

dugan production corp.



May 17, 1995

Mr. William J. LeMay, Director New Mexico Oil Conservation Division 2040 South Pacheco Street Santa Fe, New Mexico 87505

RE: Application for Administrative Approval Salt Water Disposal Well Stella Needs A Com 1E 790 FNL, 790 FWL Township 30 North, Range 14 West Section 36 San Juan County, New Mexico



OH COM. DIV.

Dear Mr. LeMay:

Dugan Production Corp. (DPC) is the operator of the Stella Needs A Com 1E Well which is currently a shut-in Dakota gas well dedicated to the Basin Dakota Gas Pool.

DPC hereby requests administrative approval to convert the Stella Needs A Com 1E from an oil and gas well to a salt water disposal well under NMOCD Rule #701. Enclosed is Form C-108 along with attachments for your review.

By certified mail, return receipt requested, we have provided all operators of wells or owners of non-producing property within a one-half (1/2) mile radius of the proposed disposal well with a copy of this letter application. A copy of the offset operator or owner notice, along with a list of names and addresses of all operators notified, is attached for your information. Upon receiving the "return receipts", we will provide you with a copy for your records.

Should you have any questions regarding our application, please feel free to contact me.

Sincerely,

Richard Corcoran

Land Manager

RC:pm Enclosures



dugan production corp.



May 17, 1995

CERTIFIED

TO: OFFSETTING OPERATOR OR OWNER

RE: Salt Water Disposal Well Application

Stella Needs A Com 1E

790 FNL, 790 FWL

Township 30 North, Range 14 West

Section 36

San Juan County, New Mexico

DECEIVED MAY 1 9 1995

OIL CON. DIV.

Dear Operator or Owner:

Dugan Production Corp. (DPC) is making application to the New Mexico Oil Conservation Division (NMOCD) for administrative approval to convert the Stella Needs A Com 1E from an oil and gas well to a salt water disposal well.

As provided for in the NMOCD Rule #701, we are giving notice to you as the operator or lease owner of offsetting acreage to our proposed disposal well.

We are enclosing a copy of our letter of application, location plat, and ownership map for your reference. As an operator of a well or lease owner within one-half (1/2) mile radius of the proposed disposal well, if you wish to object to the administrative granting of approval for the subject salt water disposal well application, you should provide notice to the NMOCD within fifteen (15) days of our making application. We would also appreciate your notifying DPC if you intend to object.

If you do not have an objection to this application, we would appreciate your signing and returning one copy of the waiver provided below to Mr. William J. LeMay, Director, New Mexico Oil Conservation Division, 2040 South Pacheco Street, Santa Fe, New Mexico 87505 and return one executed copy to our office. Stamped, addressed envelopes are enclosed for your convenience.

Offsetting Operator or Owner May 17, 1995
Page 2 of 2

If there should be any questions regarding this application, please feel free to contact me.

Sincerely, Occoran

Richard Corcoran Land Manager

RC:pm Enclosures

WAIVER

	hereby waives any objection to
(company/individual) the granting of the above-request	ted administrative approval to
convert the Stella Needs A Com 1	E oil and gas well to a saltwater
disposal well.	
BY	
DA'	re:



The second secon

OFFSET OPERATORS OR OWNERS

Universal Resources Corp. 1331 Seventeenth Street, Suite 300 Denver, CO 80202 ATTN: A.L. Stennentt

Meridian Oil, Inc. P. O. Box 4289 Farmington, NM 87499-04289 ATTN: Bobby Kennedy

Texaco Exploration & Production, Inc. P. O. Box 46513
Denver, CO 80201-6513
ATTN: Chuck Snur

Robert Gregory Thomson 4815 Jarboe Kansas City, MO 64112

Henry P. Meywes P. O. Box 656 Fairview, NC 28730

Bernice Bales Bruns RFD 2, Box 4 Liberal, KS 67901

Alma Bales 4829 Holly Kansas City, MO 64112

Rosalie Barkhouse 4829 Holly Kansas City, MO 64112

Far East Broadcasting c/o Michael Sutin, Esquire P. O. Box 32500 Albuquerque, NM 87190

