

DATE IN 2/8/06	SUSPENSE	ENGINEER WVS	LOGGED IN SWD 884B	TYPE PWTJ	APP NO. 0603939506
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ABOVE THIS LINE FOR DIVISION USE ONLY

NEW MEXICO OIL CONSERVATION DIVISION
 - Engineering Bureau -
 1220 South St. Francis Drive, Santa Fe, NM 87505



ADMINISTRATIVE APPLICATION CHECKLIST

THIS CHECKLIST IS MANDATORY FOR ALL ADMINISTRATIVE APPLICATIONS FOR EXCEPTIONS TO DIVISION RULES AND REGULATIONS WHICH REQUIRE PROCESSING AT THE DIVISION LEVEL IN SANTA FE

Application Acronyms:

[NSL-Non-Standard Location] [NSP-Non-Standard Proration Unit] [SD-Simultaneous Dedication]
 [DHC-Downhole Commingling] [CTB-Lease Commingling] [PLC-Pool/Lease Commingling]
 [PC-Pool Commingling] [OLS - Off-Lease Storage] [OLM-Off-Lease Measurement]
 [WFX-Waterflood Expansion] [PMX-Pressure Maintenance Expansion]
 [SWD-Salt Water Disposal] [IPI-Injection Pressure Increase]
 [EOR-Qualified Enhanced Oil Recovery Certification] [PPR-Positive Production Response]

- [1] **TYPE OF APPLICATION** - Check Those Which Apply for [A]
- [A] Location - Spacing Unit - Simultaneous Dedication
☐ NSL ☐ NSP ☐ SD
- Check One Only for [B] or [C]
- [B] Commingling - Storage - Measurement
☐ DHC ☐ CTB ☐ PLC ☐ PC ☐ OLS ☐ OLM
- [C] Injection - Disposal - Pressure Increase - Enhanced Oil Recovery
☐ WFX ☐ PMX ☒ SWD ☐ IPI ☐ EOR ☐ PPR
- [D] Other: Specify _____
- [2] **NOTIFICATION REQUIRED TO:** - Check Those Which Apply, or Does Not Apply
- [A] ☐ Working, Royalty or Overriding Royalty Interest Owners
- [B] ☐ Offset Operators, Leaseholders or Surface Owner
- [C] ☐ Application is One Which Requires Published Legal Notice
- [D] ☐ Notification and/or Concurrent Approval by BLM or SLO
U.S. Bureau of Land Management - Commissioner of Public Lands, State Land Office
- [E] ☐ For all of the above, Proof of Notification or Publication is Attached, and/or,
- [F] ☐ Waivers are Attached

- [3] **SUBMIT ACCURATE AND COMPLETE INFORMATION REQUIRED TO PROCESS THE TYPE OF APPLICATION INDICATED ABOVE.**

- [4] **CERTIFICATION:** I hereby certify that the information submitted with this application for administrative approval is **accurate** and **complete** to the best of my knowledge. I also understand that **no action** will be taken on this application until the required information and notifications are submitted to the Division.

Note: Statement must be completed by an individual with managerial and/or supervisory capacity.

Print or Type Name	Signature	Title	Date
		e-mail Address	


Jones, William V., EMNRD

From: John Alexander [johnalexander@duganproduction.com]
Sent: Wednesday, February 08, 2006 9:03 AM
To: Jones, William V., EMNRD
Cc: Perrin, Charlie, EMNRD
Subject: RE: Cliff House Aquifer in the Mary Lou 1 SWD operated by Dugan Production Corporation

Will:

I am looking at the Sanchez O'Brien 1 SWD to see if we did perforate the Cliff House. I'll let you know sometime today. If is okay with Dugan Production Corp if you rescind permission to include the Cliff House interval in the Mary Lou 1 SWD.

Thanks
John

SWD-884B

-----Original Message-----

From: Jones, William V., EMNRD [mailto:William.V.Jones@state.nm.us]
Sent: Wednesday, February 08, 2006 08:28
To: John Alexander
Cc: Perrin, Charlie, EMNRD; Macquesten, Gail, EMNRD; Sanchez, Daniel J., EMNRD
Subject: RE: Cliff House Aquifer in the Mary Lou 1 SWD operated by Dugan Production Corporation

John:

Thank You

The post fracture temperature log could be run while injecting at your normal injection rate - or how ever you and Charlie work out.

