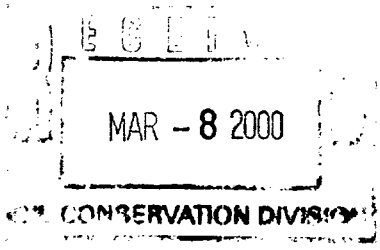
SWD 3/23/00

dugan production corp.

#1364



March 7, 2000

New Mexico Oil Conservation Division
2040 S. Pacheco
Santa Fe, NM 87505

Re: Application to Convert Stella Needs A Com No. 1 to Salt Water Disposal Well

Gentlemen:

Dugan Production Corp. asks for administrative approval to convert the subject well from a Dakota production well to a Mesaverde Salt Water Disposal well. The well is located 1650' fsl & 1650' fwl, Sec. 36-Twn.30N-Rng.14W, San Juan Co., NM. Dugan operates the Stella Needs A Com No. 1E as a Mesaverde disposal well, located in the same section under Administrative Order SWD-595. The subject well of this application will be operated in a similar manner.

Sincerely Yours,

John Alexander

John Alexander
Vice President

JA/mm
cc: NMOCD - Aztec Office

709 E. MURRAY DR. • P. O. BOX 420 • FARMINGTON, N.M. 87499-0420 • PHONE: (505) 325-1821 • FAX# (505) 327-4613

STATE OF NEW MEXICO
ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

OIL CONSERVATION DIVISION
PO BOX 2088
SANTA FE, NM 87504-2088

FORM C-108
Revised 7-1-81

Case 12364

APPLICATION FOR AUTHORIZATION TO INJECT

I. PURPOSE: ____ Secondary Recovery ____ Pressure Maintenance X Disposal ____ Storage
Application qualifies for administrative approval? ___Yes ___No

II. OPERATOR: DUGAN PRODUCTION CORP.

ADDRESS: P.O. Box 420, Farmington, NM 87499

CONTACT PARTY: John Alexander PHONE: 505/325-1821

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

IV. Is this an expansion of an existing project: ___ Yes X No
If yes, give the Division order number authorizing the project_____

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.

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.

VII. Attach data on the proposed operation, including:

1. Proposed average and maximum daily rate and volume of fluids to be injected;
2. Whether the system is open or closed;
3. Proposed average and maximum injection pressure;
4. Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and
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.).

*VIII. Attach appropriate geological data on the injection zone including appropriate lithologic detail, geological 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.

IX. Describe the proposed stimulation program, if any.

* X. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division, they need not be resubmitted.)

* 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.

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 source of drinking water.

XIII. Applicants must complete the "Proof of Notice" section on the reverse side of this form.

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: John Alexander TITLE: Vice-President

SIGNATURE: John Alexander DATE: 3/6/2000

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 circumstance of the earlier submittal. _____

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

Attachment III Well Data
Dugan Production Corp. Stella Needs A Com 1 - SWD

Well Name: Stella Needs A Com No. 1

Location: 1650' fsl & 1650' fwl, Sec. 36-Twn.30N-Rng.14W, San Juan Co., NM

Surface Casing: 8-5/8" 24 lb./ft. set at 268'. Cemented with 150 sks. Circulate surface.

Long String: 4-1/2" 10.5 lb./ft. set at 6016' in 7-7/8' hole. Cemented with 100 sks. 8% gel, followed with 50 sks. neat. Top of cement calculated at 5200'. A casing hole at 3500' was squeezed with 150 sks. Class B neat. Calculated top of cement at 2950'.

Tubing: 2-3/8" EUE 4.7 lb./ft. plastic lined, set at 3500'. Packer will be Baker Model AD-1 tension type.

