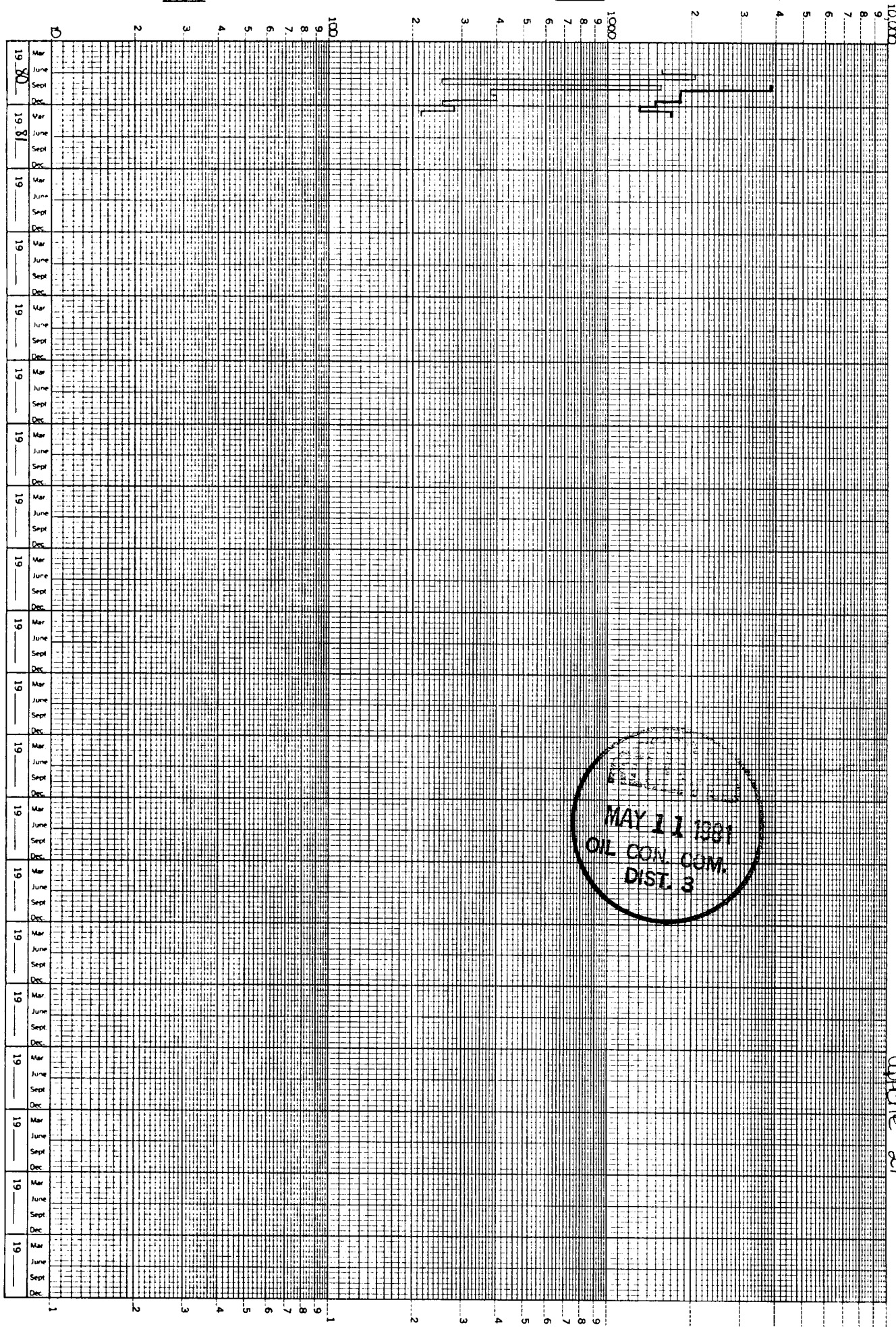


Chadra

Pictured Cliffs



Apache #29

AFACHE #29

12-2-80 CH flowed 10 MCF, 0 BW, FTP 145, ch 20/64.  
PC flowed 53 MCF, 0 BW, FCP 150, ch 23/64.

12-3-80 CH flowed 11 MCF, 0 BW, FTP 145, 20/64 ch.  
PC flowed 61 MCF, 0 BW, FCP 150, 23/64 ch.

12-4-80 CH flowed 11 MCF, 0 BW, FTP 145, 20/64 ch.  
PC flowed 61 MCF, 0 BW, FCP 150, 23/64 ch.

12-5-80 CH flowed 11 MCF, 0 BW, FTP 145, 20/64 ch.  
PC flowed 61 MCF, 0 BW, FCP 150, 23/64 ch.

12-6-80 Dual completed.  
CH flowed 9 MCF, 0 BW, FTP 145, 23/64 ch.

12-7-80 CH SI for press build up, SITP 250

12-8-80 CH flowed 15 MCF, 0 BW, FTP 160, 23/64 ch.

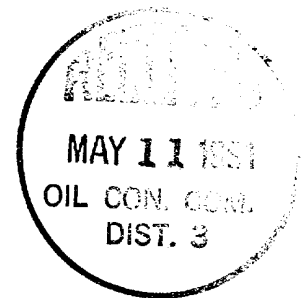
12-6-80- PC flowed 63 MCF, 0 BW, FCP 150, 20/64.  
12-8-80 Same rate per day.

12-9-80 CH flowed 9 MCF, 0 BW, FTP 145, 20/64 ch.  
PC flowed 46 MCF, 0 BW, FCP 150, 23/64 ch.

12-10-80 CH flowed 10 MCF, 0 BW, FTP 145, 20/64 ch.  
PC flowed 46 MCF, 0 BW, FCP 150, 23/64 ch.

12-11-80 CH flowed 10 MCF, 0 BW, FTP 145, 20/64 ch.  
PC flowed 46 MCF, 0 BW, FCP 150, 23/64 ch.

12-12-80 Drop from report



11-20-80	Dual completed. CH flowed 15 MCF, 0 BW, FTP 145, 23/64 ch. PC flowed 68 MCF, 0 BW, FCP 150, 20/64 ch.
11-21-80	Dual completed. CH flowed 14 MCF, 0 BW, FTP 145, 20/64 ch. PC flowed 63 MCF, 0 BW, FCP 150, 23/64 ch.
11-22-80	Dual completed. CH flowed 14 MCF, 0 BW, 150 FTP, 20/64 ch. PC flowed 53 MCF, 0 BW, FCP 150, 23/64 ch.
11-23-80	CH flowed 14 MCF, 0 BW, FTP 150, 20/64 ch. PC flowed 53 MCF, 0 BW, 150 FCP, 23/64 ch.
11-24-80	CH flowed 14 MCF, 0 BW, 150 FTP, 20/64 ch. PC flowed 53 MCF, 0 BW, FCP 150, 20/64 ch.
11-25-80	Dual completed. CH flowed 13 MCF, 0 BW, FTP 145, 20/64 ch. PC flowed 74 MCF, 0 BW, FCP 150, 23/64 ch.
11-26-80	Dual completed. CH flowed 14 MCF, 0 BW, FTP 140, 23/64 ch. PC flowed 53 MCF, 0 BW, FCP 150, 20/64 ch.
11-27-80	Dual completed. CH flowed 12 MCF, 0 BW, FTP 145, 20/64 ch. PC flowed 54 MCF, 0 BW, FCP 150, 23/64 ch.
11-28-80	CH flowed 12 MCF, 0 BW, FTP 145, 20/64 ch. PC flowed 54 MCF, 0 BW, FCP 150, 23/64 ch.
11-29-80	CH flowed 12 MCF, 0 BW, FTP 145, 20/64 ch. PC flowed 54 MCF, 0 BW, FCP 150, 23/64 ch.
11-30-80	CH flowed 12 MCF, 0 BW, FTP 145, 20/64 ch. PC flowed 54 MCF, 0 BW, FCP 150, 23/64 ch.
12-1-80	CH flowed 12 MCF, 0 BW, FTP 145, 20/64 ch. PC flowed 54 MCF, 0 BW, FCP 150, 23/64 ch.