I regret not checking the well file to see if you had actually perfed the Cliff house before sending that note. Glad you did not, and that takes care of another two wells that the EPA was concerned about.

I will also be more diligent to check resistivity logs and/or specific water samples prior to granting SWD permits on wells that are reasonably shallow. Grouping all the members of the Mesaverde into one Pool does not help either - but may still be the way to go. I leave that up to Steve Hayden and the producers from the Mesaverde.

Is it OK with Dugan Production Corporation for the OCD to issue amendments to those two existing orders to exclude the fresher sand members of the Cliff House?

I will wait for your answer on this one.

Regards,

William V. Jones

Engineering Bureau

Oil Conservation Division

Santa Fe

Confidentiality Notice: This e-mail, including all attachments is for the sole use of the intended recipient(s) and may contain confidential and privileged information. Any unauthorized review, use, disclosure or distribution is prohibited unless specifically provided under the New Mexico Inspection of Public Records Act. If you are not the intended recipient, please contact the sender and destroy all copies of this message. -- This email has been scanned by the Sybari - Antigen Email System.

2/8/2006

Jones, William V., EMNRD

From: John Alexander [johncalexander@duganproduction.com]
Sent: Tuesday, February 07, 2006 2:52 PM
To: Jones, William V., EMNRD
Cc: Perrin, Charlie, EMNRD
Subject: RE: Cliff House Aquifer in the Mary Lou 1 SWD operated by Dugan Production Corporation

Will:

We did not perforate the Cliff House in the Mary Lou 1 well and do not plan on doing so. The well is injecting only into the Point Lookout. You are correct that I was given permission to use the Cliff House as an injection interval, but I never did. I will look at the logs for the Sanchez O'Brien 1 SWD and see if I perforated the Cliff House there. I'll let you know, but it will probably be Wednesday morning if that is okay.

I got your reply to my request of Charlie. The Mary Lou 1 SWD has already been fractured in the Point Lookout zone. My understanding is that I was required to conduct a temperature log after the well had been on injection for 90 days. I just plain forgot until I ran across the sundry yesterday. The Mary Lou 1 was fractured during September 2005 and returned to injection at that time, so I'm past my 90 days. If you have a suggested method to run the temperature log, I'll set it up that way.

Thanks
John

-----Original Message-----

From: Jones, William V., EMNRD [mailto:William.V.Jones@state.nm.us]
Sent: Tuesday, February 07, 2006 11:40
To: Perrin, Charlie, EMNRD; johncalexander@duganproduction.com
Cc: Hayden, Steven, EMNRD; Sanchez, Daniel J., EMNRD; Macquesten, Gail, EMNRD; Ezeanyim, Richard, EMNRD
Subject: Cliff House Aquifer in the Mary Lou 1 SWD operated by Dugan Production Corporation

Hello John:

As you may be aware, the Cliff House in the San Juan Basin has become a hot topic since the EPA and the OCD has discovered that it is sometimes a "protectable" aquifer. It is often shallow, thick, porous, permeable, and has waters with less than 10,000 TDS. Apparently for years, companys which have applied for permits to inject into the Cliff House have submitted MVRD water samples which show over 10,000 TDS waters. We now suspect those water samples are from the Point Lookout or are average water samples from the entire MVRD.

Accordingly, the NMOCd has been reviewing electric logs on all permitted Mvrd injection wells to see the quality of the Cliff House waters in those wells as inferred from the induction log. When reviewing the Mary Lou #1, I was not aware the Cliff House had yet been perforated, but today when looking at the file, I noticed that the OCD has previously granted an amendment to open up this interval.

Examination of the log on this well for the Cliff House shows the sand to be approximately 30 to 40 ohm-meters in resistivity over an interval from 1830 to 2360. The well was drilled with fresh water mud, but the deep resistivity log is still reading very high. At those depths and temperatures, the sand is likely less than 10,000 TDS and therefore legally protectable.

Attorneys have guided us on this, and required revocation of permits to be done after notice and hearing. I can't say when we will get this well to hearing, but it could be soon. I recommend you not spend any more money to open up or stimulate the Cliff House in this well. Other companys have chosen not to come to hearing and to voluntarily abandon the Cliff House portion of their injection intervals. The area of review wells must also be examined and possibly worked on to isolate the Cliff House.

If your examination of water samples swabbed from the Cliff house in this well or your examination of the logs on this well conflict with all of this, let us know.