Conversion Procedure:

The procedure that will be used to plug the Dakota and Gallup and complete the Mesaverde for disposal operations is attached as Attachment III-1. The general procedure will be to properly plug the Dakota and the Gallup zones. A cement squeeze will be placed at the base of the Mesaverde to prevent water from migrating downward. The casing above the Mesaverde will be pressure tested. The Point Lookout interval of the Mesaverde will be perforated and injection rates tested. If stimulation is deemed necessary, an acid treatment will be designed. A schematic of the wellbore after the conversion procedure is completed is included as Attachment III-2

Attachment III-1

Dugan Production Corp.
Stella Needs A Com No. 1
1650' fsl & 1650' fwl
36-30N-14W
Basin Dakota

CONVERSION TO MESAVERDE SWD

DATA:

Casing: 8-5/8 @ 268'. Cemented to surface.

4-1/2" 10.5 @ 6016', pbtd 5985'. Cemented with 100 sks. 8% gel + 50 neat. Calculated top of cement @ 5200'. Had leak at 5' after fracturing Dakota. Repaired with welder. Hole in casing at 3500' +/-. Squeezed with 150 sks. neat. Calculated top of cement if all went up 2950'.

Tubing: 2-3/8" EUE @ 5888' with Model R packer @ 5762 and 4 jts. tail pipe.

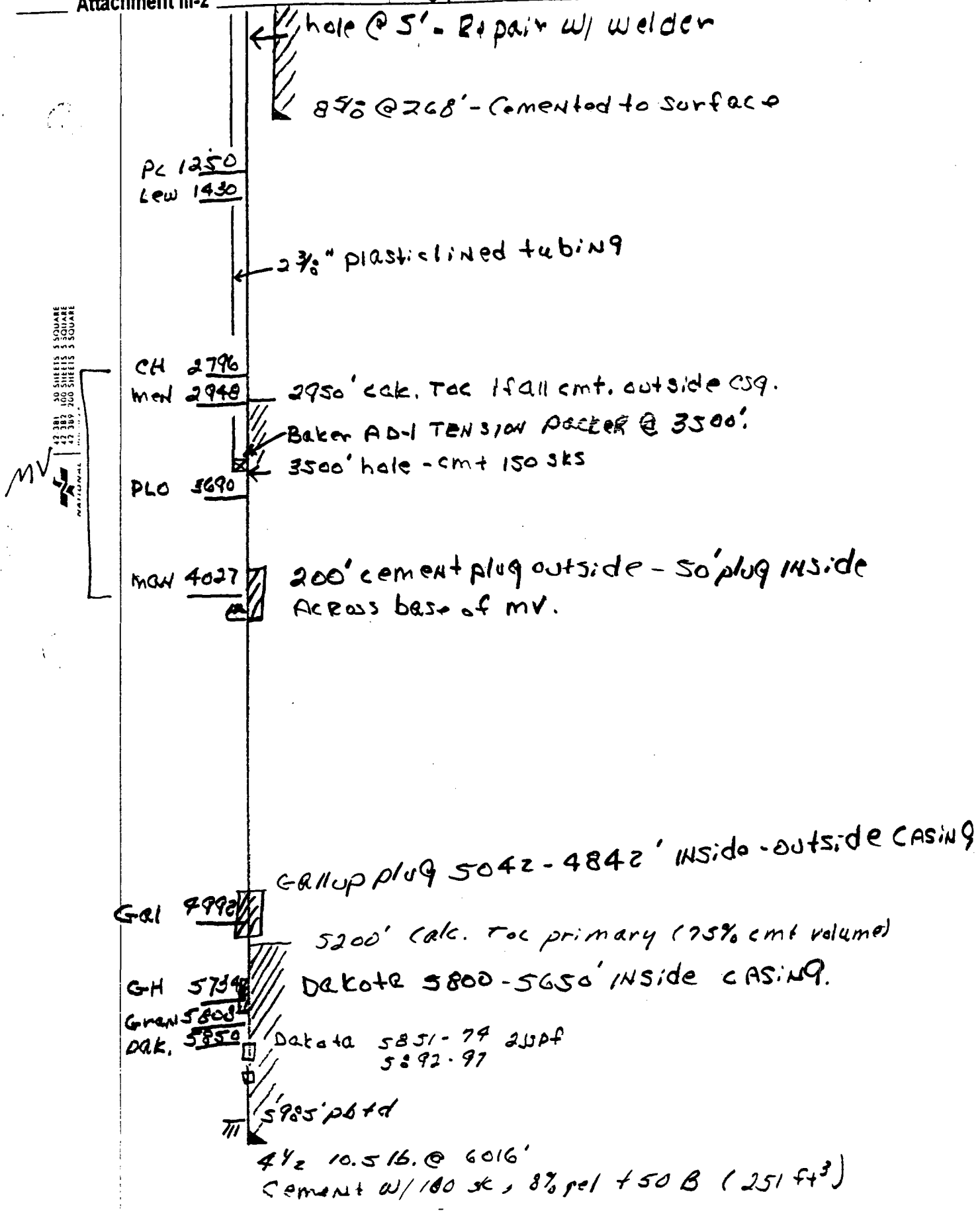
Perforations: (Dakota) 5851-5874, 5892-5897' (2 jspf)