11-2-80	CH flowed 15 MCF, 1 BW, FTP 150, 20/64 ch. PC flowed 57 MCF, 0 BW, FCP 150, 20/64 ch.
11-3-80	CH flowed 19 MCF, 2 BW, FTP 150, 20/64 ch. PC flowed 57 MCF, 0 BW, FCP 150, 20/64 ch.
11-4-80	Dual completed. CH flowed 14 MCF, 1 BW, FTP 150, 20/64 ch. PC flowed 67 MCF, 0 BW, FCP 150, 23/64 ch.
11-5-80	CH flowed 15 MCF, 1 BW, FTP 145, 20/64 ch. PC flowed 67 MCF, 0 BW, FCP 150, 23/64 ch.
11-6-80	CH flowed 15 MCF, 1 BW, FTP 145, 20/64 ch. PC flowed 67 MCF, 0 BW, FCP 150, 23/64 ch.
11-7-80	Dual completed. CH flowed 14 MCF, 1 BW, FTP 145, 20/64 ch.
11-8-80	CH flowed 14 MCF, 1 BW, FTP 145, 20/64 ch.
11-9-80	CH flowed 14 MCF, 1 BW, FTP 145, 20/64 ch.
11-10-80	CH flowed 14 MCF, 1 BW, FTP 145, 20/64 ch.
11-7-80	PC flowed 68 MCF, 0 BW, FCP 150, 23/64 ch.
11-8-80	PC flowed 68 MCF, 0 BW, FCP 150, 23/64 ch.
11-9-80	PC flowed 68 MCF, 0 BW, FCP 150, 23/64 ch.
11-10-80	PC flowed 68 MCF, 0 BW, FCP 150, 23/64 ch.
11-11-80	Dual completed CH flowed 14 MCF, 1 BW, 145 FTP, 23/64 ch. PC SI State Deliverability Test, SICP 500 psi.
11-12-80	Dual completed CH flowed 15 MCF, 0 BW, FTP 145, 26/64 ch. PC flowed 67 MCF, 0 BW, FCP 150, 23/64 ch.
11-13-80	Dual completed CH flowed 15 MCF, 4 BW, 26/64 ch. PC flowed 65 MCF, 0 BW, FCP 150, 23/64 ch.
11-14-80	Dual completed CH SI 24 hrs for press build up. TP 350# PC SI 24 hrs, for press build up. CP 400#.
11-15-80	CH -15 MCF, 1 BO, TP 145, 23/64" ch. PC- 68 MCF, 0 BW, FCP 150, 20/64" ch.
11-16-80	CH- 15 MCF, 1 BW, FTP 145, 23/64" ch. PC 68 MCF, 0 BW, FCP 150, 20/64" ch.
11-17-80	CH-15 MCF, 1 BW, FTP 145, 23/64" ch. PC- 68 MCF, 0 BW, FCP 150, 20/64" ch.
11-18-80	Dual completed. CH 18 MCF, 0 BW, FTP 145, 23/64 ch. PC 68 MCF, 0 BW, FCP 150, 20/64 ch.
11-19-80	Dual completed. CH flowed 15 MCF, 0 BW, FTP 145, 23/64 ch. PC flowed 68 MCF, 0 BW, FCP 150, 20/64 ch.

APACHE #29

10-16-80 Dual completed as a Chacra and Pictured Cliffs  
CH 18 MCF, 0 BW, FTP 150, 20/64 ch.  
PC 65 MCF, 0 BW, FCP 150, 23/64 ch.

10-17-80 Dual completed as a Chacra & Pictured Cliffs  
CH 18 MCF, 1 BW, FTP 150, 20/64 ch.  
PC 60 MCF, 0 BW, FCP 150, 23/64 ch.

10-18-80 Dual completed as Chacra & Pictured Cliffs  
CH 14 MCF, 1 BW, FTP 150, 23/64 ch.

10-19-80 CH 12 MCF, 0 VW, FTP 150, 23/64 ch.

10-20-80 CH 0 MCF, 0 BW, SITP 300, SIFPBU.

10-18-80 PC 65 MCF, 0 BW, FCP 150, 20/64 ch

10-19-80 PC 65 MCF, 0 BW, FCP 150, 20/64 ch

10-20-80 PC 65 MCF, 0 BW, FCP 150, 20/64 ch.

10-21-80 CH 19 MCF, 1 BW, 150 FTP, 23/64 ch.  
PC 65 MCF, 0 BW, 150 FCP, 20/64 ch.

10-22-80 CH 14 MCF, 1 BW, 150 FTP, 23/64 ch.  
PC 67 MCF, 0 BW, 150 FCP, 25/64 ch.

10-23-80 Dual completed as Pictured Cliffs & Chacra.  
CH flwd 14 MCF, 0 BW, FTP 150, 23/64 ch.  
PC flwd 67 MCF, 0 BW, FCP 150, 20/64 ch.

10-24-80 Dual completed. Chacra flowed 14 MCF, 1 BW, FTP 150, 23/64" ch,  
PC flowed 68 MCF, 0 BW, FCP 150, 20/64" ch.

10-25-80 Dual completed  
CH flowed 20 MCF, 0 BW, FTP 150, 20/64 ch.

10-26-80 CH SI for press build up, SITP 400.

10-27-80 CH flowed 37 MCF, 1 BW, FTP 160, 20/64 ch.

10-25-80 PC flowed 65 MCF, 0 BW, FCP 150, 23/64 ch.

10-26-80 PC flowed 62 MCF, 0 BW, FCP 150, 23/64 ch.

10-27-80 PC flowed 62 MCF, 0 BW, FCP 150, 23/64 ch.

10-28-80 Dual completed  
CH flowed 9 MCF, 0 BW, FTP 45, 20/64 ch.

10-29-80 CH flowed 10 MCF, 1 BW, FTP 145, 20/64 ch.

10-28-80 PC flowed 62 MCF, 0 BW, FCP 150, 23/64 ch.

10-29-80 PC flowed 62 MCF, 0 BW, FCP 150, 23/64 ch.

10-30-80 Dual completed.  
CH flowed 10 MCF, 0 BW, FTP 150, 30/64 ch.  
PC flowed 75 MCF, 0 BW, FCP 160, 23/64 ch.

10-31-80 CH flowed 14 MCF, 1 BW, FTP 150, 20/64 ch.  
PC flowed 57 MCF, 0 BW, FCP 150, 20/64 ch.

11-1-80 CH flowed 15 MCF, 1 BW, FTP 150, 20/64 ch.  
PC flowed 57 MCF, 0 BW, FCP 150, 20/64 ch.

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DRILLING REPORT

APACHE #29  
Rio Arriba County, NM  
4100' Chacra  
CPC 100% WI  
\$228,830  
LLL Ric #2

10-11-80 Dual completed Chacra & Pictured Cliffs  
CH 23 MCF, 0 BW, FTP 150, 20/64 ch.  
PC 85 MCF, 0 BW, FCP 160, 23/64 ch.