Estate of Milton Thomson Barbara Thomson, Executrix c/o Dickson & Dubois 200 Lomas Boulevard NW Suite 900, ABC Albuquerque, NM 87120 Amoco Production Co. P. O. Box 800 Denver, CO 80201 ATTN: Julie T. Jenkins

Conoco, Inc. 10 Desta Drive West Midland, TX 79705 ATTN: Tom Scarboro

Michael Thomson 3521 Baltimore #308 Kansas City, MO 64111

Barbara Gail N. Dersham 9601 North Tracy Kansas City, MO 64155

Marcus Milton Nasal 817 Jefferson, Apt. 105 Kansas City, MO 64105

Louise Bales 16517 West 133rd Street Olathe, KS 66062

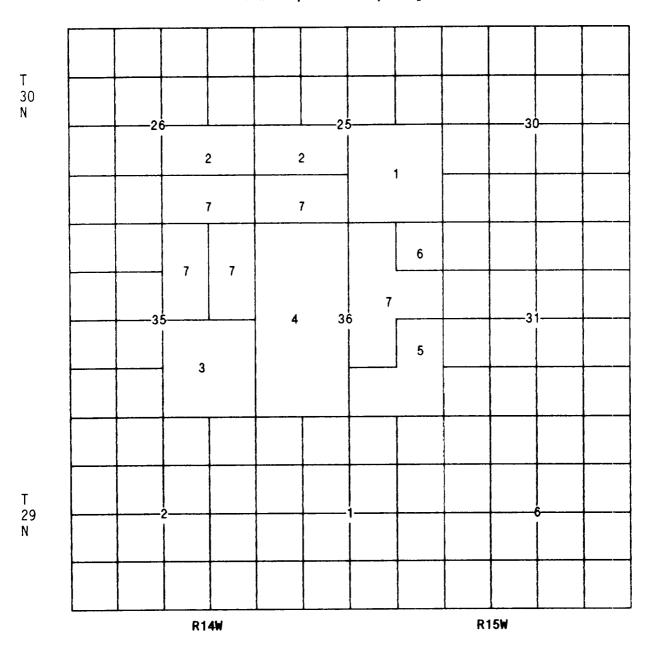
David Barkhouse 73 Truesdale Drive Croton on Hudson New York, NY 10520

James M. Durrett, Jr. 8513 Bellhaven Place, NE Albuquerque, NM 87112

Lovelace Medical Foundation c/o Michael Sutin, Esquire P. O. Box 32500 Albuquerque, NM 87190