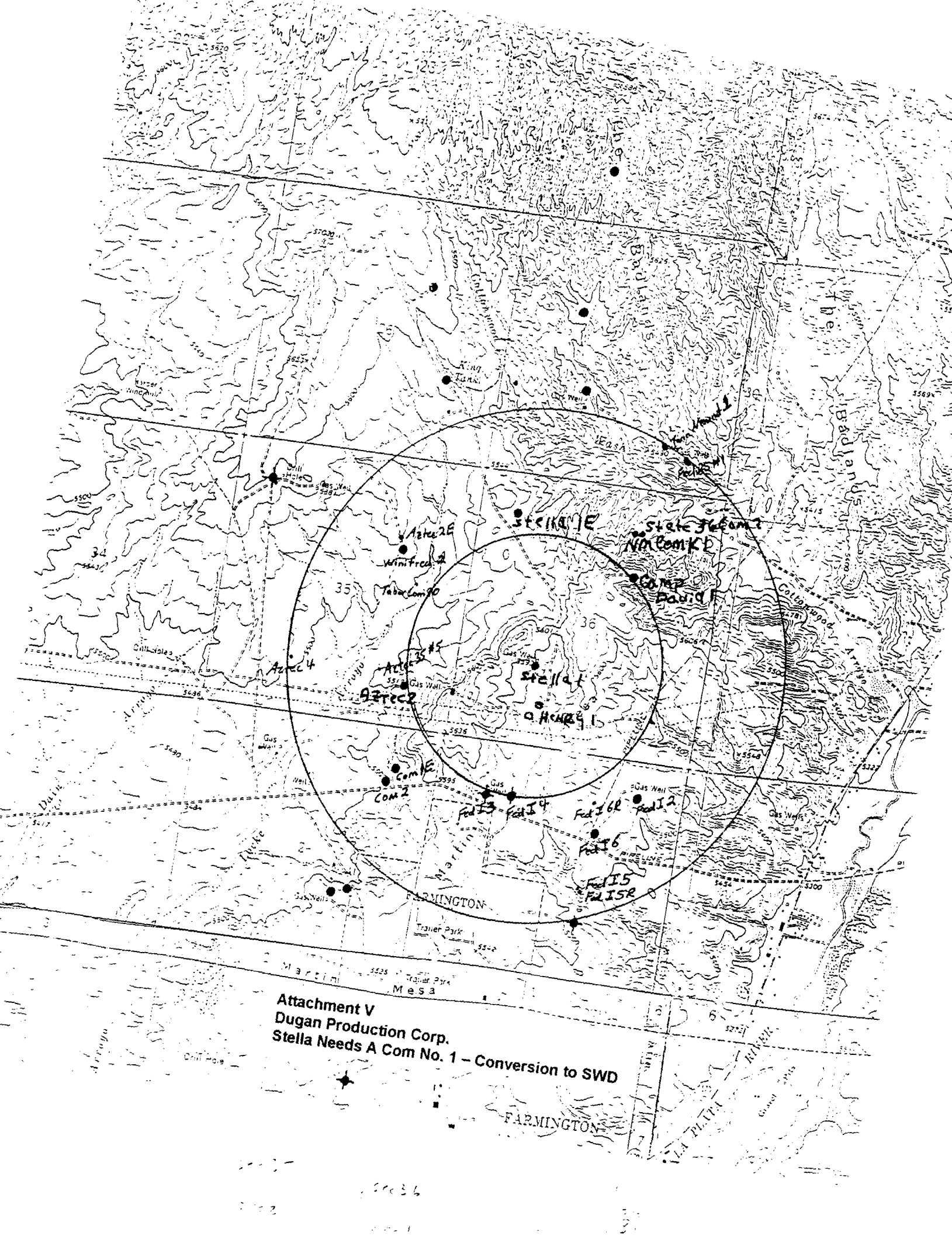
PROCEDURE:

