

STATE OF NEW MEXICO

ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION HOBBS DISTRICT OFFICE

8-14-89

POST OFFICE ROX 1990 HOBBS, NEW MEXICO 88241 1980 (505) 393-6161

GARREY CARRUTHERS

OIL CO	DNSEF	RVAT	ION DIV:	ISION
P. O.	вох	2088	3	
SANTA	FE,	NEW	MEXICO	87501

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RE: Proposed: MC DHC NSL NSP SWD WFX PMX

Gentlemen:

C),

I have examined the application for the:

murphy	Operatina	Corp.	Find	Low	v SA	Unit Sec	35#8.H	35-7-35
Operator/		- 7 L	ease & Wel	1 No.	Unit	S-T-R		

and my recommendations are as follows:

Youns very truly

/Jerry Śexton Supervisor, District l

/ed



TELEPHONE 505 623-7210

August 10, 1989

Mr. David R. Catanach, Petroleum Engineer Oil Conservation Division Post Office Box 2088 Santa Fe, New Mexico 87501

> Re: Request for Approval to Convert One (1) Well to Injection / Expansion of Waterflood; Todd Lower San Andres Unit ("the Todd Unit"); Roosevelt County, New Mexico.

Dear Mr. Catanach:

I have enclosed herewith for your review and approval Murphy Operating Corporation's application dated August 10, 1989 for the conversion to injection of one (1) well located in the Todd Lower San Andres Unit referenced above. The utilization of this well (#35-8 marked in blue on the map attached hereto) will permit a more uniform and effecient flood pattern due to the existence of certain preferentially oriented fractures.

Enclosed with the application is a land plat upon which a 1/2 mile radius circle ("area of review") has been drawn around said proposed injection well. A schematic diagram with the required downhole information is also included herewith. Certain statements necessary to the completion of application Form C-108 are given below:

REQUIRED INFORMATION: (Presented in same sequence and format as on Form C-108)

- V. Enclosed as Exhibit I.
- VI. Previously submitted as referenced on the C-108 Application.
- VII. 1) Average daily injection rate is estimated to be 400 BWPD with an anticipated maximum rate of 600 BWPD.
 - 2) This is a closed system.
 - Average injection pressure is estimated to be 400 psig with a maximum injection pressure of 850 psig.
 - 4) Previously submitted as referenced on the C-108 Application.
 - 5) Not applicable.
- VIII. Geological data and description of "Injection Zone" and "Fresh Water Zones" in area.

<u>Injection Zone</u>: The proposed injection zone is known as the Slaughter P-2 porosity zone of the San Andres Formation. This zone is a tan to brown dolomite. Scattered anhydrite inclusion and bedding occurs along with infrequent zones of fine solution porosity. The top of the P-2 occurs at approximately 4220' below level and has an approximate thickness of 40 to 60 feet. This zone dips south and east and as a result the bottom of this zone can occur at depths approaching 4335' below ground level.

<u>Fresh Water Zone</u>: The only known fresh water source in this area is the Ogalala Formation. This is a fresh water sand that is infrequently present throughout the area. The maximum reported depth is 250 feet below ground level as evidenced in two water wells located approximately 2-1/2 miles east of the Todd Lower San Andres Unit eastern boundry line. If a local presence of the Ogalala exists, it will be protected by the 280 feet or more of 8 5/8" surface casing set in all of the wells in the Todd Lower San Andres Unit.

- IX. Previously submitted as referenced on the C-108 Application.
- X. Wells logs have been previously submitted to the Division.
- XI. Previously submitted as referenced on the C-108 Application.
- XII. Although this requirement is for disposal wells, Murphy Operating Corporation has examined available geologic and engineering data and finds no evidence of openfaults or any other hydrologic connection between the proposed disposal (injection) zone and any underground source of drinking water
- XIII. The Proof of Notice requirement has been complied with. An Affidavit of Publication will be forwarded under separate cover when we receive same from the Portales News-Tribune, and a copy of the certified return receipts from the landowner, Ted Williamson, Milnesand, New Mexico and the offsetting leasehold operators within 1/2 mile acknowledging reciept of this application.

