

IT-357

DATE IN 10/28/09	SUSPENSE	ENGINEER Ward	LOGGED IN 10/28/09	TYPE IPT	PT6W APP NO. 0930128685
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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



Apache(873)
15422

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]

House SWD Well #1

30-025-
39193

1720 PSE
374 gradient

SWD-1169
IT-351

- [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.

Jeff Frederick

Print or Type Name

Signature

Production Engineer

Title

10/27/2009

Date

jeff.frederick@apachecorp.com

e-mail Address

TWO WARREN PLACE / SUITE 1500 / 6120 S. YALE / TULSA, OKLAHOMA 74136-4224

RECEIVED OCD



2009 OCT 27 A 11: 53

WWW.APACHECORP.COM
Telephone: (918) 491-4900

October 23, 2009

State of New Mexico
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

Attention: Mr. William V. Jones

RE: Request for Surface Injection Pressure Amendment
House SWD #1 (30-025-39193)
Lea County, New Mexico

Dear Mr. Jones:

Apache Corporation requests an amendment to the surface pressure limitation for the House SWD #1. A step-rate test was performed on October 22, 2009 and this test indicates that the parting pressure occurs at a surface pressure of 1776 psi (0.39 psi/ft) and the ISIP of the test was 1720 psi. Therefore, Apache Corporation is requesting the allowable surface injection pressure limitation is increased to 1720 psi (the lesser of the two pressures).

Your approval of said amendment would be greatly appreciated. Please call (918-491-4982) or email (jeff.frederick@apachecorp.com) with any questions or comments.

Sincerely,

A handwritten signature in black ink, appearing to read "JF", with a horizontal line underneath.

Jeff Frederick, P.E.

Attachments

Cc: Sophie Mackay, Engineering Tech

jlf,bm

Depth 4600 ft
Fluid Wt 9.2 ppg

Rate (bbl/min)	Surface Pressure (psi)	Friction Pressure (psi)	Hydrostatic Pressure (psi)	Bottom Hole Pressure (psi)
0.5	1326	8	2201	3518
1	1419	29	2201	3591
1.5	1535	59	2201	3677
2	1605	98	2201	3708
2.5	1744	146	2201	3799
3	1837	202	2201	3835
3.5	1930	267	2201	3864
4	2023	339	2201	3885
4.5	2116	419	2201	3897
5	2233	507	2201	3927
ISIP	1720	0	2201	3921

Location	Parting Pressure (psi)	Rate at Parting Pressure (bbl/min)
Bottom hole	3827	2.7
Surface	1776	2.7

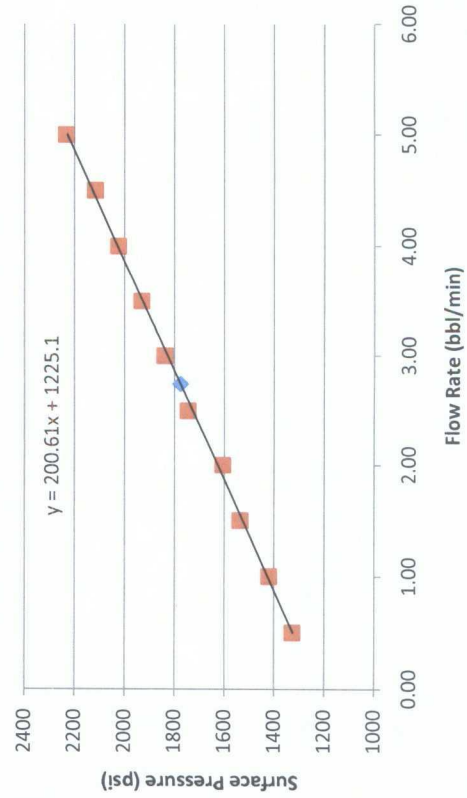
This is the surface pressure that corresponds to the 3827 psi bottom hole parting pressure.

