DATE IN 6/25/04	SUSPENSE	ENGINEER Jones	LOGGED IN 7-1-04	TYPE PMX	APP NO pSEM0418328344

ABOVE THIS LINE FOR DIVISION USE ONLY

IPI

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

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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

TWO WARREN PLACE / SUITE 1500 / 6120 SOUTH YALE / TULSA, OK 74136-4224

APACHE CORPORATION

WWW.APACHECORP.COM

(918) 491-4900
(918) 491-4853 (FAX)
(918) 491-4854 (FAX)

June 22, 2004

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

RE: Request for Surface Injection Pressure Amendment
Argo No. 6 and Argo No. 7
Sec 15, 21S 37E
Lea County, New Mexico

Dear Mr. Catanach,

Apache Corporation respectfully requests an amendment to the 780 psi surface pressure limitation for its Argo No. 6 (API 30-025-06603) and Argo No. 7 (API 30-025-09915) SWD wells. We would like to raise our surface pressure limitations based on the given data. The attached injection step rate test (Figure 1) for the Argo No. 6 supports a bottom hole pressure limitation of 3150 psi at 4930' or 2905 psi at 4375' (mid point of upper perforations). This correlates on Figure 2 to a surface pressure of approximately 1665 psi.

The friction pressure in the pipe was calculated at various rates and is attached in Figure 3. This calculated data is within 1% of our actual friction pressure losses. The surface pressures line indicates the point where our BHP at the mid point of the perfs is equal to the parting pressure of 2905 psi at the associated rate with friction losses included. The pressures range from 975 psi with no friction and a rate of 0 BW/d to 1665 psi at a max rate of 11,000 BW/d. We will be installing automatic choke assemblies to limit our pressures at the given rates to keep our BHP below the calculated parting pressures.

Your consideration in approving increased surface injection pressures for the Argo No. 6 and Argo No. 7 wells is greatly appreciated.

If you have any questions please feel free to contact me at (918) 491-4800 or by email at rick.crist@apachecorp.com