10-12-80 CH SI fr press build up, SITP 500 psi.  
PC 70 MCF, 0 BW, FCP 160, 23/64 ch.

10-13-80 CH 35 MCF, 0 BW, FTP 200, 20/64 ch.  
PC 69 MCF, 0 BW, FCP 160, 23/64 ch.

10-14-80 Dual completed as Chacra & Pictured Cliffs.  
CH 18 MCF, 1 BLW, FTP 150, 20/64 ch.  
PC 64 MCF, 0 BW, FCP 150, 23/64 ch.

10-15-80 TD 4072', PBTD 4041', Perf's Chacra, 3825',  
26, 28, 39, 40, 41, 49, 51, 53, 55, 62, 64,  
66, 3900', 5, 13, 17, 19, 21, 30, 32, 38,  
43, 45, 49 & 62 w/1 JSPF, PC 2964-84', 2990-  
96' w/ 1 JSPF, IPF Chacra 440 MCF, tr wtr,  
FTP 23; IPF PC, 767 MCF, tr wtr, well dual  
comp as a flowing gas well.  
FINAL REPORT!!

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DRILLING REPORT

APACHE #29  
Rio Arriba County, NM  
4100' Chacra  
CPC 100% WI  
- \$228,830  
LLL Rio #2

10-4-80	Dual Completed Pictured Cliff & Chacra. CH 75 MCF, 0 BW, 300 FTP, 20/64 ch. PC 107 MCF, 0 BW, 400 FCP, 23/64 ch.
10-5-80	CH 60 MCF, 0 BW, 200 FTP, 20/64 ch. PC 107 MCF, 0 BW, 200 FCP, 23/64 ch.
10-6-80	Dual Completed Pictured Cliff & Chacra CH 58 MCF, 0 BW, 170 FTP, 20/64 ch. PC 146 MCF, 0 BW, 160 FCP, 23/64 ch.
10-7-80	CH 55 MCF, 0 BW, 180 FTP, 20/64 ch. PC 140 MCF, 0 BW, 160 FCP, 23/64 ch.
10-8-80	Dual Completed Pictured Cliff & Chacra. CH 60 MCF, 0 BW, FTP 160, 20/64 ch. PC 98 MCF, 0 BW, FCP 180, 23/64 ch.
10-9-80	Dual Completed Pictured Cliff & Chacra. CH 60 MCF, 0 BW, FTP 160, 20/64 ch. PC 98 MCF, 0 BW, FCP 180, 23/64 ch.
10-10-80	Dual completed Chacra and Pictured Cliffs. CH 60 MCF, 0 BW, FTP 150, 20/64 ch. PC 136 MCF, 0 BW, FCP 160, 23/64 ch.

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APACHE #29	9-27-80	Well completed as dual completed Pictured Cliff & Chacra. Chacra 76 MCF, 2 BLW, FTP 150, 32/64" ch, PC 147 MCF, 0 BW, FCP 160, 20/64" ch.
Rio Arriba County, NM		
4100' Chacra		
CPC 100% WI		
- \$228,830	9-28-80-	SI, State Deliverability Test, will be a 7 day
LLL Rio #2	9-29-80	SI.
	9-30-80	Dual completed Pictured Cliff & Chacra. Well SI, State Deliverability Test.
	10-1-80	Dual completed Pictured Cliff & Chacra. Well SI for State Deliverability Test.
	10-2-80	Dual completed Pictured Cliff and Chacra. SI, for State Deliverability Test.
	10-3-80	Dual Completed Pictured Cliff and Chacra. SI, for State Deliverability Test, will go back on today.

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APACHE #29	9-20-80	No report.
Rio Arriba County, NM	9-21-80	No report.
4100' Chacra	9-22-80	No report.
CPC 100% WI	9-23-80	No report.
\$228,830	9-24-80	No report.
LLL Ric #2	9-25-80	No report.
	9-26-80	Well dual completed, Chacra and Picture Cliff, The Chacra flowed 75 MCF, FTP 180, 32/64" ch, PC 138 MCF, FTP 180, 32/64" ch,

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APACHE #29  
Rio Arriba County, NM  
4100' Chacra  
CPC 100% WI  
- \$228,830  
LLL Ric #2

9-13-80	No report.
9-14-80	PC 138 MCF, 0 BW, CP 170, 24/64" ch. Chacra 45 MCF, 0 BW, TP 150, 25/64" ch.
9-15-80	PC 138 MCF, 0 BW, CP 170, 20/64" ch. Chacra 45 MCF, 0 BW, TP 150, 25/64" ch.
9-16-80	PC SI 24 hrs w/540#. Chacra SI 24 hrs w/360# to build press.
9-17-80	PC 137 MCF, 1 BW, CP 190, 20/64" ch, Chacra 51 MCF, 0 BW, TP 160, 25/64" ch.
9-18-80	PC-138 MCF, 3 BW, 190 CP, 20 ch, Chacra-55 MCF, 0 BW, TP 160, 25 ch.
9-19-80	PC-130 MCF, 0 BW, CP 170, 20 ch, Chacra-55 MCF, 0 BW, TP 160, 25 ch.

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APACHE #29	9-6-80	Dual completed Chacra & PC, PC flowed 175 MCF, 0 BW, FCP 235, 25/64" ch, Chacra flowed 45 MCF, 0 BW, FTP 140, 20/64" ch.
Rio Arriba County, NM		
4100' Chacra		
CPC 100% WJ		
- \$228,830	9-7-80	PC flowed 150 MCF, 0 BW, FCP 200, 25/64" ch, Chacra flowed 45 MCF, 0 BW, FTP 140, 20/64" ch.
LLL Rio #2		
	9-8-80	PC flowed 150 MCF, 0 BW, FCP 200, 25/64" ch, Chacra flowed 45 MCF, 0 BW, FTP 140, 20/64" ch.
	9-9-80	PC flowed 40 MCF, 0 BW, FCP 200, 20/64" ch, Chacra flowed 59 MCF, 0 BW, FTP 140, 25/64" ch.
	9-10-80	PC flowed 139 MCF, 0 BW, FCP 200, 20/64" ch. Chacra flowed 57 MCF, 0 BW, 140 MCF, 25/64" ch.
	9-11-80	PC flowed 139 MCF, 0 BW, FCP 192, 20/64" ch. Chacra flowed 57 MCF, 0 BW, FTP 140.
	9-12-80	Well dual completed, Pictured Cliffs and Chacra, Pictured Cliff fl 138 MCF, 0 BW 180 FCP, 20/64 ch. Chacra fl 56 MCF, 0 BW FTP 140.

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APACHE #29  
Rio Arriba County, NM  
4100' Chacra  
CPC 100% WI  
\$228,830  
LLL Rio #2

8-30-80	Well dual completed in PC & Chacra Fm, PC flowed 225 MCF, 0 BW, FCP 550, 25/64" ch, Chacra flowed 57 MCF, trace wtr, FTP 160, 20/64" ch.
8-31-80	PC flowed 78 MCF, 0 BW, FCP 500, 25/64" ch, Chacra flowed 57 MCF, 0 BW, FTP 160, 20/64" ch.
9-1-80	PC flowed 142 MCF, 0 BW, FCP 450, 25/64" ch, Chacra flowed 57 MCF, 0 BW, FTP 160, 20/64" ch.
9-2-80	PC flowed 128 MCF, 0 BW, FCP 400, 25/64" ch, Chacra flowed 57 MCF, 0 BW, FTP 160, 20/64" ch.
9-3-80	Well dual completed in PC & Chacra Fm, PC flowed 211 MCF, 0 BW, FCP 375, 25/64" ch, Chacra flowed 57 MCF, 0 BW, FTP 145, 20/64" ch.
9-4-80	Well dual completed in PC & Chacra Fm, PC flowed 190 MCF, 0 BW, FCP 400, 25/64" ch, Chacra flowed 40 MCF, 0 BW, FTP 140, 20/64" ch.
9-5-80	Well dual completed in PC & Chacra, PC flowed 190 MCF, 0 BW, FCP 275, 25/64" ch, Chacra flowed 45 MCF, 0 BW, FTP 140, 20/64" ch.