Murphy Operating Corporation hereby respectfully requests administrative approval to the application contained herein. Should you have any questions or comments, please contact the undersigned at the telephone number listed above.

Sincerely,

MURPHY OPERATING CORPORATION

Then the Mark B. Murphy President and Chief Operating Officer

MBM/js

cc: Mr. Jerry Sexton, Supervisor Oil Conservation Division Post Office Box 1980 Hobbs, New Mexico 88240

Enclosures:

Exhibit I - Landplat outlining "Area of Review"; Schematic diagram; Copies of Receipts for Certified Mail. STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO B7501 ..

 11. Operator: <u>Murphy Operating Corportion</u> Address: <u>Post Office Box 2648, Roswell, New Mexico 88202-2648</u> Contact party: <u>Mark B. Murphy</u> Phone: <u>505/623-7210</u> 111. Well dota: Complete the data required on the reverse side of this form for each well proposed for injection. Additional sheets may be attached if necessary. 14. Is this an expansion of an existing project? <u>Miscon Motor Mark B. Murphy</u> If yes, give the Division order number authorizing the project <u>Miscon #A-6677</u> <u>Miscon well with a one-half mile radius circle drawn around each proposed injection well. This circle identifies the well's area of review.</u> VI. Attach a tabulation of data on all wells of public record within the area of review whic penetrate the proposed onjection 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 daily rate and volume of indica to be injected; 3. Proposed average and maximum daily rate and volume of indication enalysis of the disposal zone formation weter (may be measured or inferred fram existing 11 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 schemical analysis of the disposal zone formation weter (may be measured or inferred fram existing 11 underground sources of drinking weter (squifers containing waters with total dussion they need not be resubmitted.) *VIII. Attach appropriate geological data on the injection rule radius make maining waters with total dussion they need not be resubmitted.) *VIII. Attach appropriate logging and test data on the well. (If well lags have been filed with the Division they		I. Purpose: X Secondary Recovery Pressure Maintenance Disposal Storage Application qualifies for administrative approval? X yes no	
 Contact party: Mark B. Murphy Phone: 505/623-7210 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? X yes Monco #R-6677 / 1/4-08-0001-19582 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 with a one-half mile radius circle drawn around each proposed injection well with a one-half mile radius circle drawn around each proposed injection well with a one-half mile radius circle drawn around each proposed injection sone. Such data shell include a description of each well's area of review. VI. Attach a tabulation of data on all wells of public record within the sarea of review whic premitrate the proposed 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; Whother the system is open or closed; Proposed average and maximum factor pressure; Sources and an appropriate analysis of injection fluid and compatibility with the receiving formation if other than reinjected produced water; and 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 lithologi detail, injection informs of 10(00 mg/f or less) overlight 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 resolutied.) *VIII. Attach appropriate logging and test data on the well. (If well logs have been filed with the Division they need not be resolutied.) *X. Attach appropr	-		11
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to the best of my knowledge and belief.		I hereby certify that the information submitted with this application is true and corr to the best of my knowledge and belief.	
Name: Mark B. Murphy/ Title President and Chief Oper Offi Signature: Date: August 10, 1989	rating icer		
* If the information required under Sections VI, VIII, X, and XI above has been previously submitted, it need not be duplicated and resubmitted. Please show the date and circumstance of the earlier submittal. <u>C-108 Application dated April 21, 1988 Order No. WFX</u>	X-571	f the information required under Sections VI, VIII, X, and XI above has been previously ubmitted, it need not be duplicated and resubmitted. Please show the date and circumstance	ธน

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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:
 - 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.

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

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

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.