Frac Grad psi/ft
SRT 0.83
ISIP 0.85

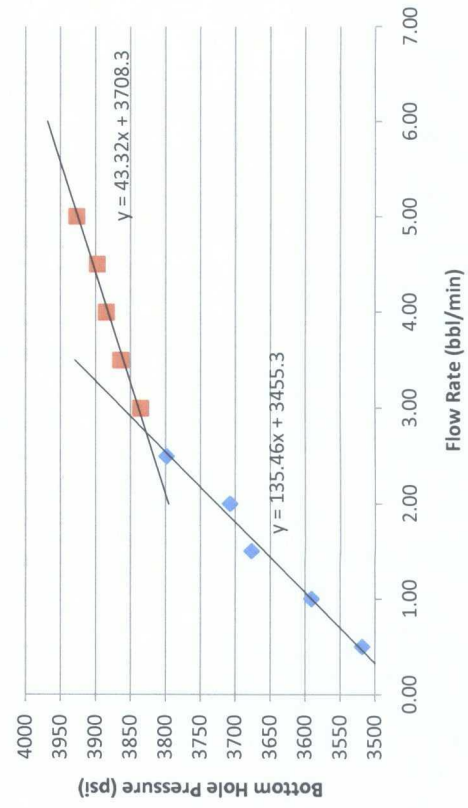
New Maximum Requested Surface Pressure

1720 psi

Step Rate Test: Surface Pressure Data



Step Rate Test: Bottom Hole Pressure Data



CPS Treatment Report

page 1

Customer: APACHE Well Name & No.: HOUSE SWD #1 County: LEA State: NM	ESO#: DJU27X3J3C Formation: N/A Date: October 22, 2009 Well type: Oil / Old / Stim.
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Customer Information Address: P.O.BOX DRAWER D City, State: MONUMENT NM Zip Code: 88265 Customer Representative: ALBERT MAES	
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Remarks	Arrive on Location: 6:00 AM Depart Location: 4:00 PM Total Hours: 10.00
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	Depth	O.D	Weight	I.D	Volume	Bbls/linear ft.
Tubing 1 length ft.:	N/A		0	0.000	0.00 BBLs.	0.00000
Tubing 2 length ft.:					0.00 BBLs.	0.00000
Casing 1 length ft.:	N/A	5 1/2	0.00	0.000	##### BBLs.	0.00000
Casing 2 length ft.:					0.00 BBLs.	0.00000
Open Hole length ft.:		N/A	N/A		0.00 BBLs.	0.00000
Combined Depth ft.:	#VALUE!				BBLs.	0.00000

	Depth	Vol.			
Top Perf/Open Hole:	N/A	#VALUE!	Maximum Pressure:	2279	ISIP: 1720
Bottom Perf/Open Hole:	N/A	#VALUE!	Average Pressure:	1755	5 min:
Number of Perfs:	N/A		Maximum Rate:	5.3	10 min:
Perf Size:	0.31	in.	Average Rate:	2.8	15 min:
Packer Depth:	N/A	ft.	Fluid to Recover:	883.4	Proppant Total:

Time	STP	CAS	Rate	Stage	Total	Comments
6:00:27 AM	0	0	0.0	0.0	0.0	SAFETY MEETING
10:15:01 AM	1186		0.6		0.2	START WATER
10:29:51 AM	1256		0.7		10.0	PSI & RATE CHECK
10:44:52 AM	1326		0.7		20.7	END OF 30 MIN
10:45:24 AM	1349		1.0		21.2	BEGINNING OF 30MIN
11:00:31 AM	1395		1.0		36.7	PSI & RATE CHECK
11:15:25 AM	1419		1.0		52.0	END OF 30 MIN
11:16:21 AM	1465		1.5		53.4	BEGINNING OF 30MIN
11:31:20 AM	1512		1.5		76.2	PSI & RATE CHECK
11:46:19 AM	1535		1.5		98.7	END OF 30 MIN
11:47:01 AM	1581		2.0		99.9	BEGINNING OF 30MIN
12:01:58 PM	1605		2.0		128.8	PSI & RATE CHECK
12:17:02 PM	1605		2.0		159.6	END OF 30 MIN
12:17:57 PM	1698		2.5		160.8	BEGINNING OF 30MIN
12:32:58 PM	1721		2.5		198.4	PSI & RATE CHECK
12:47:52 PM	1744		2.5		235.0	END OF 30 MIN
12:48:33 PM	1814		3.0		236.8	BEGINNING OF 30MIN
1:03:32 PM	1814		3.0		281.8	PSI & RATE CHECK
1:18:36 PM	1837		3.0		327.4	END OF 30 MIN
1:19:12 PM	1884		3.5		329.2	BEGINNING OF 30MIN
1:34:19 PM	1907		3.5		382.9	PSI & RATE CHECK
1:49:08 PM	1930		3.5		435.8	END OF 30 MIN
1:50:39 PM	2000		4.0		441.6	BEGINNING OF 30MIN
2:05:40 PM	2023		4.0		503.0	PSI & RATE CHECK
2:20:36 PM	2023		4.0		563.8	END OF 30 MIN
2:21:53 PM	2116		4.5		569.3	BEGINNING OF 30MIN
2:36:57 PM	2116		4.5		636.0	PSI & RATE CHECK
2:51:54 PM	2116		4.5		704.9	END OF 30 MIN
2:52:34 PM	2209		5.1		708.0	BEGINNING OF 30MIN
3:07:37 PM	2233		5.1		784.5	PSI & RATE CHECK
3:22:40 PM	2233		5.1		860.5	END OF 30 MIN

ESO #

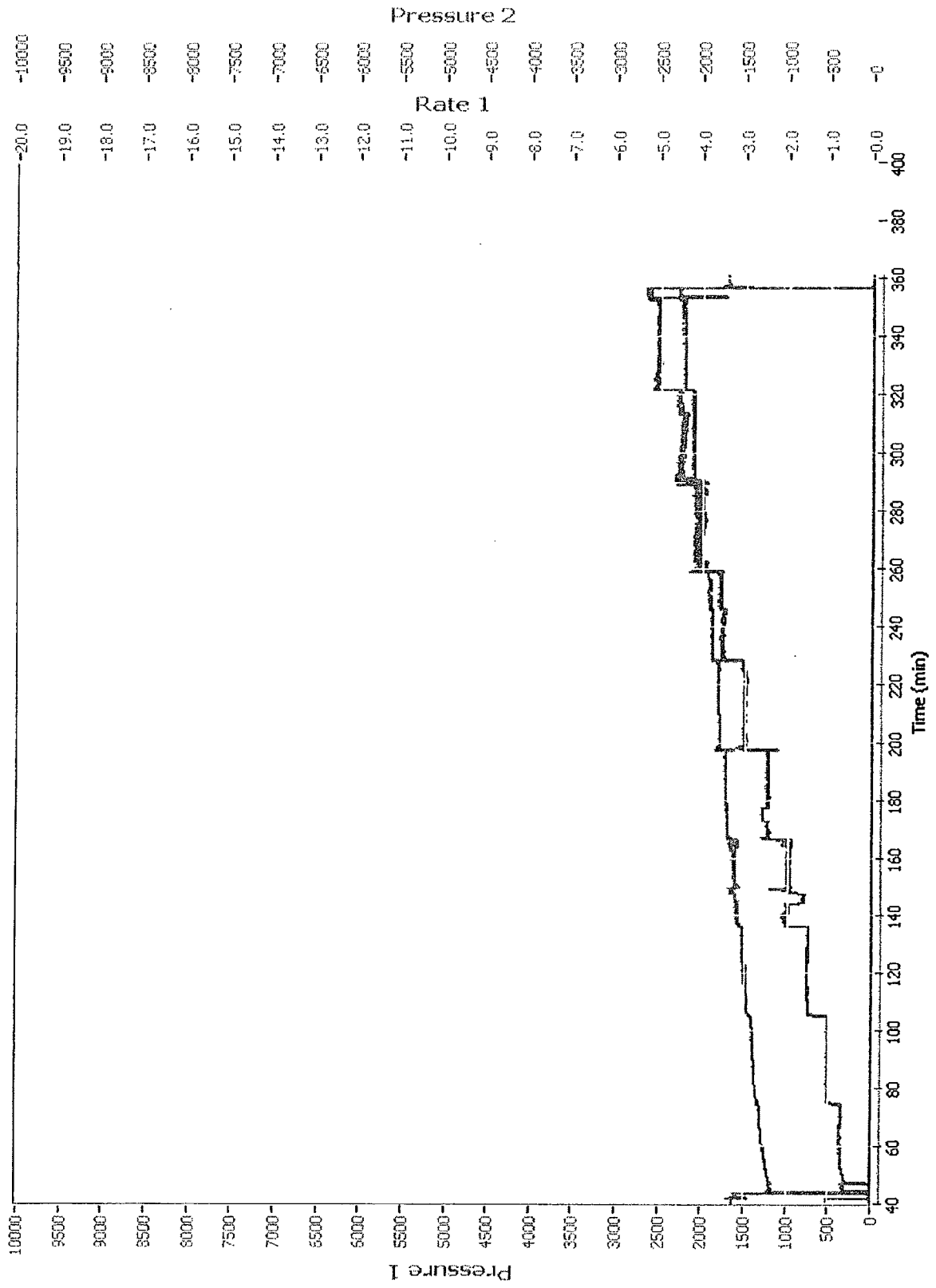
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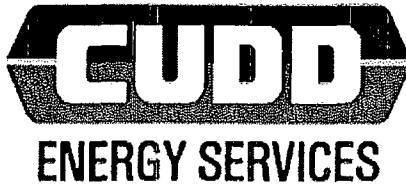
APACHE

