



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON
Governor
Betty Rivera
Cabinet Secretary

December 1, 2002

Lori Wrotenbery
Director
Oil Conservation Division

Richardson Operating Company
3100 La Plata Highway
Farmington, New Mexico 87401

Attn: Mr. Drew Carnes

Re: Injection Pressure Increase - 190
Salty Dog Well No. 2
San Juan County, New Mexico

Dear Mr. Carnes:

Reference is made to your request dated November 22, 2002, to increase the surface injection pressure on the above referenced well. This request is based on a step rate test conducted on this well on November 21, 2002. The test results have been reviewed and we feel an increase in injection pressure is justified at this time.

You are therefore authorized to inject at or below the following surface injection pressure.

Well and Location	Maximum Surface Injection Pressure 2 7/8" Tubing
Salty Dog Well No. 2	1,300 PSIG
Located in Unit J, Section 5, Township 29 North, Range 14 West, NMPM, San Juan County, New Mexico.	

The Division Director may rescind this injection pressure increase if it becomes apparent that the injected water is not being confined to the injection zone or is endangering any fresh water aquifers.

Sincerely,

Lori Wrotenbery (wrs)
Lori Wrotenbery
Director

cc: Oil Conservation Division - Aztec
Files: SWD-811; PSI-X, 2002

November 22, 2002

Will Jones
New Mexico Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

Re: Salty Dog #2 Step Rate Test

Dear Mr. Jones,

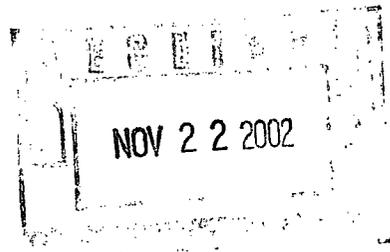
Please find the attached data and analysis of the step rate test performed on the Salty Dog #2 on November 21, 2002. I have included all raw data, as well as the analysis performed by American Energy Services. Also attached is the Salty Dog #2 well diagram containing all pertinent well information.

Based on the Tefteller and American Energy Services charts, I agree with the AES determination of FPP being 2587 psi. I did a rough determination based on the Tefteller chart alone and determined the FPP being 2600 psi.

Please review this information and review and if possible increase our allowable surface injection pressure.

Thank you for your time and consideration.