2/8/2006

Submit 3 Copies To Appropriate District
Office
District I
1625 N. French Dr., Hobbs, NM 88240
District II
1301 W. Grand Ave., 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 and Natural Resources

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-103
Revised March 25, 1999

SUNDRY NOTICES AND REPORTS ON WELLS (DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)		WELL API NO. 30-045-26460
1. Type of Well: Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Salt Water Disposal		5. Indicate Type of Lease STATE <input checked="" type="checkbox"/> FEE <input type="checkbox"/>
2. Name of Operator DUGAN PRODUCTION CORP.		6. State Oil & Gas Lease No. V-1509
3. Address of Operator P.O. Box 420 Farmington, NM 87499		7. Lease Name or Unit Agreement Name: Mary Lou
4. Well Location Unit Letter <u>A</u> : <u>800'</u> feet from the <u>North</u> line and <u>800'</u> feet from the <u>East</u> line Section <u>32</u> Township <u>24N</u> Range <u>10W</u> NMPM <u>San Juan</u> County		8. Well No. 1
10. Elevation (Show whether DR, RKB, RT, GR, etc.) 6592' GL		9. Pool name or Wildcat Bisti Gallup, South

11. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPLETION ☐
OTHER: ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ PLUG AND ABANDONMENT ☐
CASING TEST AND CEMENT JOB ☐
OTHER: Conversion to Injection Service ☒

12. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

Plugged Gallup interval per previous sundry.
Converted to Injection as follows:
Perforate Point Lookout from 3458'-3570' w/40 holes.
Acidized perforated interval with 1500 gal. 15% HCl acid.
Ran 2" buttress plastic lined tbg & model AD-1 packer. Set packer w/10,000# tension @ 3390'.
Loaded tubing/casing annulus with packer fluid.
State witnessed mechanical integrity test. Passed test.
Commenced injection 1/15/2004.

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

SIGNATURE John Alexander TITLE Vice President DATE March 25, 2004

Type or print name John Alexander Telephone No. (505) 325-1821

(This space for State use)

APPROVED BY Charles R. DEPUTY OIL & GAS INSPECTOR, DIST. 52 DATE MAR 26 2004

Conditions of approval, if any:

Submit To Appropriate District Office

State Lease - 6 copies

Fee Lease - 5 copies

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 and Natural Resources

Oil Conservation Division

1220 South St. Francis Dr.

Santa Fe, NM 87505

Form C-105

Revised March 25, 1999

WELL API NO.

30-045-34695-26460

5. Indicate Type of Lease

STATE ☒ FEE ☐

State Oil & Gas Lease No.

V-1509

WELL COMPLETION OR RECOMPLETION REPORT AND LOG

1a. Type of Well:

OIL WELL ☐ GAS WELL ☐ DRY ☒ OTHER ☐ SWD

b. Type of Completion:

NEW ☐ WORK ☐ DEEPEN ☐ PLUG ☐ DIFF. ☐
WELL OVER BACK RESVR. ☐ OTHER ☐ Convert to disposal

2. Name of Operator

DUGAN PRODUCTION CORP.

3. Address of Operator

P.O. Box 420 Farmington, NM 87499

7. Lease Name or Unit Agreement Name

Mary Lou

8. Well No.

1 SWD

9. Pool name or Wildcat

Mesaverde SWD (96160)

4. Well Location

Unit Letter A : 800' Feet From The North Line and 800' Feet From The East Line

Section 32 Township 24N Range 10W NMPM San Juan County

10. Date Spudded

09/13/85

11. Date T.D. Reached

09/17/85

12. Date Compl. (Ready to Prod.)

09/23/03

13. Elevations (DF& RKB, RT, GR, etc.)

6592' GL

14. Elev. Casinghead

15. Total Depth

4815'

16. Plug Back T.D.

4250'

17. If Multiple Compl. How Many Zones?

18. Intervals Drilled By

Rotary Tools

TD

Cable Tools

19. Producing Interval(s), of this completion - Top, Bottom, Name

3458'-3570' (Point Lookout)

20. Was Directional Survey Made

NO

21. Type Electric and Other Logs Run

GR-CCL

22. Was Well Cored

NO

23. CASING RECORD (Report all strings set in well)

CASING SIZE	WEIGHT LB./FT.	DEPTH SET	HOLE SIZE	CEMENTING RECORD	AMOUNT PULLED
8-5/8"	24# 8rd ST&C	193' RKB	12-1/4"	159 cu ft	
4-1/2" K-55	10.5# K-55	4815'	7-7/8"	1616 cu ft	