APPLICATION FOR APPROVAL SALT WATER INJECTION WELL STELLA NEEDS A COM 1E

OFFSET LESSEE'S PLAT Township 30 North, Range 14 West



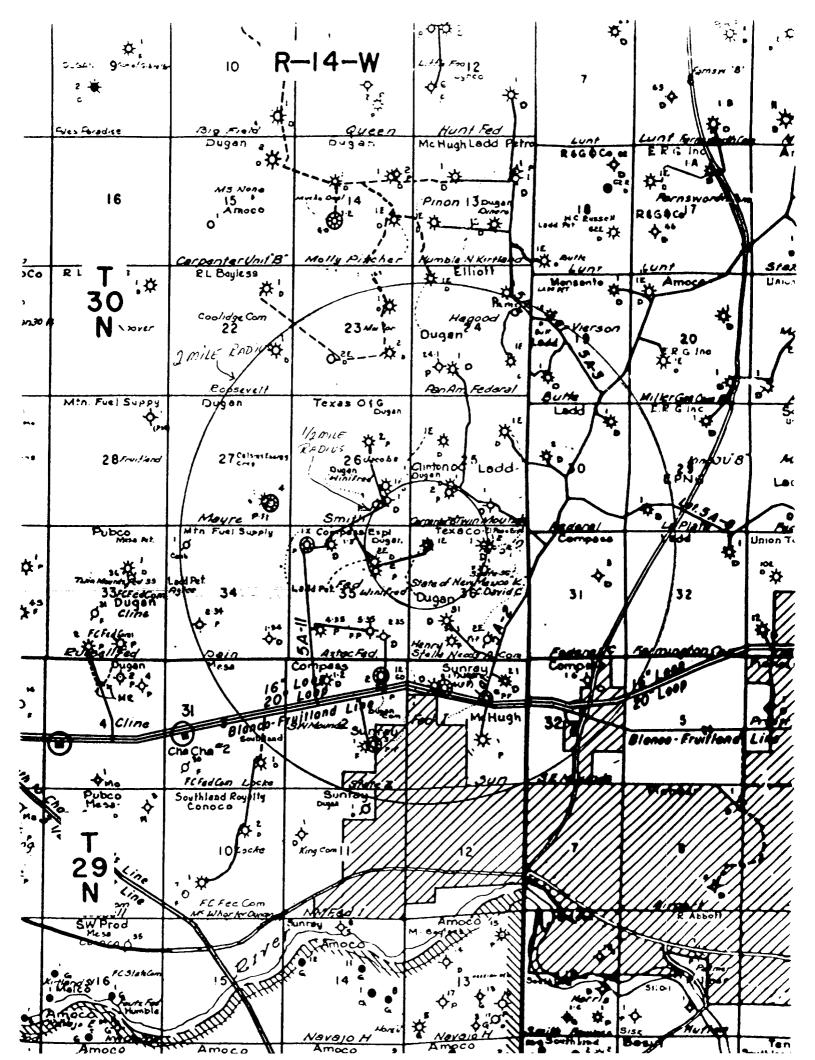
- 1) Universal Resources Corp.
- 2) Amoco Production Company
- 3) Meridian Oil, Inc.
- 4) Heirs of Stella Dysart
- 5) Texaco Exploration & Production, Inc.
- 6) Conoco, Inc.
- 7) Dugan Production Corp.

DUGAN PRODUCTION CORP. STELLA NEEDS A COM 1E

OFFSET OPERATOR PLAT SALT WATER INJECTION WELL Township 30 North, Range 14 West

1		1	2	
1		SEC	1	
		SEC		
1	1		1	

- 1) Dugan Production Corp.
 P. O. Box 420
 Farmington, New Mexico 87499-0420
- 2) Universal Resources Corp. P. O. Box 11070 Salt Lake City, Utah 84147



DIE COUPSERVATION DIVISION

BOOK OF CE BOX SOME STATE LAND COPICE BUY DAME STATE LAND COPICE BUY DAME FURH C-108 Revised 7-1-81

ı.	Purpose: Secondary Recovery Pressure Haintenance Disposal Storal Application qualifies for administrative approval? Zyes Inc								
11.	Operator: Dugan Production Corp.								
	Address: P.O. Box 420, Farmington, NM 87499								
	Contact party: John Alexander Phone: 505-325-1821								
111.	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:								
٧.	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 penetrate the proposed injection zone. Such data shall include a description of eac 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:								
	 Proposed average and maximum daily rate and volume of fluids to be injected; Whether the system is open or closed; Proposed average and maximum injection pressure; Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and 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 lithol detail, geological name, thickness, and depth. Give the geologic name, and depth to bottom of all underground sources of drinking water (squifers containing waters with total dissolved solids concentrations of 10,000 mg/l or less) overlying the proposed injection zone as well as any such source known to be immediately underlying the injection interval.								
ıx.	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 token.								
X11.	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.								
ш.	Applicants must complete the "Proof of Notice" section on the reverse side of this for								
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 Operations Manager								
	Signatures John Westersch Date:								

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111. 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 Yo.; location by Section, Township, and Range; and Cootage location within the section.
 - (2) Each casing string used with its size, setting depth, sacks of cement used, hule 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.