1. Pull tubing and packer. Visually inspect tubing. Run tubing and pressure test to 2,000 psi.
2. Set cast iron bridge plug at 5800'.
3. Spot 150' cement on top of plug to plug Dakota.
4. Perforate 50' below Gallup top (4992') at 5042' +/-.
5. Run cement retainer and set 25' above Gallup perforation.
6. Pump cement below retainer to fill 200' of annular volume. Spot 150' plug on top of retainer.
7. Perforate 100' below Mancos top (4027') at 4127' +/-.
8. Run cement retainer at set 25' above Mancos perforation.
9. Pump cement below retainer to fill 200' of annular volume. Spot 50' cement plug on top of retainer.
10. Run packer and pressure casing from 3500' to surface @ 1,000 psi. A decision on remedial cementing operations will be made depending on test results.
11. Perforate Point Lookout section of Mesaverde from approximately 3690' – 3820' with one shot per each 2' interval (65 total holes).
12. Run plastic lined 2-3/8" tubing and packer, set at 3500'.

Attachment III-2

Stella Needs A Com #1 2/9/2000





Attachment V
Dugan Production Corp.
Stella Needs A Com No. 1 – Conversion to SWD

Attachment V-1

Wells within 2 miles of Stella Needs A Com No. 1

Wells in Area of Review are shaded

OPERATOR	WELL_NAME	WELL_NO	POOL	FORM	SEC	TWN	RGE	UL	FTAGE_NS	FTAGE_EW	STATUS
DUGAN PRODUCTION CORP	FEDERAL I	2	BASIN DAKOTA	DK	01	29N	14W	A	790/N	990/E	CO
DUGAN PRODUCTION CORP	FEDERAL I	4	HARPER HILL FT SAND PC	PC	01	29N	14W	C	1100/N	1600/W	CO
DUGAN PRODUCTION CORP	FEDERAL I	3	BASIN DAKOTA	DK	01	29N	14W	D	1030/N	1070/W	PA
DUGAN PRODUCTION CORP	FEDERAL I	6	HARPER HILL FT SAND PC	FP	01	29N	14W	G	1590/N	1800/E	SI
DUGAN PRODUCTION CORP	FEDERAL I	5	HARPER HILL FT SAND PC	FP	01	29N	14W	J	1850/S	1850/E	PA
DUGAN PRODUCTION CORP	FEDERAL I	5R	HARPER HILL FT SAND PC	PC	01	29N	14W	J	1790/S	1820/E	CO
DUGAN PRODUCTION CORP	COM	2	HARPER HILL FT SAND PC	FP	02	29N	14W	A	1125/N	1070/E	CO
DUGAN PRODUCTION CORP	COM	1E	BASIN DAKOTA	DK	02	29N	14W	A	810/N	940/E	CO
LADD PET CORP	TWIN MOUNDS	1	BASIN DAKOTA	DK	25	30N	14W	O	1010/S	1450/E	PA
HENRY S BIRDSEYE	FED 25	1	WC D3;PICTURED CLIFFS	PC	25	30N	14W	P	790/S	910/E	PA
DUGAN PRODUCTION CORP	AZTEC 35	3	HARPERHILL FRT SAND PC	FP	35	30N	14W	D	790/N	790/W	PA
RICHARDSON OPERATING CO	AZTEC	2E	BASIN DAKOTA	DK	35	30N	14W	G	1600/N	1600/E	CO
DUGAN PRODUCTION CORP	WINIFRED	2	HARPER HILL FT SAND PC	FP	35	30N	14W	G	1850/N	1500/E	SI
DUGAN PRODUCTION CORP	TABOR COM	90	BASIN FRUITLAND COAL	FT	35	30N	14W	H	2510/N	1100/E	CO