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INJECTION WILL DATA SHELL

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	WELL NU.	TOUTAGE LOCATION	SECTION	TOWNSHIP	RANGE
	Schema	tic		<u>Tabular Data</u>	-
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	Tubing size _	<u>2 3/8"</u> lin	ed with <u>Ceramic epo</u>	xy coating	set in a
	Baker	UNI-1 d and model)	packer	at <u>4160'</u>	
		any other casing-lubi	ng scal).		tely 100' above perforation)
	Other Data				
	1. Name of t	he injection formatio	n <u>San Andres</u>		
		icld or Pool (if appl	icable) Todd Lower	San Andres Un	i t
	2. Name of F				
	•	new well drilled for	injection? <u>/</u> 7 Yes	<u>/7</u> / No	
	3. Is this a		injection? /_7 Yes e well originally drill		ed as

5. Give the depth to and name of any overlying and/or underlying oil or gas zones (pools) in this area. <u>The Wolfcamp produces approximately one mile north at an</u> <u>approximate depth of 7500' below ground level.</u>

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Distribution List

Offsetting Leasehold Operators

Mr. Bill Coppoc, Engineer Apache Corporation 500 Triad Center 7666 East 61st Street Tulsa, Oklahoma 74133-1201

Mr. Kenneth D. Crews Landman and Attorney Mayfair Minerals, Inc. Post Office Box 940 Mayfair, Texas 78502

Mr. Mike Slater, Operations Manager Yates Petroleum Corporation 105 South 4th Street Artesia, New Mexico 88210

Mr. H. R. Lewis, District Manager Amoco Production Company Post Office Box 4072 Odessa, Texas 79760

Mr. John M. Weaver, District Manager Texaco, Inc. Post Office Box 1270 Midland, Texas 79702

Mr. Micky Warlick Gulf Chevron, U.S.A. Post Offices Box 670 Hobbs, New Mexico 88240

Mr. Bill Graham G & P Exploration, Inc. 4800 San Felipe - Suite 620 Houston, Texas 77056

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MURPHY OPERATING CORPORATION UNITED BANK PLAZA, SUITE 300 400 NORTH PENNSYLVANIA AVENUE POST OFFICE BOX 2648 ROSWELL, NEW MEXICO 88202-2648

TELEPHONE 505 623-7210

August 10, 1989

Ms. Debbie Burrows Portales News Tribune Post Office Box 848 Portales, New Mexico 88130

> Re: Submittal of Legal Notice on Todd Lower San Andres Unit Conversion of Well to Injection

Dear Ms. Burrows:

Please find enclosed a legal notice to be placed in the Portales News Tribune for Murphy Operating Corporation. Please run the notice for a total of three (3) days. I understand that we will be billed an undetermined amount after you have received the notice.

Thank you for all of your help in this matter. If there are any questions concerning the placement of this legal notice, please feel free to contact me at 505/623-7210.

Sincerely,

MURPHY OPERATING CORPORATION

Mark B. Murphy President and Chief Operating Officer

MBM/js

This shall constitute notice to all concerned parties that Murphy Operating Corporation (United Bank Plaza, Suite 300, Post Office Box 2648, Roswell, New Mexico 88202-2648, Attention Mark B. Murphy, telephone number (505) 623-7210) intends to convert the following well from producing to injection service for the purpose of expanding the existing waterflood project, the Todd Lower San Andres Unit, Roosevelt County, New Mexico.

Well No.	Unit	Section	Township, Range
35-8	н	35	T7S-R35E

Water will be injected into the P2 zone of the San Andres formation (being the equivalent interval as found between the logged depths of 4235' and 4286' in the Murphy Operating Corporation Well #30-10 as shown on the Schlumberger Compensated Formation Density Log of said well dated January 7, 1967) at rates of approximately 400 BWPD and at maximum wellhead pressures not exceeding 850 psi.

Interested parties must file objections or requests for hearing with the Oil Conservation Division, Post Office Box 2088, Santa Fe, New Mexico 87501 within 15 days.

Published in Portales News-Tribune _____ Legal No. _____

date