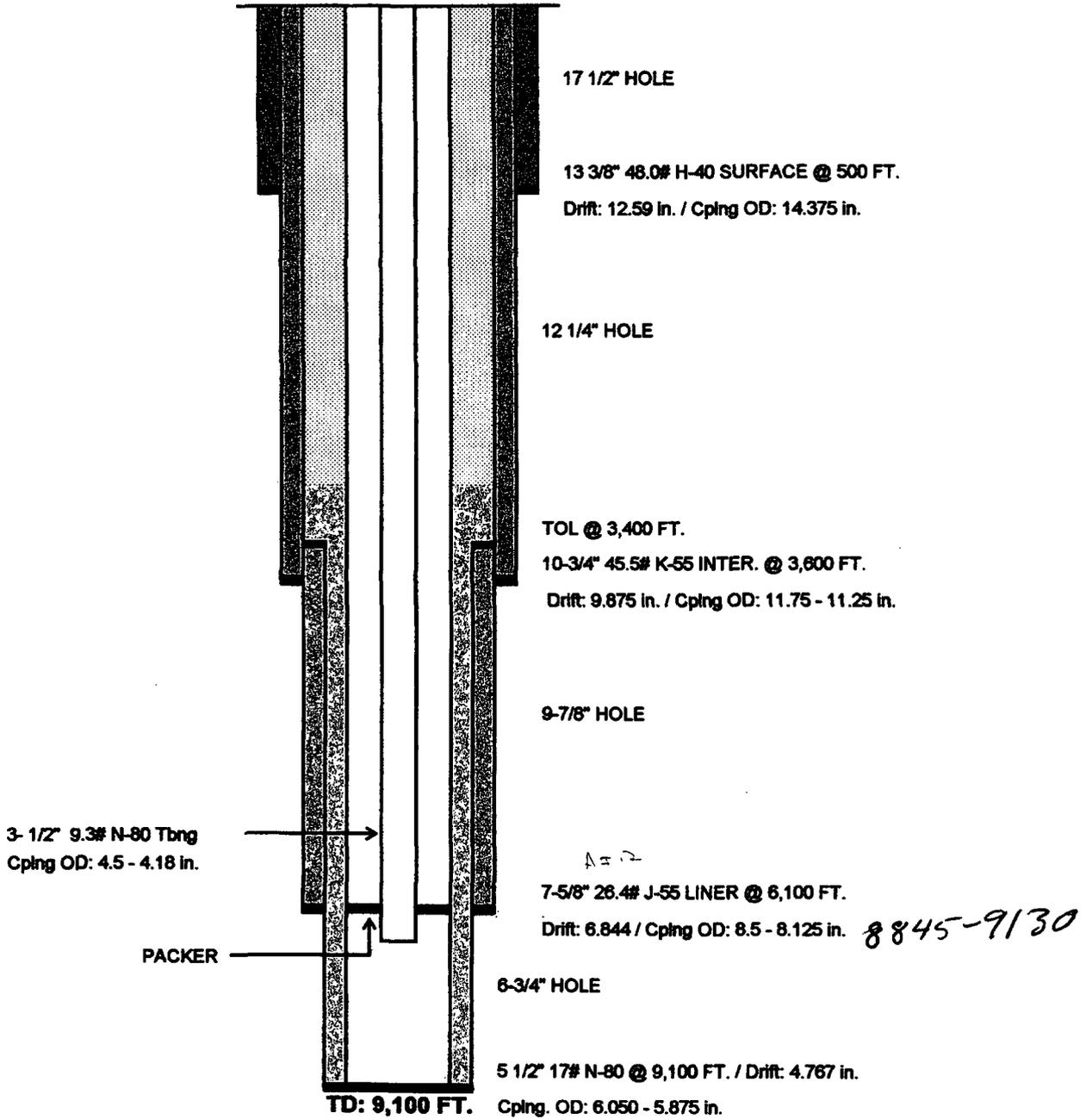
<p>¹⁶</p>	<p>5280.00'</p>	<p>5280.00'</p>	<p>¹⁷ OPERATOR CERTIFICATION I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief.</p> <p><i>John C. Thompson</i> Signature John C. Thompson Printed Name Agent Title 7/17/02 Date</p>
	<p>5278.68'</p>	<p>5280.00'</p>	<p>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.</p> <p>JUNE 2, 1999 Date of Survey Signature of Registered Professional Surveyor NEALE C. EDWARDS NEW MEXICO 6857 REGISTERED PROFESSIONAL SURVEYOR Certificate No. 6857</p>