Regards,



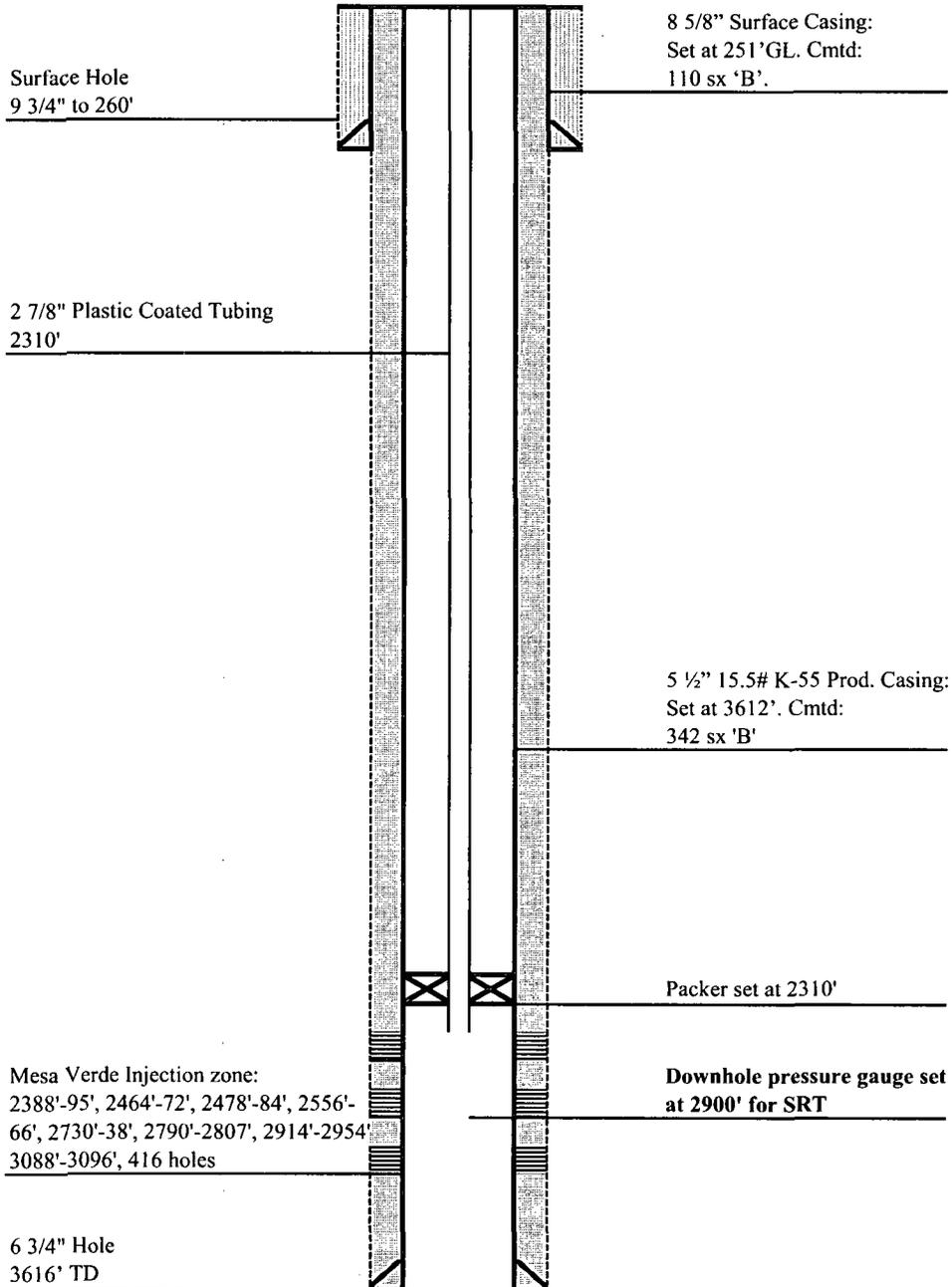
Drew Carnes
Operations Manager
505-564-3100
505-215-3926 (Cell)

RICHARDSON Operating COMPANY

(SWD-811)

Richardson Operating Company
3100 La Plata Highway
Farmington, NM 87401
(505) 564-3100