RICHARDSON OPERATING CO	AZTEC	4	HARPER HILL FT SAND PC	FP	35	30N	14W	N	1120/S	1600/W	CO
LADD PET CORP	AZTEC 35	5	HARPERHILL FRT SAND PC	FP	35	30N	14W	O	1120/S	1640/E	PA
LADD PET CORP	AZTEC	2	BASIN DAKOTA	DK	35	30N	14W	P	890/S	990/E	PA
DUGAN PRODUCTION CORP	STATE 36 COM	2	BASIN DAKOTA	DK	36	30N	14W	B	870/N	1700/E	PA
TEXACO INC	NEW MEXICO COM K	1	BASIN DAKOTA	DK	36	30N	14W	B	870/N	1780/E	PA
DUGAN PRODUCTION CORP	STELLA NEEDS A COM	1E	BASIN DAKOTA	DK	36	30N	14W	D	790/N	790/W	ZA
DUGAN PRODUCTION CORP	STELLA NEEDS A COM	1E	SWD MESAVERDE	MV	36	30N	14W	D	790/N	790/W	WD
DUGAN PRODUCTION CORP	CAMP DAVID COM	1	BASIN FRUITLAND COAL	FT	36	30N	14W	G	1800/N	1740/E	CO
DUGAN PRODUCTION CORP	STELLA NEEDS A COM	1	BASIN DAKOTA	DK	36	30N	14W	K	1650/S	1650/W	CO
DUGAN PRODUCTION CORP	O HENRY	1	BASIN FRUITLAND COAL	FT	36	30N	14W	N	790/S	1850/W	CO

Attachments VI, VII, VIII, and IX Dugan Production Corp. Stella Needs A Com 1 - SWD

Attachment VI

Only the subject well penetrates the Mesaverde within the area of review.

Attachment VII

Average Daily Rate: 700 bwpd

Maximum Daily Rate: 700 bwpd

System is closed.

Average Injection Pressure: 600 psi

Maximum Injection Pressure: 700 psi

Source of water to be injected is Fruitland Coal and Pictured Cliffs wells in the area. A representative sample of this water is shown in Attachment VII-1.

A water sample from the Mesaverde taken from the offsetting Stella Needs A Com No. 1E is included as Attachment VII-2. The Stella Needs A Com No. 1E is an approved SWD well by Administrative Order SWD-595.

Attachment VIII

Geological data for the disposal zone is presented in Administrative Order SWD-595.

Attachment IX

If stimulation is required, 4,000 gal. 15% HCl acid will be pumped into the Mesaverde perforations.

Attachment X

An open hole log is attached as Attachment X-1

Attachment XI

There are no fresh water wells within one mile of this location.

Attachment XII

I 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 source of drinking water.

Attachment XIII

Proof of notice is attahced.

Attachment VII-1
Dugan Production Corp.
FW01W363 Stella Needs A Com No. 1 – Conversion to SWD ; COMPANY

WATER ANALYSIS #FW01W363

FARMINGTON LAB

GENERAL INFORMATION			
OPERATOR:	DUGAN PRODUCTION	DEPTH:	
WELL:	FEDERAL "I" 5R	DATE SAMPLED:	01/29/99
FIELD:		DATE RECEIVED:	01/29/99
SUBMITTED BY:		COUNTY:	STATE:NM
WORKED BY	:D. SHEPHERD	FORMATION:	
PHONE NUMBER:			