070 FARMINGTON NM
2002 JUL 22 AM 11:22
RECEIVED

WILLIAMS SWD # 1



WELLBORE SCHEMATIC



UNITED STATES
DEPARTMENT OF INTERIOR
BUREAU OF LAND MANAGEMENT

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

RECEIVED

SUNDRY NOTICE AND REPORTS ON WELLS
Do not use this form for proposals to drill or to deepen or reentry to a different reservoir. Use "APPLICATION TO DRILL" for permit for such proposals

Lease Designation and Serial No.
SF-078771

2003 NOV 17 PM 3:36

If Indian, Allottee or Tribe Name

070 Farmington, NM

If Unit or CA, Agreement Designation
Rosa

SUBMIT IN TRIPLICATE

1. Type of Well Oil Well <input type="checkbox"/> Gas Well <input checked="" type="checkbox"/> Other <input type="checkbox"/>	8. Well Name and No. Rosa Unit SWD #1
2. Name of Operator WILLIAMS PRODUCTION COMPANY	9. API Well No. 30-039-27055
3. Address and Telephone No. PO BOX 316 Ignacio, Colorado 81137 (970)563-3308	10. Field and Pool, or Exploratory Area Entrada
4. Location of Well (Footage, Sec., T., R., M., or Survey Description) 2420' FSL & 1210' FEL, Sec 23, T31N, R6W	11. County or Parish, State Rio Arriba, New Mexico

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

TYPE OF SUBMISSION	TYPE OF ACTION
<input type="checkbox"/> Notice of Intent <input checked="" type="checkbox"/> Subsequent Report <input type="checkbox"/> Final Abandonment	Abandonment Recompletion Plugging Back Casing Repair Altering Casing <input checked="" type="checkbox"/> 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 depths for all markers and zones pertinent to this work.)*

Williams Production Company, LLC is seeking an extension on the APD that was issued for the above mentioned well. Due to budget constraints Williams was unable to drill this well in 2003, but plan to drill this well in 2004.

-This approval expires: FEB 14 2005



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

Signed Larry Higgins Title Drilling C.O.M. Date 11-17-03

(This space for Federal or State office use)

Approved by [Signature] Title Petr. Eng. Date 11/26/03

Conditions of approval, if any:

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.

NMOC

Production Casing

Hole Size: 6-3/4" Casing Size: 5-1/2"
Cemented with: 405 sx. *or* 705 ft³
Top of Cement: 3400' Method Determined: Calculation
Total Depth: 9100'

Injection Interval

8200' feet to 9100'

Perforated

INJECTION WELL DATA SHEET

Tubing Size: 3-1/2" 9.3 #/ft N-80 Lining Material: Plastic Coated

Type of Packer: Arrow Set 1 x, 5-1/2" x 3-1/2" (nickel coated)

Packer Setting Depth: 7900'

Other Type of Tubing/Casing Seal (if applicable): N/A

Additional Data

1. Is this a new well drilled for injection? Yes No

If no, for what purpose was the well originally drilled? _____

2. Name of the Injection Formation: MORRISON / BUFF, Entrada

3. Name of Field or Pool (if applicable): Wildcat

4. Has the well ever been perforated in any other zone(s)? List all such perforated intervals and give plugging detail, i.e. sacks of cement or plug(s) used. No

5. Give the name and depths of any oil or gas zones underlying or overlying the proposed injection zone in this area: There are no oil and gas zones below the Entrada. The Oil and gas

zones above are the Dakota (7745' - 8145'), Point Lookout (5525' - 2525'), Menefee (5315' - 5525'),

Cliff House (5270' - 5315'), Lewis Shale (3360' - 5278'), Pictured Cliffs (3065' - 3360'), &).