24. LINER RECORD

SIZE	TOP	BOTTOM	SACKS CEMENT	SCREEN	SIZE	DEPTH SET	PACKER SET
					2-3/8"	3390'	3390'

26. Perforation record (interval, size, and number)

3458'-3570' w/40 holes

27. ACID, SHOT, FRACTURE, CEMENT, SQUEEZE, ETC.

DEPTH INTERVAL AMOUNT AND KIND MATERIAL USED

3458'-3570' 1500 gallons 15% HCL

28. PRODUCTION

Date First Production		Production Method (Flowing, gas lift, pumping - Size and type pump)			Well Status (Prod. Or Shut-in)		
NA					SWD		
Date of Test	Hours Tested	Choke Size	Prod'n For - Test Period	Oil - Bbl	Gas - MCF	Water - Bbl.	Gas - Oil Ratio
Flow Tubing Press.	Casing Pressure	Calculated 24-Hour Rate	Oil - Bbl.	Gas - MCF	Water - Bbl.	Oil Gravity - API - (Corr.)	

29. Disposition of Gas (Sold, used for fuel, vented, etc.)

Test Witnessed By

30. List Attachments

31. I hereby certify that the information shown on both sides of this form as true and complete to the best of my knowledge and belief

Signature John Alexander Printed Name John Alexander

Title Vice President Date 04/22/04

INSTRUCTIONS

This form is to be filed with the appropriate District Office of the Division not later than 20 days after the completion of any newly-drilled or deepened well. It shall be accompanied by one copy of all electrical and radio-activity logs run on the well and a summary of all special tests conducted, including drill stem tests. All depths reported shall be measured depths. In the case of directionally drilled wells, true vertical depths shall also be reported. For multiple completions, items 25 through 29 shall be reported for each zone. The form is to be filed in quintuplicate except on state land, where six copies are required. See Rule 1105.

INDICATE FORMATION TOPS IN CONFORMANCE WITH GEOGRAPHICAL SECTION OF STATE

Southeastern New Mexico

T. Anhy _____ T. Canyon _____
T. Salt _____ T. Strawn _____
B. Salt _____ T. Atoka _____
T. Yates _____ T. Miss _____

T. 7 Rivers	T. Devonian
T. Queen	T. Silurian
T. Grayburg	T. Montoya
T. San Andres	T. Simpson
T. Glorieta	T. McKee
T. Paddock	T. Ellenburger
T. Blinebry	T. Gr. Wash
T. Tubb	T. Delaware Sand
T. Drinkard	T. Bone Springs
T. Abo	T.
T. Wolfcamp	T.
T. Penn	T.
T. Cisco (Bough C)	T.

Northwestern New Mexico

T. Ojo Alamo _____
T. Kirtland- 297' _____
T. Pictured Cliffs 1053' _____
T. Cliff _____
House 2108' _____

T. Penn. "B" _____
T. Penn. "C" _____
T. Penn. "D" _____
T. Leadville _____

T. Menefee	T. Madison
T. Point Lookout 3460'	T. Elbert
T. Mancos 3675'	T. McCracken
T. Gallup	T. Ignacio Otzte
Base Greenhorn	T. Granite
T. Dakota	T. Fruitland 700'
T. Morrison	T.
T. Todilto	T.
T. Entrada	T.
T. Wingate	T.
T. Chinle	T.
T. Permian	T.
T. Penn "A"	T.

OIL OR GAS SANDS OR ZONES

No. 1, from.....to.....
No. 2, from.....to.....
No. 3, from.....to.....
No. 4, from.....to.....

IMPORTANT WATER SANDS

Include data on rate of water inflow and elevation to which water rose in hole.

No. 1, from.....to.....feet.....
 No. 2, from.....to.....feet.....
 No. 3, from.....to.....feet.....

LITHOLOGY RECORD (Attach additional sheet if necessary)

From	To	Thickness In Feet	Lithology

From	To	Thickness In Feet	Lithology

Submit 3 Copies To Appropriate District
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1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM
87505

State of New Mexico
Energy, Minerals and Natural Resources

Form C-103
May 27, 2004

OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

WELL API NO.
30-045-26460

5. Indicate Type of Lease
STATE ☒ FEE ☐

6. State Oil & Gas Lease No.
V-1509

7. Lease Name or Unit Agreement Name

Mary Lou

8. Well Number
1

9. OGRID Number
006515

10. Pool name or Wildcat
SWD; Mesaverde

SUNDRY NOTICES AND REPORTS ON WELLS

(DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR. USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.)