SAMPLE DESCRIPTION

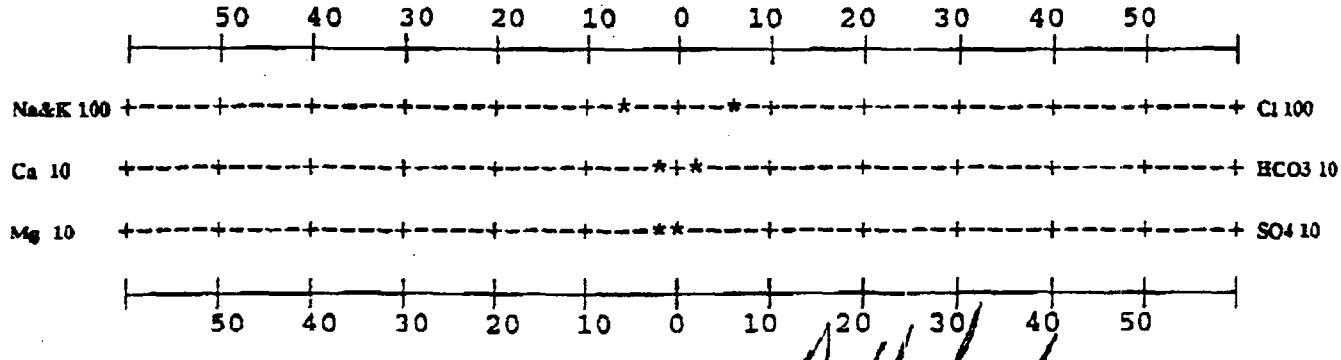
SAMPLE FOR ANALYSIS

PHYSICAL AND CHEMICAL DETERMINATIONS

SPECIFIC GRAVITY:	1.023 @ 76°F	PH:	7.55
RESISTIVITY (MEASURED):	0.200 ohms @ 78°F		
IRON (FE++) :	0 ppm	SULFATE:	0 ppm
CALCIUM:	235 ppm	TOTAL HARDNESS	1,125 ppm
MAGNESIUM:	131 ppm	BICARBONATE:	990 ppm
CHLORIDE:	19,061 ppm	SODIUM CHLORIDE(Calc)	31,355 ppm
SODIUM+POTASS:	12,214 ppm	TOT. DISSOLVED SOLIDS:	33,390 ppm
H2S: NO TRACE		POTASSIUM (PPM):	56

REMARKS

STIFF TYPE PLOT (IN MEQ/L)



ANALYST D. Shepherd
D. SHEPHERD

** TOTAL PAGE.03 **

Attachment VII-2
Dugan Production Corp.
Stella Needs A Com No. 1 – Conversion to SWD

MPANY OF NORTH AMERICA

API W A T E R A N A L Y S I S

Company:	DUGAN PROD.	W.C.N.A. Sample No.:	S106695
Field:		Legal Description:	
Well:	STELLA NEEDS A COM #1E	Lease or Unit:	
Depth:		Water.B/D:	
Formation:	POINT LOOKOUT/MESA VERDE	Sampling Point:	SWAB
State:	N.M.	Sampled By:	J. ALEXANDER
County:		Date Sampled:	04/24/95

Type of Water(Produced,Supply, ect.):

PROPERTIES

pH:	6.30	Iron, Fe(total):	250
Specific Gravity:	1.050	Sulfide as H2S:	0
Resistivity (ohm-meter):	.13	Total Hardness:	
Tempature:	78F	(see below)	

D I S S O L V E D SOLIDS

CATIONS	mg/l		me/l				
Sodium, Na:	20470	:	890				
Calcium, Ca:	2084	:	104	Sample(ml):	1.0 ml of EDTA:	5.20	
Magnesium, Mg:	170	:	14	Sample(ml):	1.0 ml of EDTA:	.70	
Barium, Ba:	N/A	:	N/A				
Potassium, K:		:					

