

DATE IN <u>2-22-10</u>	SUSPENSE	ENGINEER <u>Wannell</u>	LOGGED IN <u>2-22-10</u>	TYPE <u>IPI</u>	PTGW APP NO. <u>1005348789</u>
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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



Chesapeake

Smith 4 Fed. #2

ADMINISTRATIVE APPLICATION CHECKLIST

30-025-36730

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]

IPI-364

SWD-1031

[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

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RECEIVED OCD

[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.

Shannon Glancy

Production Engineer

2/19/2010

Print or Type Name

Signature

Title

Date

Shannon.Glancy@chk.com
 e-mail Address



Operations Department

2/18/10

Terry Warnell (NMOCD)
1220 South St. Francis Drive
Santa Fe, NM 87505
(505) 476-3466

RE: Smith 4 Federal 2 Injector Pressure Increase

Mr. Terry Warnell,

Chesapeake Energy respectfully requests to increase the injection pressure on the Smith 4 Fed 2. A step rate test has been performed, and the results are summarized in the table below. More detailed information in regards to the test and wellbore is enclosed.

Well	API	Current Limit	Fracture Pressure	Requested Inj. Pressure Limit	SRT Date
Smith 4 Fed 2	3002536730	643 psi	2030 psi	1980 psi	2/17/10

Note: All pressures are surface pressures

Feel free to contact me if you have any questions or need any other information. Thank you for your time, I appreciate it.

Regards,

Mr. Shannon Glancy
Production Engineer (Permian)
Chesapeake Energy Corporation
Office: (405) 935-8109
Cell: (405) 415-5299
Fax: (405) 849-8109

Chesapeake Energy Corporation

6100 N. Western Ave. • Oklahoma City, OK 73118 • P.O. Box 18496 • Oklahoma City, OK 73154-0496
405.848.8000 • fax 405.879.7930

Step Rate Test



Cardinal Surveys Company

February 17, 2010

ChesapeakeEnergy
Smith Fed 4 - 2
Field:
Lea County, New Mexico
SC 59173
File # 19732

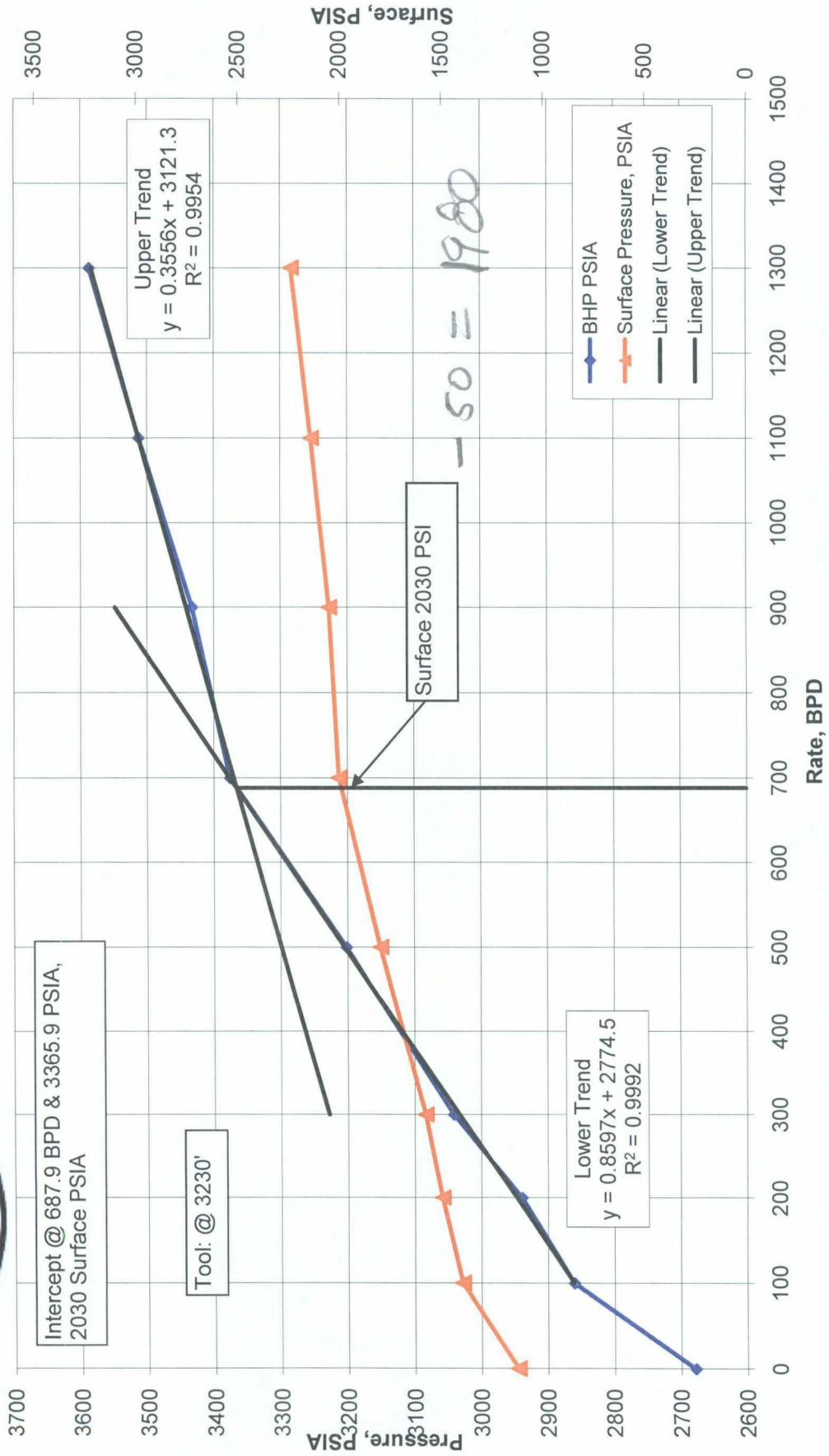
Intercept @ 687.9 BPD
& 3365.9 PSIA, 2030
Surface PSIA