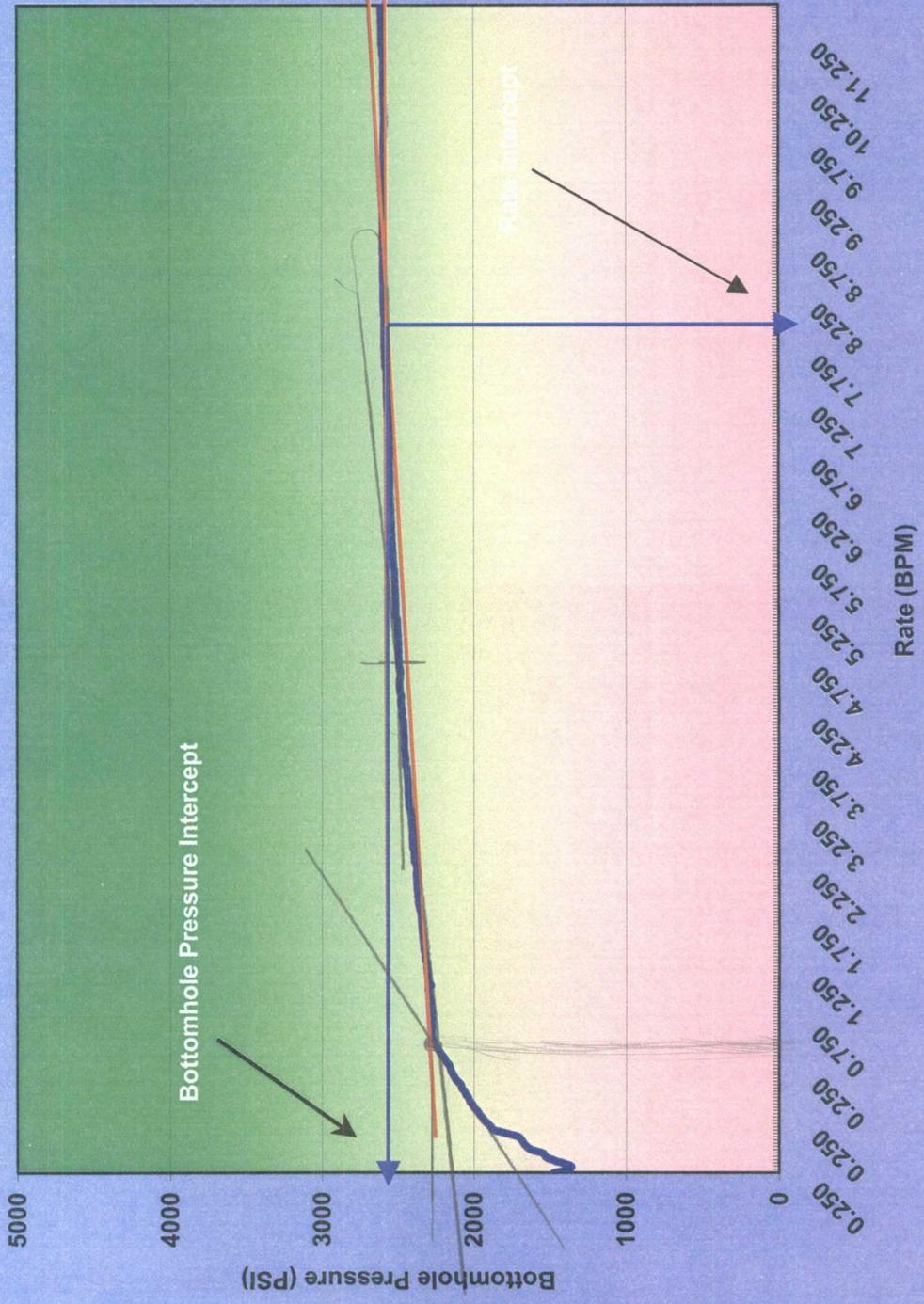
Well Name **Salty Dog #2**
Location 1495' FSL & 1477' FEL
J Sec 5, T29N, R14W NMPM
County San Juan
Field SWD; Blanco Mesa Verde
API# 30-045-30812
Elevation 5297' UG



30-045-30812

Salty Dog #2 - Step Rate Test November 21, 2002

BHP @ Fracture = 2,587 PSI
Based on Graph Below - FG = 1.0833
psi/ft



SDP
TP

SwD approved 2/15/02

1PF 171
3/15/02

1050 = old allowable
Surface Pressure

Jones, William V

From: Jones, William V
Sent: Friday, November 22, 2002 3:41 PM
To: 'Drew Carnes'
Cc: Catanach, David; Perrin, Charlie
Subject: Injection Pressure Limit for Richardson's Salty Dog Well No. 2

Mr. Drew Carnes
Richardson Operating Company
Farmington, New Mexico,

From preliminary analysis of the Step Rate Test you have sent today, you have permission to inject at 1200 psi surface pressure on the Salty Dog Well No. 2 until the final determination and order is issued on this matter. The final order will detail the allowable surface pressure and may be below or above the 1200 psi temporary limit.