Very truly yours,

APACHE CORPORATION

Rick Crist
Production Engineer

cc: Doug O'Neil
Bill Baswell
Well file

FIGURE 1 - ARGO 6 STEP RATE TEST
BHP vs. RATE

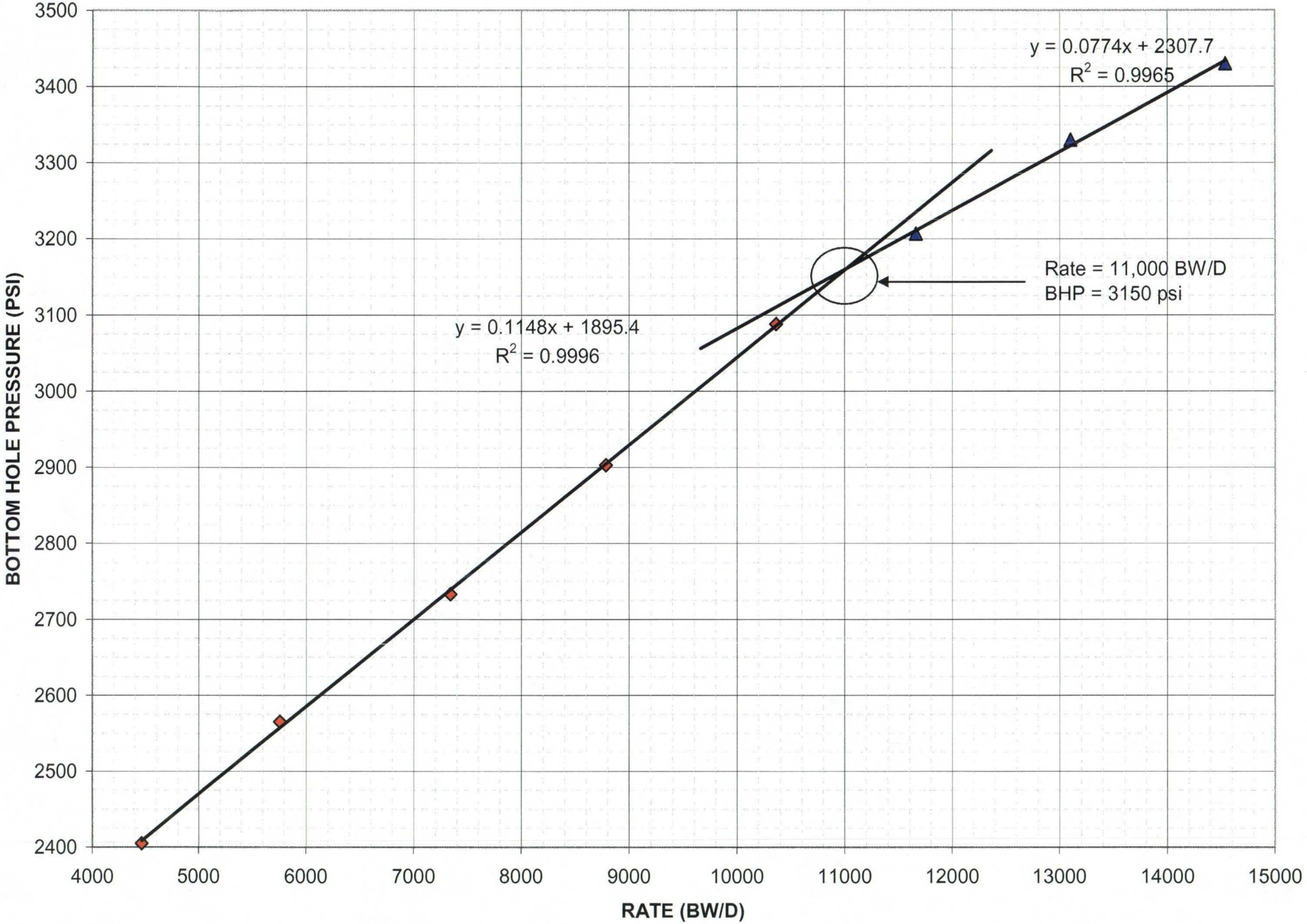

FIGURE 2 - ARGO 6 STEP RATE TEST
SURFACE PRESSURE vs. RATE

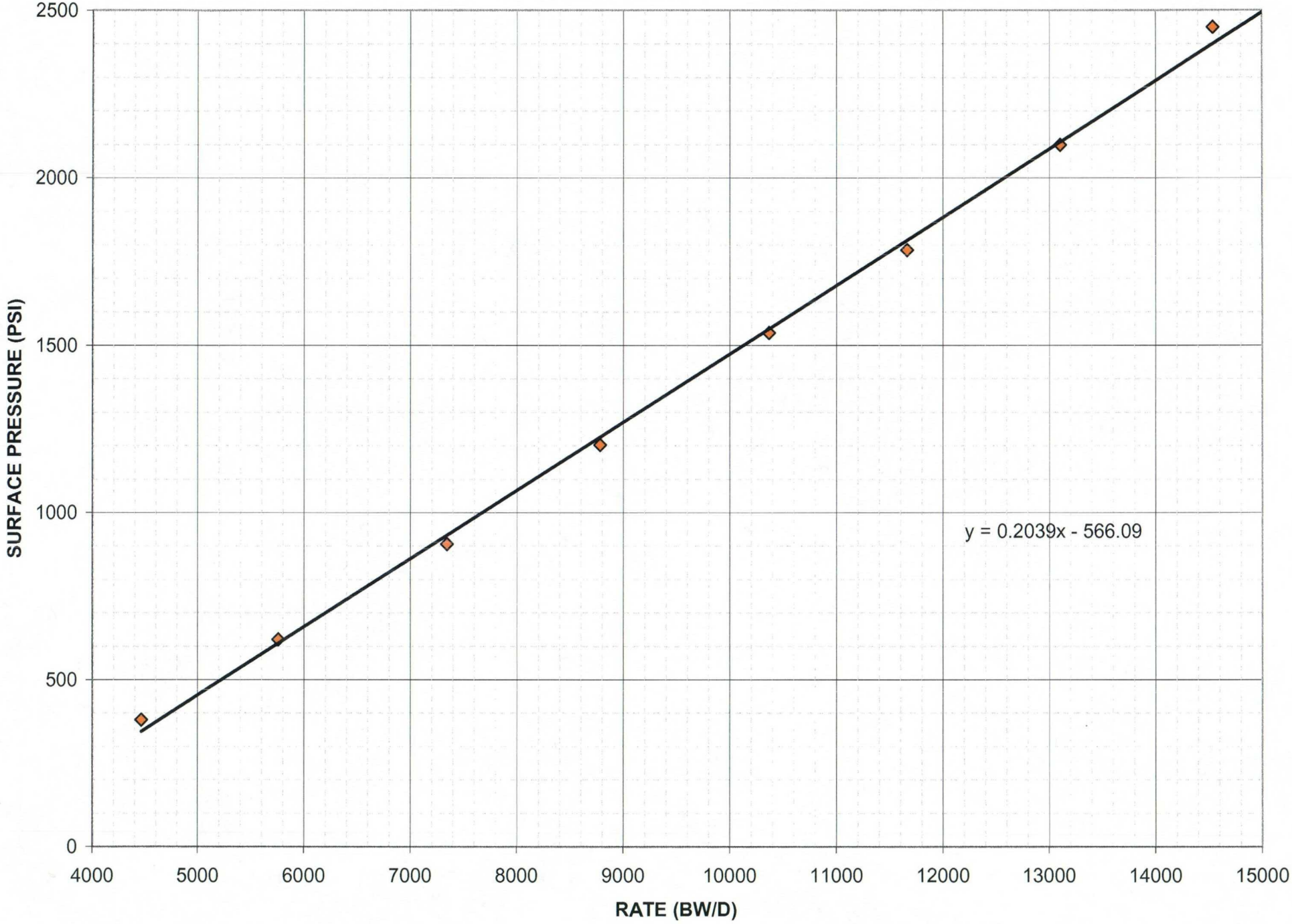

FIGURE 3 - ARGO 6 SURFACE PRESSURE AND FRICTION LOSS