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DRILLING REPORT

HE #29  
Rio Arriba County, NM  
4100' Chacra  
CPC 100% WI  
\$228,830  
LLL Ric #2

8-23-80	WSI, WO U.S.G.S. paper work.
8-24-80	WSI, WO U.S.G.S. paper work.
8-25-80	WSI, WO U.S.G.S. paper work.
8-26-80	WSI, WO U.S.G.S. paper work.
8-27-80	WSI, WO U.S.G.S. paper work for 1st delivery.
8-28-80	1st delivered PC @ 1:30 pm, SI PC press 710, put Chacra back on line @ 2:00 pm, SI Chacra press 680 psi, dual completed Chacra & PC.
8-29-80	Dual completed Chacra & PC, Chacra Fm flowed 95 MCF, FTP 145, 16/64" ch, PC Fm flowed 80 MCF on 680 psi, 16/64" ch.

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APACHE #29  
Rio Arriba County, NM  
4100' Chacra  
CPC 100% WI  
\$228,830  
LLL Ric #2

8-16-80	WSI, for state pkr leakage test
8-17-80	will run second phase of pkr test
8-18-80	today
8-19-80	Conduct 2nd phase of State pkr leakage test, aft 14 days SI Pictured Cliff press 480 on csg, 7 days SI Chacra 645 tbg, open PC to atmosphere 3 hrs through 3/4" ch, flowing PC press 70 psig, SI Chacra 645 ARO flowing PC 1014 MCFPD, no press leak indicated in Chacra.
8-20-80	Chacra & PC dual completed well, SI WO State approval to 1st deliver.
8-21-80	Dual completed Chacra & PC, WSI WO approval fr State to 1st deliver.
8-22-80	Dual completed Chacra & PC, WSI WO approval fr State to 1st deliver.

DRILLING REPORT

WELL #29  
Arriba County, NM  
4100' Chacra  
CPC 100% WI  
\$228,830  
LLL Ric #2

8-9-80	WSI for State pkr leakage test.
8-10-80	WSI for State pkr leakage test.
8-11-80	WSI for State pkr leakage test, w/conduct 1st phase of test this am.
8-12-80	WSI for State pkr leakage test, ran 1st phase of test, SITP Chacra Zone 621 psi, SICP Pictured Cliff Zone 785, blew Chacra 3 hrs, aft 3 hrs blow tbg had 9 psi, test indicated no pkr leakage.
8-13-80	WSI for 2nd phase of State pkr leakage test.
8-14-80	WSI for 2nd phase of State pkr leakage test.
8-15-80	WSI for 2nd phase of State pkr leakage test.

DRILLING REPORT

PACHE #29

Arriba County, NM

4100' Chacra

CPC 100% WI

\$228,830

LLL Ric #2

8-2-80	Pictured Cliff Fm, RU Nowco, pmpd out plug & tbg, left well SI.
8-3-80	Flowing Pictured Cliff to pit through 3/4" positive ch @ 50 psi, ARO 767 MCFPD, slight trace wtr.
8-4-80	Flowing Pictured Cliff to pit through 3/4" positive ch @ 50 psi, ARO 767 MCFPD. Chacra Zone on 8-2-80 SI, on 8-3-80 turned on Chacra Zone through sales line @ 9:00 am. On 8-4-80 Chacra Zone WF 75 MCF, 0 BW, FTP 140, 16/64" ch.
8-5-80	Chacra, flowed 75 MCF, 0 BW, FTP 150, 16/64" ch, WSI @ 9:00 am for 7 day SI pkr test. Pictured Cliff flowing to pit @ 50 psi on csg through 3/4" ch ARO 767 MCF; mist of wtr, PC SI @ 9:00 am for pkr test. Using tech surveys & GR prod tracer log, showed high radiation 3032-3072, 2982-2925, temp log indicated flow coming out of top perf's, perf interval fr 2964-2983, 2990-2995.
8-6-80	Chacra & Pictured Cliff Zones SI for State pkr leakage test.
8-7-80	Chacra & Pictured Cliff Zones SI for State pkr leakage test.
8-8-80	Chacra & Pictured Cliff Fm SI for State pkr leakage test.

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APACHE #29  
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4100' Chacra  
CPC 100% WI  
\$228,830  
LLL Ric #2

8-1-80

SICP 340, psi aft 17 hrs SI, RU tech surveys, lost light plant on logging truck, unable to service, RD tech surveys, PU & ran 119 jnts tbg measuring 3775', tag @ 3760', 44' sd fill, clean out sd w/Newsco to pkr @ 3803.50 w/120 jnts tbg measuring 3807', circ 30 min, pull 1 stand, wait 5 min, went back to btm had 10' fill, circ 45 min pull 1 stand, wait 5 min went back to btm had 2' fill, POOH w/work string, ran prod tbg as follows: ran expendable ck, 2 1/16 spacer sub, anchor & sealing units, locator sub, extension sub, FLT on-off tool, 2 3/8 EUE 8-round sub, 1.87 Model "L" sliding sleeve, 24 jnts 2 3/8 tbg, 2 3/8 sub, 8' long, 3 blast jnts, 20' ea. measuring 60' overall, 91 jnts 2 3/8 tbg, 2-6' subs, 1 4' sub, 1 3' sub, 1 jnt 2 3/8 tbg, total 116 jnts measuring 3801.74', top of sliding sleeves @ 3788', btm blast jnts @ 3010', top of last jnts @ 2950', install mandrel, landed tbg w/6000# press, ND BOP, install WH, drop ball, ran out of N<sub>2</sub> before pmpg out plug & expendable ck, w/pump out plug this am, SWIFN, TWCTD \$194,532.

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APACHE #29  
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4100' Chacra  
CPC 100% WI  
\$228,830  
LLL Ric #2

7-26-80 MIRU Flint #1437, bled TP of 200 & CP 400 to pit, ND tree, NU BOP, POOH w/123 jnts 2 3/8 tbg @ SSN measuring 3900.59', SWI for weekend, WO Baker ret-pkr. DC \$1855.

7-27-80 - No Report.

7-28-80 No Report.

7-29-80 SICP 200, bled press to pit, RU Jetronics, RIH w/Baker retrovodie pkr w/expendable plug in place & set same @ 3810' KB, 15' above top Chacra perf @ 3825', RU Western, loaded hole w/57 bbls 2% KCl & press csg to 4000 psi, 5 min OK, ran PDC log fr 3100-2800' & perf'd Picture Cliff Fm w/ 1 JSPF fr 2964-84, 2990-96, total 26 holes, spearheaded frac w/2600 gal Western spearhead acid & frac w/23,486 gal 70-quality foam, 24,000# 20-40 sd, & 15 ball sealers midway through job, total N<sub>2</sub> 27,489 scf, total LW 287 bbls, AIR 25 bpm, max treat press 1800, mini treat press 1600, avg treat press 1700, had 200 psi increase when balls hit fm, tag frac sd w/RA material, ISIP 1400, 5&10 min 1350, 15 min 1300, open well through 3/4" pos ch @ 4:23 pm, inspect fittings aft 1 hr flow, all OK, flared gas @ 6:22 pm, @ 7:00 pm well died, began surging well, 1 hr SI, 1 hr flow, 1 hr SI & built to 300 psi, left well w/night watchman. Total \$176,237.