Fruitland Coal (2830' - 3065').

Water Analysis Report

Customer : Williams Production Company

Date Sampled : 10-Sep-02

Address :

Date Reported : 24-Sep-02

City :

Date Received : 18-Sep-02

State :

Postal Code :

Field : Farmington

Lease : Farmington

Attention : Lance Hobbs

Location : Rosa #223

cc1 : Mark Lepich

Sample Point : tank

cc2 :

Salesman : Clay Bingham

cc3 :

Comments :

Analyst : Karen Hawkins Allen

CATIONS

Calcium : 288 mg/l
Magnesium : 282 mg/l
Barium : mg/l
Strontium : mg/l
Iron : 3.0 mg/l
Sodium : 3350 mg/l

pH (field) : 8.00
Temperature : 73 degrees F
Ionic Strength : 0.18

Resistivity : ohm/meters

Ammonia : ppm

ANIONS

Chloride : 3,460 mg/l
Carbonate : 0 mg/l
Bicarbonate : 4,990 mg/l
Sulfate : 188 mg/l mg/l mg/l

Specific Gravity : 1.010 grams/ml
Total Dissolved Solids : 12,561 ppm
CO2 in Water : 1 mg/l
CO2 in Gas : 0.03 mole %
H2S in Water : 33.0 mg/l
Dissolved Oxygen : ppm

SI calculations based on Tomson-Oddo parameters

Calcite (CaCO3) SI :	3.43	Calcite PTB :	251.7
Calcite (CaCO3) SI @ 100 F :	3.70	Calcite PTB @ 100 F :	251.8
Calcite (CaCO3) SI @ 120 F :	3.91	Calcite PTB @ 120 F :	251.8
Calcite (CaCO3) SI @ 140 F :	4.13	Calcite PTB @ 140 F :	251.8
Calcite (CaCO3) SI @ 160 F :	4.35	Calcite PTB @ 160 F :	251.8
Calcite (CaCO3) SI @ 180 F :	4.59	Calcite PTB @ 180 F :	251.8
Calcite (CaCO3) SI @ 200 F :	4.82	Calcite PTB @ 200 F :	251.8
Gypsum (CaSO4) SI :	-1.85	Gypsum PTB :	N/A
Barite (BaSO4) SI :	N/A	Barite PTB :	N/A
Celestite (SrSO4) SI :	N/A	Celestite PTB :	N/A

Confidential

Champion Technologies, Inc.
 Vernal District Technical Services

District I
PO Box 1980, Hobbs, NM 88241-1980

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised February 21, 1994

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AMENDED REPORT

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*API Number		*Pool Code		*Pool Name	
*Property Code		*Property Name ROSA UNIT SWD			*Well Number 1
*GRID No.		*Operator Name WILLIAMS PRODUCTION COMPANY			*Elevation 6243'

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UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County

¹² Dedicated Acres	¹³ Joint or Infill	¹⁴ Consolidation Code	¹⁵ Order No.

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¹⁶

23

¹⁷ OPERATOR CERTIFICATION

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

John C. Thompson

Signature
John C. Thompson
Printed Name
Agent
Title
7/17/02
Date

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.