HOUSE SWD #1

10-21-09

Surface Conditions





Cudd Pumping Services
P O Box 910080
Dallas TX 75391

Equipment And Service Order

ESO No. **DJUZ7X3J3C** ESO Date: 10/22/2009

Bill To: Apache Corporation		Customer No. 10026	Well Owner Name: APACHE	
P O Box Drawer D		Lease Name: Well Name: Well No: HOUSE SWD #1		
		County: LEA	State: NM	Country: USA
Monument NM 88265		Date From 10/22/2009	Date To 10/22/2009	Work Location Wellbore
Customer AFE NO:	Customer PO:	Job: JOB092956727001	Well Location LAND	Well Type WORKOVER
Customer Representative: ALBERT MAES		Type of Operation Stimulation		
		CPCI By: DAVID JUAREZ		

Pricing Basis:

PB000001 CPS Price Book as of 07/01/06

Ln	Dist-Svc	Prod. ID	Description	Qty	UOM	Unit Price	Gross Price	Disc/Sur	Amount	Net Price
1	0357-119	5020	250 HHP Pump, 0-5,000, 4 hr. m	1	MIN	\$508.10	\$1,129.10	-55.00%	-\$621.00	\$508.10
2	0357-119	9186	Light Equipment	30	MIL	\$1.98	\$4.40	-55.00%	-\$72.60	\$59.40
3	0357-119	9180	Heavy Equip. mileage	30	MIL	\$2.93	\$6.50	-55.00%	-\$107.25	\$87.75
4	0357-119	9242	Step Rate Test	1	EA	\$594.00	\$1,320.00	-55.00%	-\$726.00	\$594.00
5	0357-119	7152	Acid treating van	1	EA	\$602.19	\$1,338.20	-55.00%	-\$736.01	\$602.19
6	0357-119	5023	250 HHP Pump, 0-5,000, Inland/	5	HR	\$157.32	\$349.60	-55.00%	-\$961.40	\$786.60

NOTES:
OIL

Estimated Cost:	\$2,638.04
Applicable Taxes:	\$0.00
Total Estimated Cost:	\$2,638.04

This is an estimate of applicable taxes. The correct taxes will be calculated when invoiced.

Employee Name & Hours:		Billable Hours: Travel Hours:	
Jurado-Sanchez,Oscar		10	1
Payan,Jason P.		10	1
Juarez,David		10	1
		Total Man Hours: 33	
Unit No: Equipment Description: Line(s):			
6409B	750 BHP Acid Pump	1	

HOUSE SWD									SEPTEMBER