1. Type of Well: Oil Well ☐ Gas Well ☐ Other SWD

2. Name of Operator
Dugan Production Corp.

3. Address of Operator
P. O. Box 420, Farmington, NM 87499-0420

4. Well Location

Unit Letter A : 800 feet from the North line and 800 feet from the East line
Section 32 Township 24N Range 10W 14 PM San Juan County

11. Elevation (Show whether LTR, RKA, GR, etc.)

Pit or Below-grade Tank Application ☐ or Closure ☐

Pit type _____ Depth to Groundwater _____ Distance from nearest fresh water well _____ Distance from nearest surface water _____

Pit Liner Thickness: _____ mil Below-Grade Tank: Volume _____ bbls; Construction Material _____

12. Check Appropriate Box to Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

PERFORM REMEDIAL WORK ☐ PLUG AND ABANDON ☐
TEMPORARILY ABANDON ☐ CHANGE PLANS ☐
PULL OR ALTER CASING ☐ MULTIPLE COMPL ☐

OTHER: Fracture ☐

SUBSEQUENT REPORT OF:

REMEDIAL WORK ☐ ALTERING CASING ☐
COMMENCE DRILLING OPNS. ☐ P AND A ☐
CASING/CEMENT JOB ☐

OTHER: ☒

13. Describe proposed or completed operations. (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). SEE RULE 1103. For Multiple Completions: Attach wellbore diagram of proposed completion or recompletion.

POH w/injection string and packer. Added 20 additional perforations from 3,462'-3,567'. Acidized with 500 gals 15% HCL acid. Fractured perfs 3,458'-3,570' with 54,524 gals slickwater and 54,585 lbs 20/40 Brady sand. TIH w/Model AD-1 packer and 2-3/8" injection string. Set packer @ 3,355'. Loaded TCA with packer fluid. Pressure tested TCA to 420 psig for 30 minutes. Test witnessed by NMOCD on 9/21/05. Returned well to injection.

I hereby certify that the information above is true and complete to the best of my knowledge and belief. I further certify that any pit or below-grade tank has been/will be constructed or closed according to NMOCD guidelines ☐, a general permit ☐ or an (attached) alternative OCD-approved plan ☐.

SIGNATURE Darrin Steed TITLE Petroleum Engineer DATE September 27, 2005

Type or print name Darrin Steed E-mail address: darrinsteed@duganproduction.com Telephone No. 325-1821

For State Use Only

APPROVED BY: Charles TITLE SUPERVISOR DISTRICT # 3 DATE SEP 30 2005

Conditions of Approval (if any):



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

MECHANICAL INTEGRITY TEST REPORT

(TA OR UIC)

Date of Test 9-21-05 Operator Dugan Rod API # 30-0 45 26460

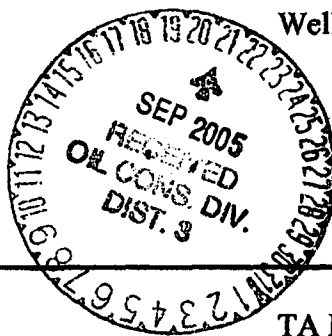
Property Name Mangrove SW Well # 1 Location: Unit Sec 32 Twn 24 Rge 10

Land Type:

State ☒
Federal ☐
Private ☐
Indian ☐

Well Type:

Water Injection ☐
Salt Water Disposal ☒
Gas Injection ☐
Producing Oil/Gas ☐
Pressure observation ☐



Temporarily Abandoned Well (Y/N) (N)

TA Expires: _____

Casing Pres. _____
Bradenhead Pres. _____
Tubing Pres. 0
Int. Casing Pres. _____

Tbg. SI Pres. _____
Tbg. Inj. Pres. _____

Max. Inj. Pres. 690

Pressured annulus up to 420 psi. for 30 mins. Test passed/failed

REMARKS:

Tested limiting device.

By Haug Anderson
(Operator Representative)

Witness

Monica Kuehling
(NMOCD)

Supervisor
(Position)

Revised 02-11-02