Downhole PSI Tool Ser. No.
Surface PSI Gauge Ser. No.
Tool @ 3230'

	Start Time	End Time	Rate BPD	Comments
1	8:28 AM	9:00 AM		0 On Bottom
2	9:00 AM	10:00 AM	100	
3	10:00 AM	11:00 AM	200	
4	11:00 AM	12:00 PM	300	
5	12:00 PM	1:00 PM	500	
6	1:00 PM	2:00 PM	700	
7	2:00 PM	3:00 PM	900	
8	3:00 PM	4:00 PM	1100	
9	4:00 PM	5:00 PM	1300	
10	5:00 PM	0.71875		0 Fall Off



Chesapeake Energy Smith Federal 4 -2 Step Rate Test 02-17-2010



Step Rate Test

Chesapeake Energy

Smith Federal 4 - 2

Field:

Lea County, New Mexico



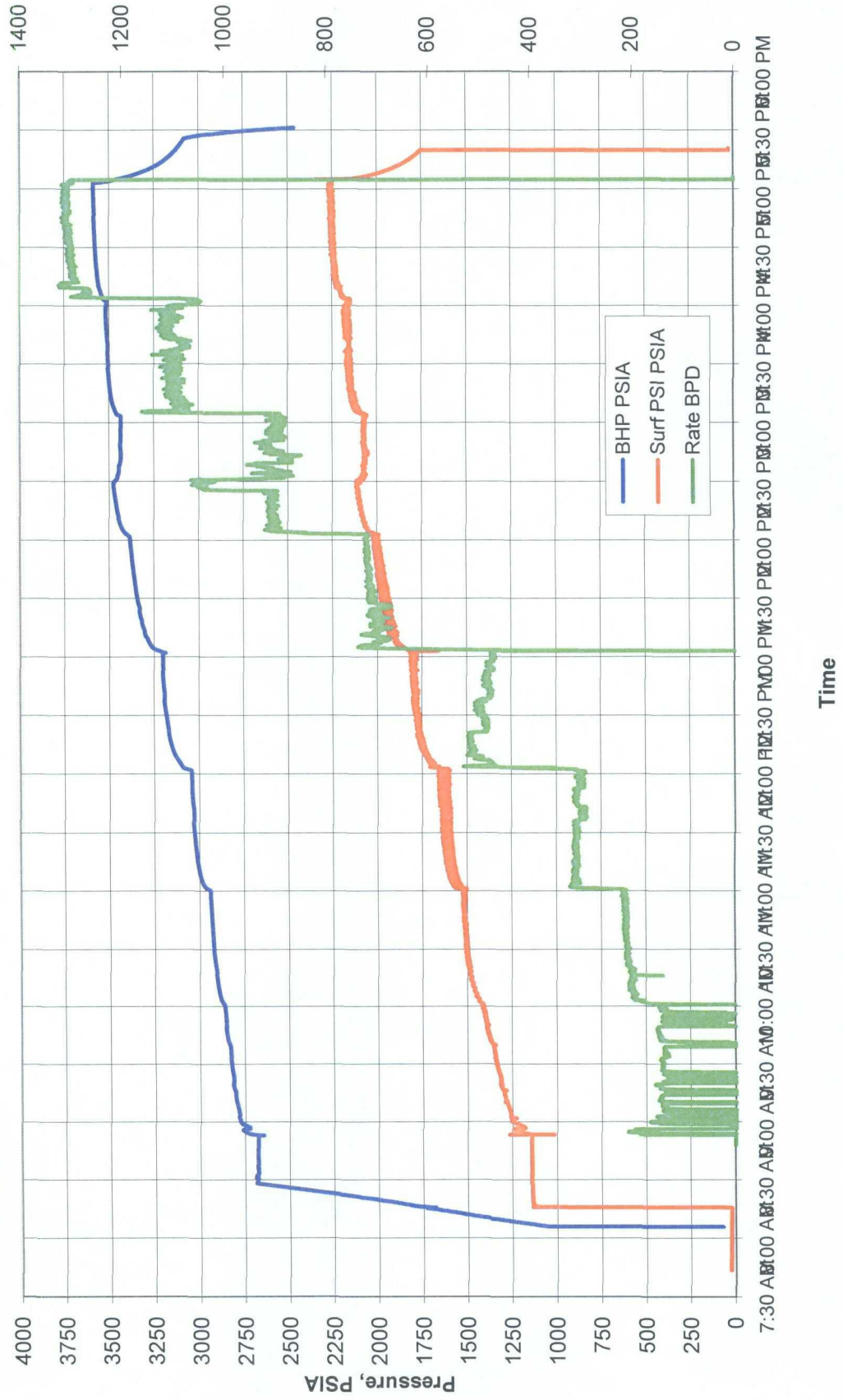
	S Time	E Time	D Time	Last Rate	Step	B. H. Pressure	Surf	Cum	Delta	Avg.	Lower	Upper
			Min	BPD	BPD	PSIA	PSIA	BBL	BBL	BPD	Trend	Trend
1	8:28 AM	9:00 AM	32	0	0	2678.5	1128.8	0	0.00	0		
2	9:00 AM	10:00 AM	60	100	100	2860.8	1401.9	6.2	6.20	149	2860.8	
3	10:00 AM	11:00 AM	60	200	100	2939.5	1500.9	15.1	8.90	214	2939.5	