- 8. 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 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 dopth 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, P. O. Box 2088, Santa Fe, New Mexico 87501 within 15 days.

NO ACTION VILL BE TAKEN ON THE APPLICATION UNTIL PROPER PROOF OF NOTICE HAS BEEN SUBHITTED.

NOTICE: Surface owners or offset operators must file any objections or requests for hearing of administrative applications within 15 days from the date this application was mailed to them.

Dugan Production Corp.

Application for Conversion of Stella Needs A Com 1E to Injection

III - Well Data:

- 1. Name: Stella Needs A Com No. 1E Location: 790' fnl & 790' fwl 36 Twn. 30N Rng. 14W
- 2. Casing Information:

Surface Casing:

Size: 8-5/8" 24 lb./ft.

Hole Size: 124"

Setting Depth: 226'

Cement: 150 sks. (177 cu. ft.) Class B + 2% CaCl2. Circulated

to surface.

Production Casing:

Size: 45 J-55 10.5 lb./ft.

Hole Size: 7-7/8"

Setting Depth: 6097' with stage tool @ 4047'.

Cement: First stage cemented with 200 sks. Class B + 8% gel, followed by 125 sks. Class B (total 520 cu. ft.). Top of cement @ 4390' calculated with a 75% cement efficiency factor. Second stage cemented with 400 sks. 65-35 Pozmix + 12% gel, followed by 100 sks. Class B + 4% gel (total 1200 cu. ft.). Top of cement @ 300' by cement bond log.

- 3. Injection tubing will be 2-7/8" J-55 Buttress threaded 6.5 lb./ft with plastic lining. Set at 3600'.
- 4. Packer will be Baker Model A-1 tension set at 3600'.

В.

- 1. Injection interval is Mesa Verde (Point Lookout).
- 2. Perforations: 3635 3780 1 shot/ft.
- 3. Originally drilled as Dakota production well.
- 4. Dakota perforations: 5802-12; 5902-14; 5924-38; 5958-76; 6051-58.

III A. Name: Stella Needs A Com No. 1E Location: 790' fnl & 790' fwl 36 - Twn. 30N - Rng. 14W Surface Casing: Size: 8-5/8" 24 lb./ft. Hole Size: 12 4" Setting Depth: 226' Cement: 150 sks. (177 cu. ft.) Class B + 2% CaCl2. Circulated to surface. Injection tubing: 2-7/8" J-55 Buttress threaded 6.5 lb./ft with plastic lining. Set at 3600'. Baker Model A-1 tension set at 3600'. Point Lookout Injection Perforations: 3635' - 3780' Size: 41/2" J-55 10.5 lb./ft. **TOC 3968** Hole Size: 7-7/8" Setting Depth: 6097' with stage tool @ 4047'. Cement: First stage cemented with 200 sks. Class B + 8% gel, CIBP 4018 followed by 125 sks. Class B (total 520 cu. ft.). Top DV @ 4047 of cement @ 4390' calculated with a 75% cement effeciency factor. Second stage cemented with 400 sks. 65-35 Pozmix + 12% gel, followed by 100 sks. Class B + 4% gel (total 1200 cu. ft.). Top of cement @ 300' by cement bond log. TOC 4805 Dakota - Gallup plugging operation: Gallup Plug A cast iron bridge plug was set @ 5755'. Spot 18 cu. 5018 ft. class "B" cement on top of plug. Spot 19 cu. ft. class "B" cement @ 5018'. Set cast iron bridge plug @ TOC 5553 4018'. Spot 50' class B cement on top of plug. These plugs covered Dakota and Gallup tops. Dakota Pluj CIBP 5755

Gallup zone was not perforated.