7-30-80 Surged well through night, rec. foamy frac wtr each opening, WSI 8 hrs, Well open 5 hrs, 1 hr SI was 360, 3 hr SI was 600, Well flowing on 3/4" positive ch on arrival @ 8:30 a.m.. Flared well 8 hrs. continuously w/ FCP 30 psi FI/ ARO 519 MCFGPD w/ light to moderate spray of wtr. Left well on 3/4" ch over night to clean up. TWCTD \$178,087. Will continue flowing well this a.m. until wtr cleans up

7-31-80 W1 flg on arrival @ 8:30 a.m. CP 30 psi on 3/4" ch ARO 519 MCFGPD w/ 1/8" stream of wtr out btm of flow line. After flg 7 hrs no change in gas or wtr. Well flared continuously. Removed 3/4" ch, ran 1 jnt 2 3/8" tbg in a 4' sub. Closed pipe rams on 4' sub. Installed 2" stabbing valve. SWI. Ready to run gamma ray and temp log this a.m. TWCTD \$179,647.

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APACHE #29  
Rio Arriba County, NM  
4100' Chacra  
CPC 100% WI  
\$228,830  
LLL Ric #2

7-12-80	WF 75 MCF, 0 BW, FTP 130, FCP 400, 25/64" ch.
7-13-80	WF 75 MCF, 0 BW, FTP 130, FCP 400, 25/64" ch.
7-14-80	WF 75 MCF, 0 BW, FTP 130, FCP 400, 25/64" ch.
7-15-80	WF 75 MCF, 0 BW, FTP 130, FCP 420, 25/64" ch.
7-16-80	WF 74 MCF, 0 BW, FTP 130, FCP 450, 25/64" ch. <u>TEMPORARILY DROPPED FROM REPORT UNTIL FURTHER ACTIVITY!!!!</u>

COTTON PETROLEUM CORPORATION  
2200 Energy Center One  
717 17th St.  
Denver, Colo, 80202

DRILLING REPORT

APACHE #29  
Rio Arriba County, NM  
4100' Chacra  
CPC 100% WI  
\$228,830  
LLL Ric #2

7-4-80	WF 70 MCF, 0 BW, FTP 140, FCP 400, 25/64" ch.
7-5-80	WF 69 MCF, 0 BW, press 140/440, 25/64" ch.
7-6-80	WF 70 MCF, 0 BW, press 140/440, 25/64" ch.
7-7-80	WF 70 MCF, 0 BW, press 140/400, 25/64" ch.
7-8-80	WF 77 MCF, 0 BW, FTP 140, FCP 400, 25/64" ch.
7-9-80	WF 77 MCF, 0 BW, FTP 140, FCP 410, 25/64" ch.
7-10-80	WF 76 MCF, 0 BW, FTP 130, FCP 400, 25/64" ch.
7-11-80	WF 75 MCF, 0 BW, FTP 130, FCP 360, 25/64" ch.

*Slowing  
tubing pressure*  
*Wellhead & Bottom  
Water*  
*C. Ric*

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DRILLING REPORT

APACHE #29	6-28-80	WF 68 MCF, 0 BW, FTP 140, FCP 400, 25/64" ch.
Rio Arriba County, MN		
4100' Chacra	6-29-80	WF 59 MCF, 0 BW, FTP 140, FCP 400, 25/64" ch.
CPC 100% WI		
\$228,830	6-30-80	WF 67 MCF, 0 BW, FTP 140, FCP 430, 25/64" ch.
	7-1-80	WF 74 MCF, 0 BW, FTP 140, FCP 100, 25/64" ch.
	7-2-80	WF 68 MCF, 0 BW, FTP 140, FCP 440, 25/64" ch.
	7-3-80	WF 70 MCF, 0 BW, FTP 140, FCP 430, 25/64" ch.

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Denver, Colo 80202

DRILLING REPORT

APACHE #29 Rio Arriba County, NM 4100' Chacra CPC 100% WI \$228,830 LLL Rig #2	6-21-80	SI 24 hrs for build up, SITP 500 spi, SICP 500 psi.
	6-22-80	WF 73 MCF, 0 BW, FTP 150, FCP 340, 25/64" ch.
	6-23-80	WF 65 MCF, FTP 130, FCP 350, 25/64" ch, blew well, had wtr mist, well d/not unload.
	6-24-80	WF 73 MCF, 0 BW, FTP 130, FCP 320, 30/64" ch.
	6-25-80	WSI 24 hrs for press build up, TP 320, CP 400.
	6-26-80	WF 76 MCF, 0 BW, FTP 145, FCP 370, 25/64" ch.
	6-27-80	WF 79 MCF, 0 BW, FTP 145, FCP 420, 25/64" ch.

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DRILLING REPORT

APACHE #29  
Rio Arriba County, NM  
4100' Chacra  
CPC 100% WI  
\$228,830  
LLL Ric #2

6-7-80	SITP 860, SICP 870.
6-8-80	SITP 865, SICP 875, WSI, WO 1st delivery.
6-9-80	SITP 865, SICP 875, WSI, WO 1st delivery.
6-10-80	SITP 870, SICP 880.
6-11-80	SITP 870, SICP 870, 1st delivered well to El Paso @ 2:20 pm on 6-10-80, aft 4 hr flow WF ARO 170 MCFGPD, FTP 325, FCP 460 on 25/64" ch, no fluid aft 4 hr flow.
6-12-80	WF 178 MCF in 24 hrs, trace wtr, FTP 150, FCP 520 on 20/64" ch.
6-13-80	WF 89 MCF, trace wtr, FTP 140, FCP 540 on 20/64" ch, well prod w/little wtr, pmp <del>er</del> blew well to atmosphere to unload, unloaded approx 2 BW.
6-14-80	89 MCF, TP 140, CP 470, 25/64" ch, 0 BW.
6-15-80	89 MCF, TP 140, CP 460, 25/64" ch, 0 BW.
6-16-80	77 MCF, TP 140, CP 440, 25/64" ch, 0 BW.
6-17-80	70 MCF, 25/64" ch, 0 BW, TP 140, CP 360.
6-18-80	77 MCF, 25/64" ch, 0 BW, TP 150, CP 400, will blow well to pit.
6-19-80	Blew well 24 hrs to pits, TP 50, CP 200, unload approx 10 BW, unable to calculate accurately due to unloading to pit, put well dwn line.
6-20-80	51 MCF, 25/64" ch, 0 BW, TP 130, CP 340, loaded well w/soap sticks, SWI, w/try to unload this am.

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DRILLING REPORT

APACHE #29  
Rio Arriba County, MN  
4100' Chacra  
CPC 100% WI  
\$228,830

6-4-80

SITP 840, SICP 860, gas line is tied in,  
w/check with El Paso & O & G Commission  
this am for 1st delivery permission.

6-5-80

SITP 850, SICP 860, will 1st deliver well this  
am.

6-6-80

SITP 855, SICP 870, WD PL tie in.