Regards,
Will Jones
New Mexico Oil Conservation Division

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

From: Drew Carnes [mailto:dcarnes@digii.net]
Sent: Friday, November 22, 2002 3:20 PM
To: 'Jones, William V'
Subject: RE: 2nd Try

Will,
Here's one with surface pressure plotted. Because of the difference in the number of data points, I took the average pressure for each step. It should be noted that the well configuration will not change from the SRT to injection.
Thanks...

Drew Carnes

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

From: Jones, William V [mailto:WVJones@state.nm.us]
Sent: Friday, November 22, 2002 2:35 PM
To: 'Drew Carnes'
Subject: RE: 2nd Try

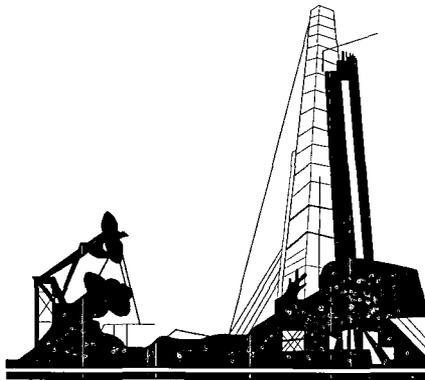
Drew:
Got your application and attachments. It was pointed out to me that I am not supposed to spend time matching up data. Also, I am backlogged on other applications from other operators.

Please send a plot with the surface AND bottomhole pressures vs surface injection rate. I will retain this data and resume work on this after this plot arrives.

Regards,
Will Jones

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

From: Drew Carnes [mailto:dcarnes@digii.net]
Sent: Friday, November 22, 2002 1:31 PM
To: wvjones@state.nm.us



TRANSMITTAL COVER SHEET

OIL CONSERVATION DIVISION
1220 S. ST. FRANCIS DRIVE
SANTA FE, NM 87505
(505) 476-3440
(505)476-3462 (Fax)

PLEASE DELIVER THIS FAX:

TO:

Fuld 505-564-3109
Drew Carnes - RICHARDSON

FROM:

Will Jowz -

DATE:

12/13/02

PAGES:

C+3

SUBJECT:

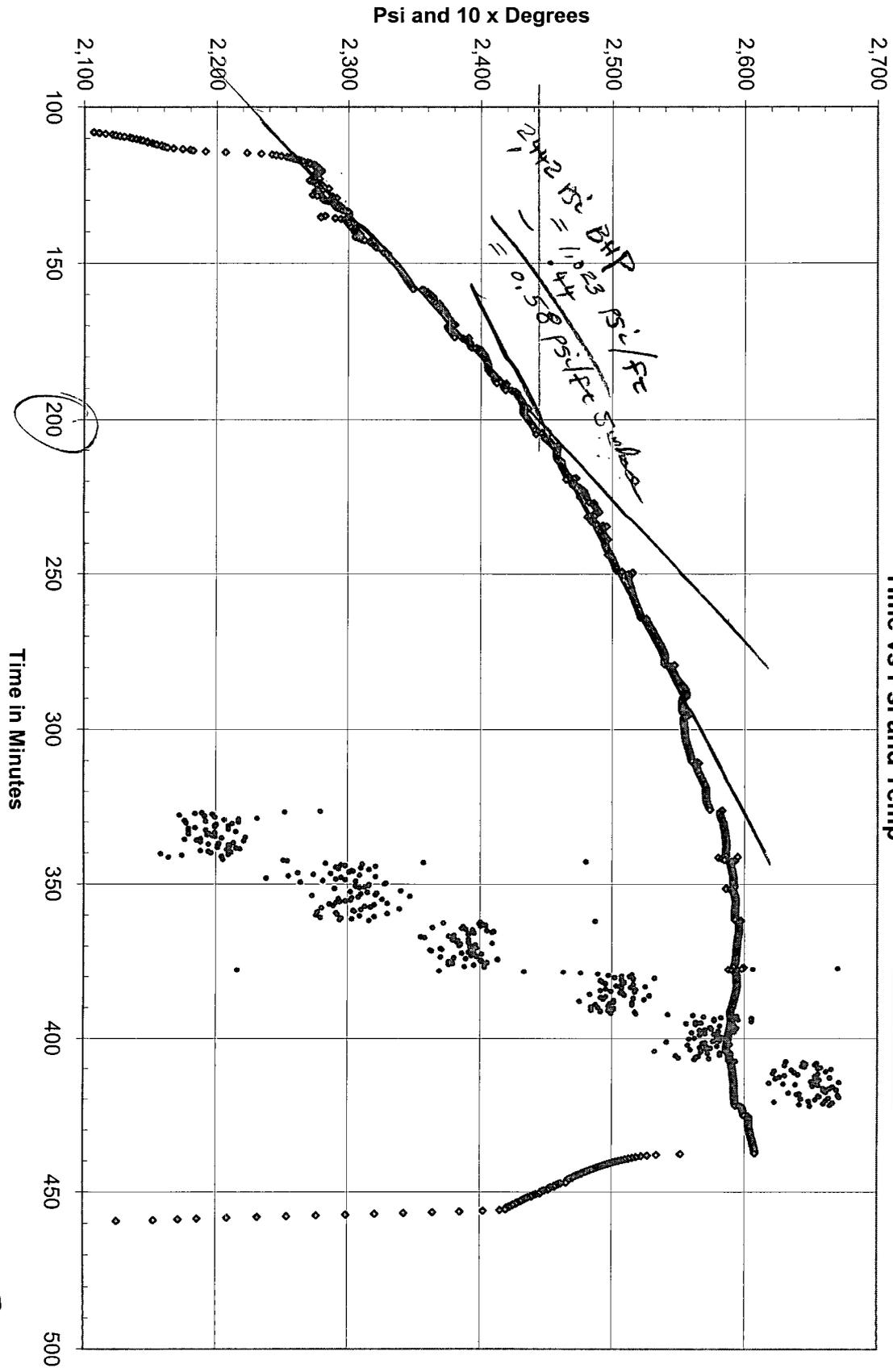
Salty DS #2 Step Rate TEST

IF YOU HAVE TROUBLE RECEIVING THIS FAX, PLEASE CALL THE OFFICE
NUMBER ABOVE.