4	11:00 AM	12:00 PM	60	300	100	3041.8	1582.7	28.1	13.00	312	3041.8	
5	12:00 PM	1:00 PM	60	500	200	3201.8	1803.4	48.9	20.80	374	3201.8	
6	1:00 PM	2:00 PM	60	700	200	3376	2005	78.5	29.60	422	3376	3376
7	2:00 PM	3:00 PM	60	900	200	3432.7	2053	117.6	39.10	938		3432.7
8	3:00 PM	4:00 PM	60	1100	200	3512.3	2141.3	163.5	45.90	1102		3512.3
9	4:00 PM	5:00 PM	60	1300	200	3586.5	2237.2	218.9	55.40	1330		3586.5
10	5:00 PM	5:15 PM	15	0	-1300	3163	1751	218.9	0.00	0		

0.8597 2774.5
0.3556 3121.3

int point: 687.95874 BPD
3365.9381 Psia



Chesapeake Energy Smith Federal 4 -2
Step Rate Test 02-17-2010





BLM Schematic

SMITH 4 FEDERAL 2

CONFIDENTIAL

Field: WEST TEAS
County: LEA
State: NEW MEXICO
Location: SEC 4, 20S-33E, 990 FNL & 395 FEL
Elevation: GL 3,568.00 KB 3,583.00
KB Height: 15.00

Spud Date: 8/9/2004
Initial Compl. Date:
API #: 3002536730
CHK Property #: 819501
1st Prod Date: 9/14/2004
PBSD: Original Hole - 3459.0
TD: 3,505.0