COTTON PETROLEUM CORPORATION  
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DRILLING REPORT

APACHE #29  
Rio Arriba County, NM  
4100' Chacra  
CPC 100% WI  
\$228,830  
LLL Rig #2

5-16-80	Tefsteller Inc. pulled btm hole press bombs, ran pot test 7 day SI on csg & tbgs w/717 psi dead weight tester, blew well 3 hrs through 3/4" ch, FTP 23 psi, FCP 136 psi, flowing temp 51°, flow rate 440 MCFPD, AOF 454 MCFPD, during 3 hrs flow well flared w/slight show of wtr & cond.
5-17-80	24 hr SI press 640 tbgs, 660 csg.
5-18-80	SI press 680/680.
5-19-80	SI press 770/770.
5-20-80	SI press 770/770.
5-21-80	WSI, WO PL, SITP 770, SICP 770.
5-22-80	SI CP & TP equalizing @ 770.
5-23-80	WSI, TP 770, CP 780.
5-24-80	SIWP 790, 600 tbgs.
5-25-80	TP 790, csg 800.
5-26-80	TP 790, csg 810.
5-27-80	TP 790, csg 810.
5-28-80	WSI, WO PL, TP 800, CP 820.
5-29-80	SITP 800, SICP 820.
5-30-80	SITP 810, SICP 830.
5-31-80	WSI, WO PL connection, SITP 830, SICP 850.
6-1-80	WSI, WO PL connection.
6-2-80	WSI, WO PL connection, talked to NW Pipeline they will be press testing line today, 1st deliver well Tuesday, June 3, 1980.
6-3-80	WSI, WO PL completion. SITP 830, SICP 855.

APACHE #29  
Rio Arriba County, NM  
4100' Chacra  
CPC 100% WI  
\$228,830  
LLL Rig #2

5-3-80	Well flowing through 3/4" pos ch @ 40 psi on tbg, CP 250#, well flowing ARO 642 MCF-GPD, mking v/little wtr, @ 4:30 pm on 5-2-80 put adj ch on well, had WSI 1/2 hr to make tie-in, TP built fr 40 psi to 150 psi, CP built fr 250-280 during 1/2 SI, well flowing to pit on 15/64" ch, holding 80 psi, well mking approx 1/4 stream wtr, out 2 in fluid line & some cond.
5-4-80	Well flowing on 15/64" ch w/ 100 psi on tbg, 300 psi csg, @ 10:30 am on 5-3-80 pumper opened on 20/64" ch, press decreased to 70 on tbg, 260 on csg, well making v/little wtr & some cond.
5-5-80	Well flowing on 15/64" ch, SWI @ 9:00 am on 5-4-80 build-up evaluation.
5-6-80	No report.
5-7-80	Aft 48 hr SI, TP 640#, CP 640#, bled well to pits, installed mandrel & landed tbg @ 3913' KB, SN @ 3881' KB, ND BOP, NU WH, left well SI for build up.
5-8-80	Aft 24 hr SI, SITP 840, CP 1000, open well up, flowing to pit @ 9:00 am 5-7-80, well flowing @ 642 MCFGPD, prep to run tandem press bomb this am.
5-9-80	WF w/10 psi on tbg, 180 CP, WF on full opened 3/4" ch, Tiffeler, Inc., ran btm hole press bomb.
5-10-80	WSI w/btm hole press bombs.
5-11-80	WSI w/btm hole press bombs.
5-12-80	WSI w/btm hole press bombs.
5-13-80	WSI w/btm hole press bombs.
5-14-80	WSI w/btm hole press bombs.
5-15-80	WSI w/btm hole press bombs.

APACHE #29  
Rio Arriba County, NM  
4100' Chacra  
CWC 100% WI  
28,830  
LLL Rig #2

4-29-80

SICP 800#, bled dwn through 3/4" ch for 1/2 hr, FCP 50 psi, no fluid rec, open on 2" & CP went to 0 immed, RU Blue jet & ran gamma ray across perf interval @ 3825'-3962', no frac indicated @ btm perf of 3962', rest of interval indicated good frac, reported perf @ 3959' was erroneous, was actually perf't @ 3949', Blue Jet's TD 3963', RU 7" blue line repaired line rams & BOP, RU & ran bit sub w/float in place, 125 jnts 2 3/8" tbg, total 3964.68, tag sd @ 3963.68' KB, RU Nowasco, clean out to 4050.65' KB w/228 jnts measuring 45935, POOH w/tbg, left well on 3/4" pos ch, flow @ 50 psi, FCP 767 MCFPD, prep to RI w/prod tbg this am. TWCTD \$149,816.

2

4-30-80

Well flowed through night flaring gas @ 30 psi on 3/4" ch, GR 519 MCFPD, released press through 2" & ran tbg as follows: 1 jnt 2 3/8" EUE tbg, 31.45', SSN .78' 122 jnts measuring 3868.32', total 123 jnts in well; measuring 3900.55', left tbg set in rig slips on top of BOP, closed pipe rams & install stabbing valve, left well flowing through csg on 3/4" ch, will install short-sub this am, will land when Donut arrives through Bovard. DC \$1360. CWC \$151,176.

3

5-1-80

Well flowing @ 30 psi on arrival ARO 519 MCFPD and does flare, install 4.04' tbg sub, landed tbg in rented slips & bowl fr Land & Marine, landed tbg @ 3914.59' KB, SN @ 3882.36', left well open through tbg all day, tbg is dead, closed well in @ dark, CP @ 580 psi.

5-2-80

Aft 16 hr SI CP 1650#, TP n/measurable on 3000# gage, open tbg through 3/4 in pos ch @ 10:00 am to pit, TP disapated immed, tbg h/very slight flow @ 12:30 aft 2 1/2 hrs flowing, tbg flowing 100 psi & 600# on csg ARO 1384 MMCF, aft 4-1/2 hrs tbg flowing @ 80 psi, csg 260# FARO 1137 MMCF.

PACHE #29  
Rio Arriba County, NM  
100' Chacra  
PC 100% WI  
2,830  
LL Rig #2

4-26-80

Install tbg head & NU BOP, ran 3 7/8" bit & bit sub, 228 jnts 2 3/8" tbg, total 4059.35', tag PBDT @ 4051', PBDT reported on cmt job @ 4061', RU Western, press test csg to 4000 psi for 5 min, held OK, roll hole w/2% KCl wtr, pull 3 jnts tbg & spot 250 gal 7 1/2% acidic acid fr 3965'-3599', POOH & RU Blue Jet, Inc., & ran gamma ray corr log fr 4040'-3540', perf Chacra fm w/l hole at the following: 3825-26, 28, 39, 40, 41, 49, 51, 53, 55, 62, 64, 66, 82, 3900' .05, 13, 17, 19, 21, 30, 32, 38, 43, 45, 59, & 62', no reaction aft perf, established inj rate 7.4 bpm @ 900 psi aft breaking dwn @ 1600, close WIFN. TWCTD \$116,482.

4-27-80

Using Western & Newsco, frac well w/70-quality foam, pad was 8000 gal, 30% wtr, 70% Nitrogen on all fluid, + 2% KCl, 2nd stage: 10,000 gal & 10,000# of 10-20 sd, 1# concentration, 10,000 gal, 15,000# 10/20 sd & 1 1/2# concentration, stage 3: 7500 gal w/15,000# 10/20 sd @ 2# concentration, flush w/2641.8 gal 70 quality foam, BD 2200 psi, Ave treat press 2800, Max treat press 3950, AIR 30 bpm, hydrolic horse power 670, ISIP 1900 5 min 1800, 10 min 1800, 15 min 1800, spear headed w/1500 gal 7 1/2% DS-30 acid, used tec surveys & tag sd w/50 milic of radioactive sd, left well SI 1/4 hr, turn well around started well flowing @ 11:30, left well flowing with night watchman, began flaring gas @ 8:00 pm w/FCP 100 psi through 3/4" ch, FRO 1.385 MMCF, aft 20 hrs flowing, FCP 35 psi through 3/4 pos ch, FARO 581 MCF, flare burning continously w/no liquid, TWCTD \$141,804.