Dakota - Gallup plugging operation:
A cast iron bridge plug was set @ 5755'. Spot 18 cu. ft. class "B" cement on top of plug. Spot 19 cu. ft. class "B" cement @ 5018'. Set cast iron bridge plug @ 4018'. Spot 50' class B cement on top of plug. These plugs covered Dakota and Gallup tops.

5. Next higher production zone: Pictured Cliffs @ 1205'. Next lower production zone: Gallup @ 4940'.

VI. Wells in Area of Review:

Name: Horace Smith 1

Location: 990' fsl & 990' fel, S.26-T.30N-R.14W

Type: Dakota Production Date Drilled: 11/8/64

Depth: 6082'

Casing: 8-5/8" @ 273'. Cemented with 140 sks. "regular" w/ 2% Cacl2.

4% 11.6 lb. @ 6081', DV @ 4046'. Stage 1: 100 sks 50/50 Diamix - Class C w/ 8% gel followed by 100 sks Class A w/ 2% gel. Calculated top of cement (using 75% cement efficiency) @ 5100'. Stage 2: 200 sks 50/50 Diamix - Class C w/ 8% gel. Calculated top of cement (using 75% cement efficiency) @ 2985'.

Completion: Dakota perforated 5822 - 5992. Fractured with 10,000 lb. 40-60 and 50,000 lb. 20-40.

Plugging: A 15 sk. cement plug was spotted 5715 - 5900. Casing shot off @ 2898' and pulled. A 15 sk. cement plug was spotted @ 2950 using tubing. A 35 sk. plug was spotted in open hole 2700 - 2800.

Pictured Cliffs Casing: 2-7/8" casing set @ 1330'. Cemented with 225 sks. Class A w/ 4% gel. Calculated top of cement @ 136'. Job complete 12/28/73.

P.C - Fruitland Perfs: Perforate 1138-48; 1227-32.

P.C - Fruitland Completion: Fracture with 30,000 lb. 10-20
P.C - Fruitland Plug: Spot 10 sk. cement plug 940 - 1250'.
Spot 10 sk. cement plug at surface. Job complete 1/26/82.

Name: Aztec 2E

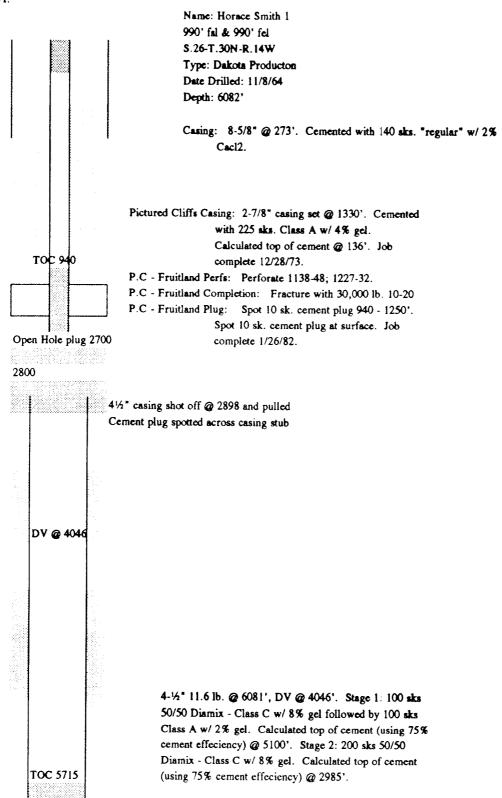
Location: 1600' fnl & 1600' fel, S.35-T.30N-R.14W

Type: Dakota Production Date Drilled: 2/12/80

Depth: 6070'

Casing: 8-5/8" 24 lb./ft. @ 273'. Cemented with 170 sks. Class B + 2% CaCl2. Cement circulated to surface.

VI.



Plugging: A 15 sk. cement plug was spotted 5715 - 5900. Casing shot off @ 2898' and pulled. A 15 sk. cement plug was spotted @ 2950 using tubing. A 35 sk. plug was spotted

Completion: Dakota perforated 5822 - 5992. Fractured with 10,000 lb. 40-60 and 50,000 lb. 20-40.

in open hole 2700 - 2800.