Salty Dog #2

11-21-02

Time vs Psi and Temp

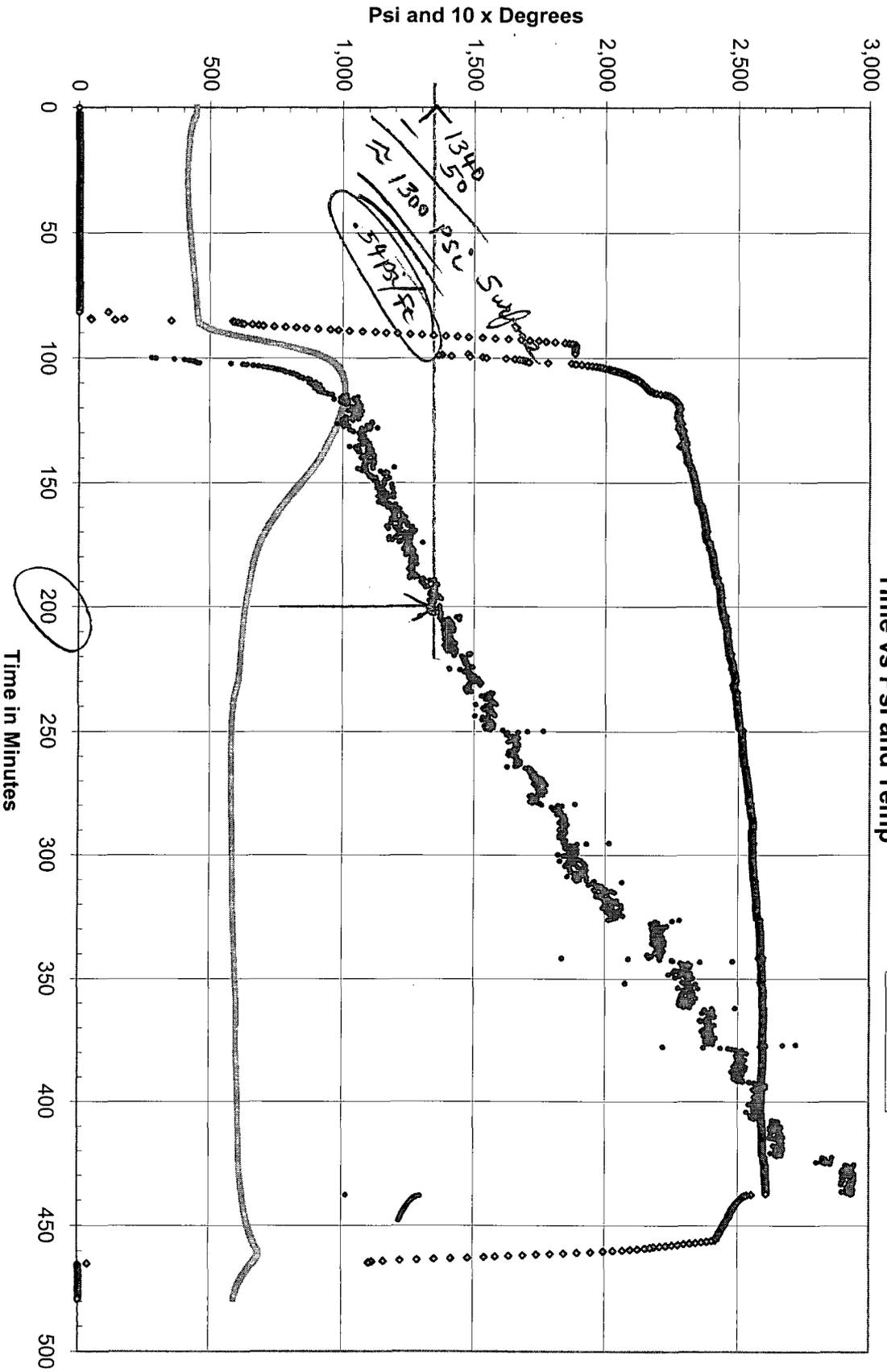


WTD
12/1/02

Salty Dog #2

11-21-02

Time vs Psi and Temp

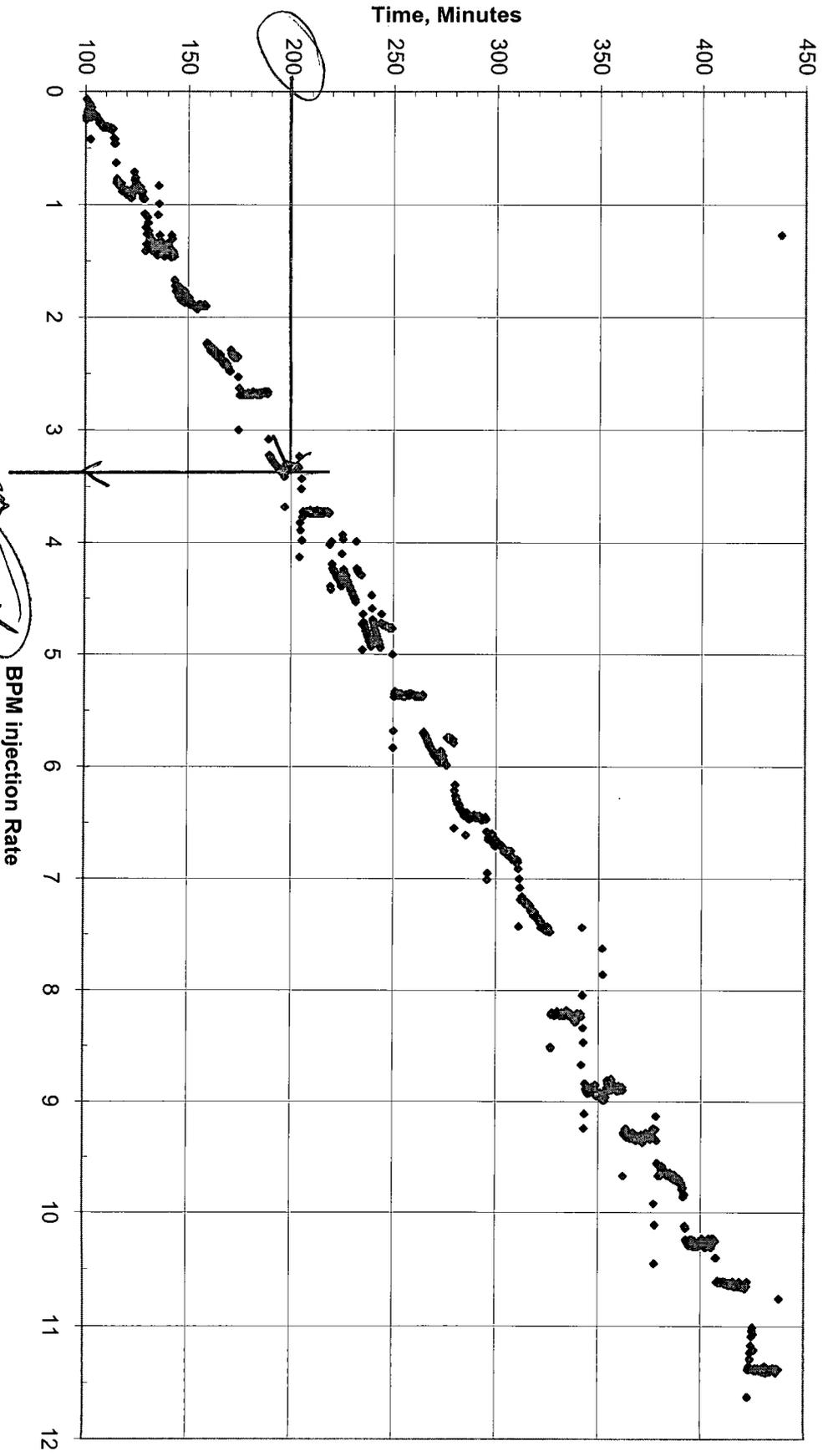


◆ Psi
■ Temp x 10
● SurfacePsi

Top Leaf @ 2388'

W. D. Jones

Salty Dog #2
11-2002
Injection Rate vs Time



3.4 BPM
1900 B.P. Data

Jones, William V

From: Catanach, David
Sent: Wednesday, December 18, 2002 10:01 AM
To: Drew Carnes (E-mail)
Cc: Jones, William V
Subject: Salty Dog No. 2

Drew, Will Jones has provided me with the latest step rate test conducted on the Salty Dog No. 2. I have examined the test and concur with the decision arrived at by Mr. Jones. Please be advised that if you wish to pursue this matter, I suggest you contact Mr. Richard Ezeanyim, the OCD Chief Petroleum Engineer. I'm sure he'd be more than happy to discuss your situation. He can be reached at:

Phone (505) 476-3467
E-Mail- REzeanyim@state.nm.us

David Catanach

12/16/02

DAVID -

DREW Carnes w/ RICHARDSON called again.
Apparently he is under pressure to ask us again
for more pressure allowable for the salty DOB #2.

I promised him I would get the test to you
for a review of ^{any} possible increase in pressure.
Here is the ^{test} order and Data.

Drew Carnes 505-564-3100

— Whatever you decide —

I'd say no, but you might check w/ Chict Espinosa
or have Drew call Richard.

De 12/18/02

dcarnes@digii.net

R Ezeanyim