4-27-80

4-28-80

SWI @ 8:30 am on 4-27-80 for 1 hr, CP built to 250 psi, open well for 1/2 hr, aft 1/2 hr psi 35, FR 581 MCF w/heavy mist wtr, w/not flare, SWI 1 hr, SIP 250#, flow well 1/2 hr, FCP 35 ARO 581 MCF w/heavy mist wtr, SI 1 hr, CP built to 250 psi, flow well 1/2 hr, FCP 35 ARO 581 MCF w/heavy wtr mist, SI 1 hr, CP built to 240 psi, flow 1/2 hr, FCP 35 psi ARO 581 MCF w/heavy wtr mist, SI 1 hr, CP built to 240 psi, flow 1/2 hr, FCP 35 psi, ARO 581 MCF, had lighter mist, w/burn about 1/2 the time, SWIFN, TWCTD \$142,508.

APACHE #29  
Rio Arriba Co., NM  
4100' Chacra  
CPC  
100% W.I.  
\$228,830  
LLL Rig #2

4-16-80

Dpt 4072 TD, Chacra, prog 88', 5 days, hole cond good, dev 1 3/4" @ 3991. Md 9.3, vis 57, wl 4.8, fc 2/32, pH 9. Bit #5 Smith 7 7/8 F2 in @ 3398 out @ 4072, cut 674 in 26 hrs. Drlng 3, totco 1/2, trp 4, logging 4 1/2, circ 3 3/4, wsh to btm 1/4, laying dwn drill pipe 3 1/2, running csg 3 3/4. RU Halliburton 3/4, ran Schlumberger C&L FDC w/ gamma ray & calliper & IES logs, went to btm on 1st run, RU csg crew & ran 97 jts 4 1/2" 10.5 k55 ST&C, Range 3 csg, landed at 4072 kb. 23' above kelly bushing. w/ 1527, sand blasted csg on btm ran Halliburton differential fill float shoe @ 4072. Halliburton latch in baffle 1 jt up @ 4061, ran one centralizer on btm jt & every other collar for a total of 20 centralizer. Pres. Oper: prepacement w/ Halliburton. CUM \$86,896.

4-17-80

4072', drlg in Chacra, made 0', DD #6, cmtng 2 1/2 hrs, cut off & set slips 3 1/2 hrs, RU Halliburton, cmt 4 1/2 long. string w/100 sxs 55-35, Halliburton lite w/12 1/2# per sx Gillsonite, 6% gel, follow by 600 sxs 50/50 poz 2% gel, flow dwn @ 8:30 am on 4-16-80, set csg & slips w/47,000# & cut off w/big red tool personnel, RR @ 12:00 noon. TWCTD \$94,896.

4-18-80

Well cased, WOCR. CWC \$94,896.

4-19-80

Well cased WOC, tec surveys, ran temp log, show cmt top @ 1000', TWCTD \$102,796.

4-20-80

4-21-80

4-22-80

Well csd, WO comp, TC \$102,796.

4-23-80

Well csd, WO comp. TWCTD \$102,796.

4-24-80

Well csd, WO comp. TWCTD \$102,796.

4-25-80

MIRU Flint pulling unit #1437, received cat walk & pipe racks, rec & tally 129 jnts of 2 3/8" tbg measure 4089', SDFN. TWCTD \$105,373.

April 14, 1980

APACHE #29  
Rio Arriba Co., N.M.  
100' Chacra  
CPC  
100% W.I.  
\$228,830  
LLL Rig #2

4-12-80

Dpt 385, sd & sh, prog 385, day 1, hole cond good, dev  $1\frac{1}{2}^{\circ}$  @ 385, drlmg 85 FPH,  $12\frac{1}{4}$  bit. Md 9, vis 45, spud md. Bit #1,  $12\frac{1}{4}$  Hughes, DSC3A, in @ 0 out @ 385, cut 385' in  $4\frac{1}{2}$  hrs. Drlmg  $4\frac{1}{2}$ , totco  $\frac{1}{4}$ , drlmg rat hole & mouse hole  $2\frac{1}{2}$ , MI RU  $10\frac{1}{4}$ , WOC  $4\frac{1}{4}$ , running 8 5/8 surface pipe  $1\frac{1}{4}$  hrs, cementing same 1, ran 9 jts 8 5/8 K55 24# ST&C, csg measuring 372' w/ Texas pattern shoe & baffle and one centralizer on btm sanded same @ 385 kb. using Woodco cementers, cemented 300 sx class B 2% Cal chloride w/  $\frac{1}{4}$  flow seal per sack. Circ 15 sx to pit w/ good return. Witnessed by Howard Davis. Job complete on surface @ 1:45 a.m. CUM \$ 13,233

4-13-80

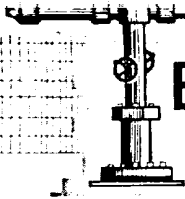
Dpt 2022, sd & sh, pro 1637', day 2 hole cond good, Dev  $1\frac{1}{2}^{\circ}$  @ 888,  $3\frac{1}{4}$  @ 1366,  $3\frac{1}{4}^{\circ}$  @ 1366,  $3\frac{1}{4}^{\circ}$  @ 1854, drlmg 131 FPH, 7 7/8 Bit md 8.9, vis 34, wl 6.6, fc 2/32, pH 8. Bit #2 Hughes OSC3A in @ 385, out @ 1854, cut 1469 in 11 hrs. WOB 50000, RPM 80, pp 1800, SPM 102, Drlmg 13, totco  $\frac{1}{2}$ , trps 2, WOC 8, pressure test csg to 1000 PSI  $\frac{1}{2}$  hr, CUM \$20,984.

4-14-80

Dpt 3398, sd & sh, prog 1376, day 3, hole cond good, Dev  $1^{\circ}$  @ 2350,  $1\frac{1}{2}^{\circ}$  @ 2938,  $1\frac{1}{2}^{\circ}$  @ 3398, md 8.9, vis 34, wl 7.6, fc 2/32, pH 8.5, Bit #3 7 7/8 Hughes, OSC3 in @ 1854 out @ 2938, 1084' in 9 3/4 hrs. Bit #4 7 7/8 Hughes OSC1G in @ 2938, cut 460' in  $7\frac{1}{4}$  hrs. WOB 40000, RPM 55, pp 1800, SPM 102, Drlmg  $15\frac{1}{2}$ , totco  $\frac{1}{2}$ , trp  $7\frac{1}{4}$ , rig serv  $\frac{1}{4}$ , wash to btm  $\frac{1}{2}$ , CUM \$42,953

4-15-80

Dpt 3984, sd & sh, prog 586', 4 days, hole cond good, drlmg 26 FPH w/ mud. Md 8.9, vis 35, wl 6, fc 2/32, pH 9.5. Bit #5 Smith F2 in @ 3398 still in hole, cut 586' in  $22\frac{1}{2}$  hrs. WOB 40000, RPM 55, pp 1800, SPM 102, Drlmg  $22\frac{1}{2}$ , totco  $3\frac{1}{4}$ , rig serv  $\frac{1}{4}$ , wsh to btm  $\frac{1}{4}$ . using oil fill tubular inspectors drifted all  $4\frac{1}{2}$  csg on racks, CUM \$57,896



TEFTELLER, INC.

reservoir engineering data

MIDLAND, TEXAS / FARMINGTON, NEW MEXICO

P. O. Box 5247

Midland, Texas 79701

June 12, 1980

RECEIVED

JUN 16 1980

COTTON PETROLEUM CORP  
DENVER

WF

Cotton Petroleum Corporation  
2200 Energy Center One  
717 17th Street  
Denver, Colorado 80202

Subject: Build Up Measurement  
Apache No. 29  
Rio Arriba County, New Mexico  
Our File No. 2-10648-BU

Gentlemen:

Attached hereto are the results of a build up measurement which was made on the above captioned well May 8 thru May 15, 1980.