Dakota Plug 5900

Dugan Production Corp. - Stella Needs A Com No. 1E - Convesion to Disposal WATER ANALYSIS OF WELLS WHICH MAY HAVE WATER INJECTED AT STELLA NEEDS A COM 1E VII. 4 & 5

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TDS		59361		29558	k'	74486		4749	19392.6		35283
нсоз		3050	}	2440		30.5)	1281	1830		427
804		4000		0		3700		200	;		1200
ប៊		30133		15953		42100		1600	10305		20000
Mg		292		64		276		ł	97.2		=
v		1483		120		2446		116	240.5		622
Z Z		20263		10948		25433		1484	6.6169		;
Sp. Gr.	KOUT	1.050		1.015		1.055		1.00	1.010		1.030
Hd	OINT LOO	6.15		7.57		6.73		9.5	7.1		7.0
LOCATION	INJECTION INTERVAL - P	STELLA NEEDS A COM 11 36-T.30N-R.14W	Fruitland Sand	1-T.29N-R.14W	Cha Cha Gallup	11-T.29N-R.15W	Fruitland Coal	4-T.30N-R.14W	35-T.26N-R.13W	Dakota	25-T.30N-R.14W
	pH Sp. Gr. Na Ca Mg Cl SO4 HCO3	pH Sp. Gr. Na Ca Mg Cl SO4 HCO3 INT LOOKOUT	ION PH Sp. Gr. Na Ca Mg CI SO4 HCO3 ERVAL - POINT LOOKOUT S A COM 1E (6.15 1.050 20263 1483 292 30133 4000 3050	TION pH Sp. Gr. Na Ca Mg CI SO4 HCO3 **TERVAL - POINT LOOKOUT** DS A COM 1E **W 6.15 1.050 20263 1483 292 30133 4000 3050	TION PH Sp. Gr. Na Ca Mg CI SO4 HCO3 VTERVAL - POINT LOOKOUT DS A COM 1E W 6.15 1.050 20263 1483 292 30133 4000 3050 V 7.57 1.015 10948 120 97 15953 0 2440	ION pH Sp. Gr. Na Ca Mg CI SO4 HCO3 ERVAL - POINT LOOKOUT S A COM IE 7.57 1.015 10948 120 97 15953 0 2440	ION PH Sp. Gr. Na Ca Mg CI SO4 HCO3 ERVAL - POINT LOOKOUT S. A COM IE 6.15 1.050 20263 1483 292 30133 4000 3050 7.57 1.015 10948 120 97 15953 0 2440	TION pH Sp. Gr. Na Ca Mg CI SO4 HCO3 WTERVAL - POINT LOOKOUT DS A COM 1E W 7.57 1.015 10948 120 97 15953 0 2440 W 6.73 1.055 25433 2446 276 42100 3700 30.5	ON PH Sp. Gr. Na Ca Mg CI SO4 HCO3 ERVAL - POINT LOOKOUT S. A COM 1E 6.15 1.050 20263 1483 292 30133 4000 3050 7.57 1.015 10948 120 97 15953 0 2440 6.73 1.055 25433 2446 276 42100 3700 30.5 9.5 1.000 1484 116 1600 200 1281	ON PH Sp. Gr. Na Ca Mg Cl SO4 HCO3 ERVAL - POINT LOOKOUT S A COM IE 7.57 1.015 10948 120 97 15953 0 2440 6.73 1.055 25433 2446 276 42100 3700 30.5 9.5 1.000 1484 116 1600 200 1281 7.1 1.010 6919.9 240.5 97.2 10305 1830 1	ON PH Sp. Gr. Na Ca Mg CI SO4 HCO3 ERVAL - POINT LOOKOUT S A COM IE 7.57 1.015 10948 120 97 15953 0 2440 6.73 1.055 25433 2446 276 42100 3700 30.5 9.5 1.000 1484 116 1600 200 1281 7.1 1.010 6919.9 240.5 97.2 10305 1830 1