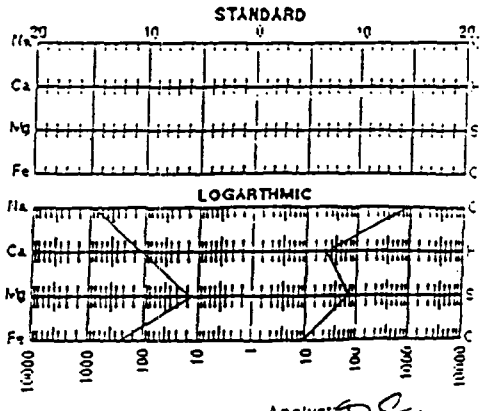
ANIONS	mg/l		me/l				
N: .5000Chloride, Cl:	31905	:	900	Sample(ml):	1.0 ml of AgNO3:	1.80	
Sulfate, SO4:	3750	:	78				
Carbonate, CO3:		:		Sample(ml):	1.0 ml of H2SO4:		
Bicarbonate, HCO3:	1830	:	30	Sample(ml):	1.0 ml of H2SO4:	.30	

Total Dissolved Solids (calculated): 60209

Total Hardness: 5900 Sample(ml): 1.0 ml of EDTA:

REMARKS AND RECOMMENDATIONS:

WATER PATTERNS-me/l



Analyst: DC
Date Analized: 4/24/95

LEGAL NOTICE

Dugan Production Corp., P.O. Box 420, Farmington, NM 87499 (505-325-1821), has made application to the New Mexico Oil Conservation Commission to convert the Stella Needs A Com No. 1 well to salt water disposal service. Contact for this application is John Alexander. This well is located 1650' fsl & 1650' fwl of S.36-Twn.30N-Rng.14W, San Juan Co., NM. Disposal will be into the Mesaverde formation at 3500'. Maximum injection pressure will be 700 psi. Maximum injection rate will be 700 barrels of water daily. Interested parties must file objections or request for hearing with the Oil Conservation Division, 2040 S. Pacheco, Santa Fe, NM 87505 within 15 days.

Legal No. 42437, published in The Daily Times, Farmington, New Mexico, Monday, February 28, 2000.

ATTACHMENT XIII

SENDER: COMPLETE THIS SECTION

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Ms. Riella King
P.O. Box 186
Dolores, CO 81323

COMPLETE THIS SECTION ON DELIVERY

A. Received by (Please Print Clearly) | B. Date of Delivery: 3/29/00

C. Signature: X Riella C King ☐ Agent ☐ Addressee

D. Is delivery address different from item 1? ☐ Yes
If YES, enter delivery address below: ☒ No

3. Service Type
☒ Certified Mail ☐ Express Mail
☐ Registered ☐ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? (Extra Fee) ☐ Yes

2. Article Number (Copy from service label)
Z 289 643 757

PS Form 3811, July 1999 Domestic Return Receipt 102595-99-M-1789

Attn. John Alexander

SENDER:

- ☐ Complete items 1 and/or 2 for additional services. Complete items 3, 4a, and 4b.
- ☐ Print your name and address on the reverse of this form so that we can return this card to you.
- ☐ Attach this form to the front of the mailpiece, or on the back if space does not permit.
- ☐ Write "Return Receipt Requested" on the mailpiece below the article number.
- ☐ The Return Receipt will show to whom the article was delivered and the date delivered.

I also wish to receive the following services (for an extra fee):
1. ☐ Addressee's Address
2. ☐ Restricted Delivery

3. Article Addressed to:
Mr. Ray Powell
State Land Office
P.O. Box 1148
Santa Fe NM 87504-1148

4a. Article Number: Z 289 643 752

4b. Service Type
☐ Registered ☒ Certified
☐ Express Mail ☐ Insured
☐ Return Receipt for Merchandise ☐ COD

7. Date of Delivery: SANTA FE NM FEB 29 2000

5. Received By: (Print Name)

6. Signature (Addressee or Agent)

8. Addressee's Address (Only if requested and fee is paid)

Is your RETURN ADDRESS completed on the reverse side?

Thank you for using Return Receipt Service.

PS Form 3811, December 1994 102595-98-B-0223 Domestic Return Receipt