JUNE 2, 1999

Date of Survey

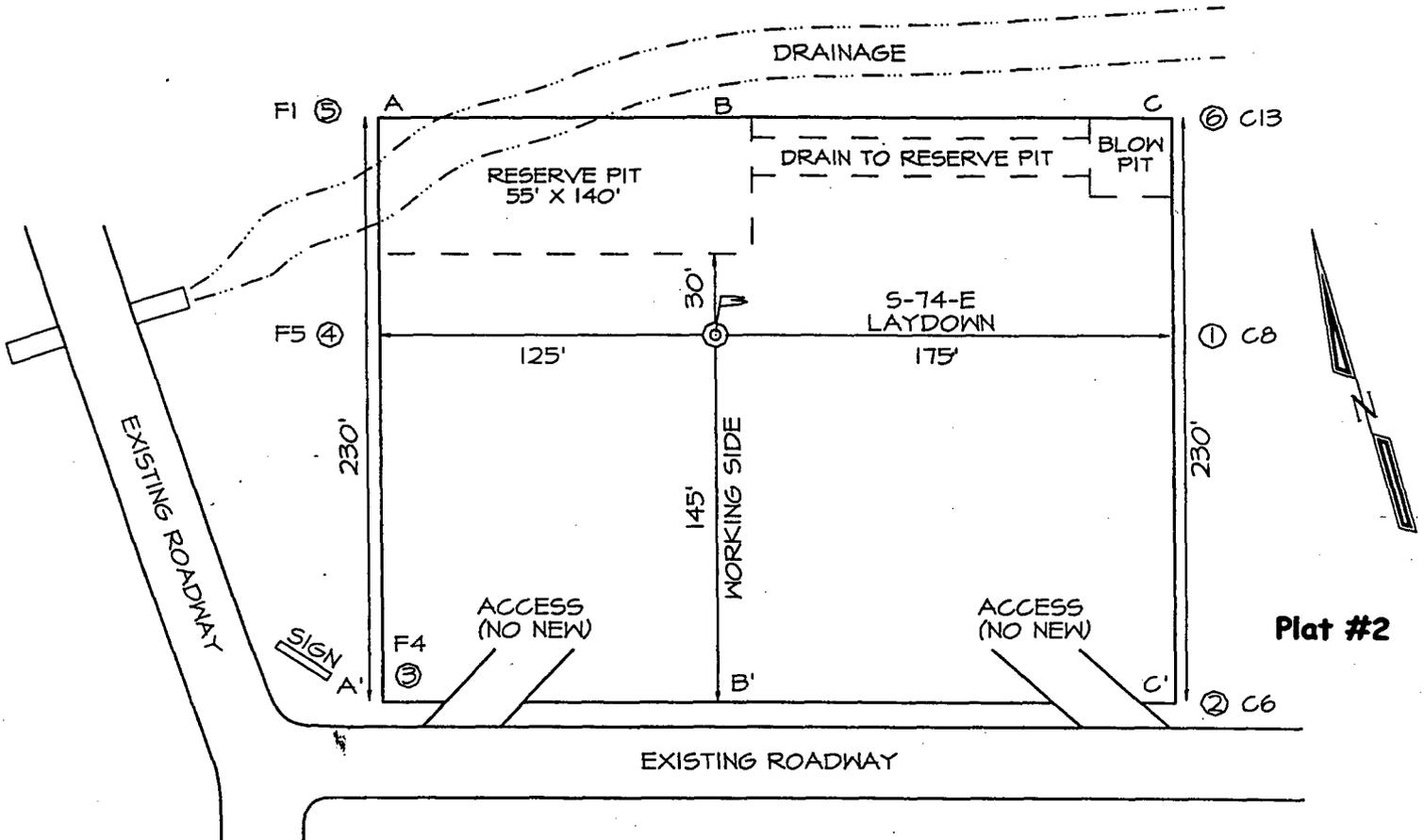
NEALE C. EDWARDS
REGISTERED PROFESSIONAL SURVEYOR
NEW MEXICO
6857

Signature and Seal of Professional Surveyor

Certificate No. 6857

RECEIVED
 2002 JUL 22 AM 11:22
 670 WASHINGTON, NM

WILLIAMS PRODUCTION COMPANY ROS. NIT SWD #1
2420' FSL 1210' FEL, SECTION 23, T31N 6W, NMPM
RIO ARriba COUNTY, NEW MEXICO GROUND ELEVATION: 6243'



Plat #2

A-A'						
6253'						
6243'						
6233'						

B-B'						
6253'						
6243'						
6233'						

C-C'						
6253'						
6243'						
6233'						

AFFIDAVIT OF PUBLICATION

Ad No. 49291

**STATE OF NEW MEXICO
County of San Juan:**

CONNIE PRUITT, being duly sworn says:
That she is the CLASSIFIED MANAGER of
THE DAILY TIMES, a daily newspaper of
general circulation published in English at
Farmington, said county and state, and that
the hereto attached Legal Notice was
published in a regular and entire issue of the
said DAILY TIMES, a daily newspaper duly
qualified for the purpose within the meaning of
Chapter 167 of the 1937 Session Laws of the
State of New Mexico for publication and
appeared in the Internet at The Daily Times
web site on the following day(s):

Thursday, February 12, 2004.