4½ 10.5 lb./ft. @ 6065', stage tool @ 4012'. Cemented first stage with 200 sks. Class B + 8% gel, followed by 160 sks. 50-50 Pozmix + 2% gel and 1% D-19 (slurry volume 567 cu. ft.). Calculated top of cement (using 75% cement efficiency) @ 4200'. Cemented second stage with 350 sks. 65-35 Pozmix + 12% gel, followed by 320 sks. 50-50 Pozmix + 2% gel and 0.6% D-19 (slurry volume 1308 cu. ft.). Calculated top of cement (using 75% cement efficiency) @ surface (cement circulation was not addressed in reports).

Completion: Dakota perforated 5775 - 5911. Fractured with 123,000 lb. 20-40 sand with water.

VII. Operational Data

- Average Daily Rate: 300 bbls.
 Maximum Daily Rate: 1,000 bbls.
- 2. System is open.
- Average Injection Pressure: 600 psi Maximum Injection Pressure: 741 psi
- 4. Water disposed with be from Fruitland Sand, Basin Fruitland Coal, Gallup Sand, and Dakota Sand wells in the area. Attached are representative samples of each zone.
- 5. A water sample was obtained from this well in the proposed disposal zone during preliminary work to plug back the Dakota and Gallup zones. A copy of that analysis is attached. The sample was obtained after swabbing 485 bbls. of water from the Point Lookout interval. Prior to obtaining this analysis the injection interval was perforated with 1 shot/ 4 ft. from 3635 3780. That interval was then acidized with 2,000 gal. 15% HCl. The load from that treatment was 102 bbls. Once acid load was recovered, the water analysis results were consistent.

VIII. Geologic Data

Injection Interval: Point Lookout (Mesa Verde)

Depth - Thickness: 3635 - 3983 (348')

Known Aquifers: None above or below (Surface is in Kirtland,

below Ojo Alamo)

IX. Proposed Stimulation

Acidize interval with 5,000 gal. 15% HCl.

X. Logging Data:

Open hole logs have been previously filed with the Division. A Cement Bond Log is attached.

XI. Fresh Water Wells:

We have been unable to identify any fresh water wells within one mile of the proposed disposal well.

XII. Existence of Open Faults and Hydrologic Connections:

I have examined geologic and engineering data available and find no evidence of open faults or any hydrologic connection between the proposed disposal well and any underground source of drinking water.

John Alexander, Operations Manager, Dugan Production Corp.

No. 34787

STATE OF NEW MEXICO County of San Juan:

ROBERT LOVETT being duly sworn says: That he 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 on the following day(s):

Wednesday, May 17, 1995

and the cost of publication was: \$22.69

On 5/17/95 ROBERT LOVETT

appeared before me, whom I know personally to be the person who signed the

above document.

My Commission Expires

Maich 2/1998



NOTICE is hereby given that Dugan Production Corp. at P.O. Box 420, Farmington, New Mexico 67499, as the Operator of the hereinatter described well, has filed Application for Administrative Approval to convert said well to a salt water disposal well. Injection will be in the Point Lookout Zone of the Mesa Verde Formation into perforations between 3,635' and 3,780'. Maximum injection will be 1,000 BWPD at less than 741 psi.

Stella Needs A Com No. 1E Location: 790' FNL & 790' FWL

Sec. 36-T30N-R14W San Juan County, NM

Contact Party: John Alexander

Any request for information or any objections should be first up the OII Constitute OF state Land Office Building, P.O. Sex 2088, Santa Fe, NM 87501 within 15 days of the nesses.

Legal No. 34787 published in The Daily Times, Fermington, New Mexico, Wednesday, May 17, 1995.