And the cost of the publication is \$36.50.

Connie Pruitt

ON 2-12-04 CONNIE PRUITT
appeared before me, whom I know personally
to be the person who signed the above
document.

Genny Beck
My Commission Expires April 2, 2004.

COPY OF PUBLICATION

918 Legals
PUBLIC NOTICE

Williams Exploration and
Production Company will file
an application on February 23,
2004, for approval to inject
water produced from other oil
and gas wells, into the
Entrada formation in the Rosa
Unit SWD #1 located in the
northwest quarter of the
southeast quarter of Section
23 Township 31 North, Range
6 West, Rio Arriba County,
New Mexico at a depth from
8100 feet to 9100 feet with
surface injection pressure up
to 1840 pounds per square
inch, and injection rates up to
4320 barrels per day.

Surface owners and offset
operators must file any
objections or request for
public hearing with the New
Mexico Oil Conservation
Division 1220 South St.
Francis Dr. Santa Fe, New
Mexico 87505 within 15 days
of the date of this notice. The
Williams Exploration and
Production Company contact
person is Kirk Place, One
Williams Center, MS 25-3,
Tulsa, Ok 74172, telephone
918-573-6250.

Legal No. 49291 published in
The Daily Times, Farmington,
New Mexico on Thursday,
February 12, 2004.

U.S. Postal Service
CERTIFIED MAIL RECEIPT
 (Domestic Mail Only: No Insurance Coverage Provided)

7000 0520 0024 3018 6789

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Postage	\$
Certified Fee	
Return Receipt Fee (Endorsement Required)	
Restricted Delivery Fee (Endorsement Required)	
Total Postage & Fees	\$

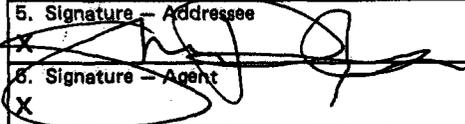
Postmark
Here

Recipient's Name (Please Print Clearly) (To be completed by mailer)
 Bureau of Land Management
 Street, Apt. No.; or PO Box No.
 1235 La Plata Highway
 City, State, ZIP+4
 Farmington, N.M. 87401

PS Form 3800, February 2000 See Reverse for Instructions

SENDER: Complete Items 1 and 2 when additional services are desired, and complete Items 3 and 4.
 Put your address in the "RETURN TO" Space on the reverse side. Failure to do this will prevent this card from being returned to you. The return receipt fee will provide you the name of the person delivered to and the date of delivery. For additional fees the following services are available. Consult postmaster for fees and check box(es) for additional service(s) requested.

1. Show to whom delivered, date, and addressee's address. Restricted Delivery
 ↑(Extra charge)↑ ↑(Extra charge)↑

<p>3. Article Addressed to: Bureau of Land Management 1235 La Plata Highway Farmington, New Mexico 87401</p>	<p>4. Article Number 7000 0520 0024 3018 6789</p> <p>Type of Service: <input type="checkbox"/> Registered <input type="checkbox"/> Insured <input checked="" type="checkbox"/> Certified <input type="checkbox"/> COD <input type="checkbox"/> Express Mail</p> <p>Always obtain signature of addressee or agent and DATE DELIVERED.</p>
<p>5. Signature - Addressee X </p> <p>6. Signature - Agent X</p>	<p>8. Addressee's Address (ONLY if requested and fee paid)</p>
<p>7. Date of Delivery FEB 27 1987</p>	