The data presented are in tabular and graphical form.

It has been our pleasure to have conducted this service for you. If we may be of further assistance, please call us at any time.

Respectfully submitted,

TEFTELLER, INC.

Neil Tefteller

NT/lw

Chacra Formation

*Serving the Permian Basin & Rocky Mountain Area*

Chocorua Mountain

TEFTELLER, INC.  
RESERVOIR ENGINEERING DATA  
Midland, Texas

Well : APACHE NO. 29

Page 1 of 4

Field:

File 2-10648-BU

CHRONOLOGICAL PRESSURE AND PRODUCTION DATA

1980 Date	Status of Well	Time	Elapsed Time		Wellhead Pressure		BHP @
			Hrs.	Min.	Tbg	Csq	3580' Psig
5-8	Well flowing to pit						
"	Tandem inst. @ 3580'	14:45					251
"	"	15:00					251
"	"	15:30					257
"	Shut-in for build up	15:30	0	00	TSTM 220		
"	"	15:36	0	06			263
"	"	15:42	0	12			267
"	"	15:48	0	18			269
"	"	15:54	0	24			274
"	"	16:00	0	30			279
"	"	16:06	0	36			284
"	"	16:12	0	42			287
"	"	16:18	0	48			291
"	"	16:24	0	54			294
"	"	16:30	1	00			397
"	"	17:00	1	30			329
"	"	17:30	2	00			342
"	"	18:30	3	00			359
"	"	19:30	4	00			381
"	"	20:30	5	00			403
"	"	21:30	6	00			416
"	"	23:30	8	00			432
5-9	"	01:30	10	00			457
"	"	03:30	12	00			473
"	"	05:30	14	00			486
"	"	07:30	16	00			499
"	"	09:30	18	00			512
"	"	11:30	20	00			521
"	"	13:30	22	00			526
"	"	15:30	24	00			529
"	"	19:30	28	00			544
"	"	23:30	32	00			556
5-10	"	03:30	36	00			577
"	"	07:30	40	00			608
"	"	11:30	44	00			620
"	"	15:30	48	00			629
"	"	19:30	52	00			635
"	"	23:30	56	00			647

TEFTELLER, INC.  
RESERVOIR ENGINEERING DATA  
Midland, Texas

Well : APACHE NO. 29

Page 2 of 4

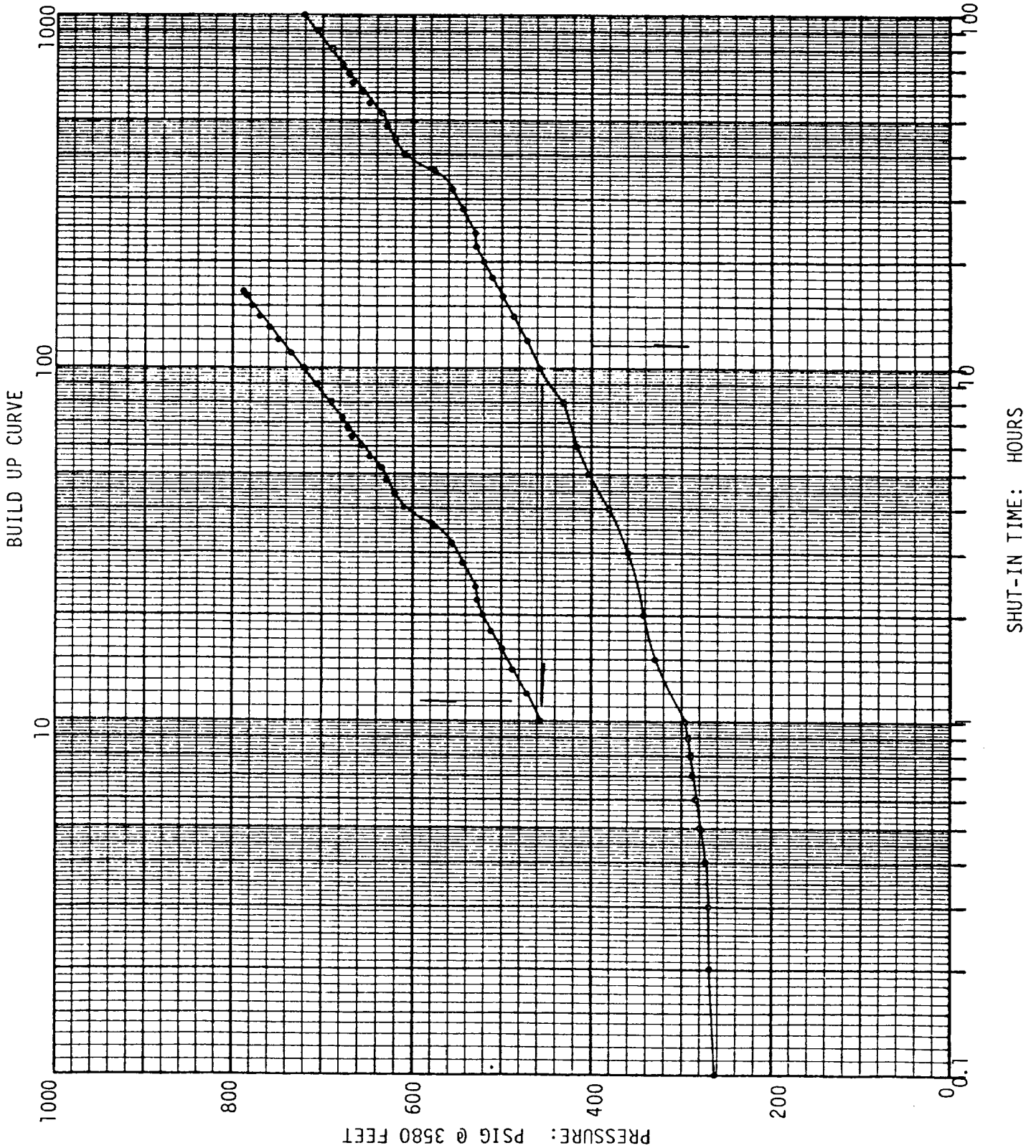
Field:

File 2-10648-BU

CHRONOLOGICAL PRESSURE AND PRODUCTION DATA

1980 Date	Status of Well	Time	Elapsed Time		Wellhead Pressure		BHP @ 3580'
			Hrs.	Min.	Tbg	Csg	Psig
5-11	Continued shut-in	03:30	60	00			656
"	"	07:30	64	00			666
"	"	11:30	68	00			672
"	"	15:30	72	00			678
"	"	23:30	80	00			689
5-12	"	09:30	90	00			705
"	"	19:30	100	00			720
5-13	"	05:30	110	00			735
"	"	15:30	120	00			748
5-14	"	01:30	130	00			760
"	"	11:30	140	00			769
"	"	21:30	150	00			778
5-15	"	07:30	160	00			784
"	Gradient Traverse	11:30	164	00	717	717	787

Company COTTON PETROLEUM CORPORATION Formation CHACRA  
 Well APACHE NO. 29 County RIO ARRIBA  
 Field \_\_\_\_\_ State NEW MEXICO





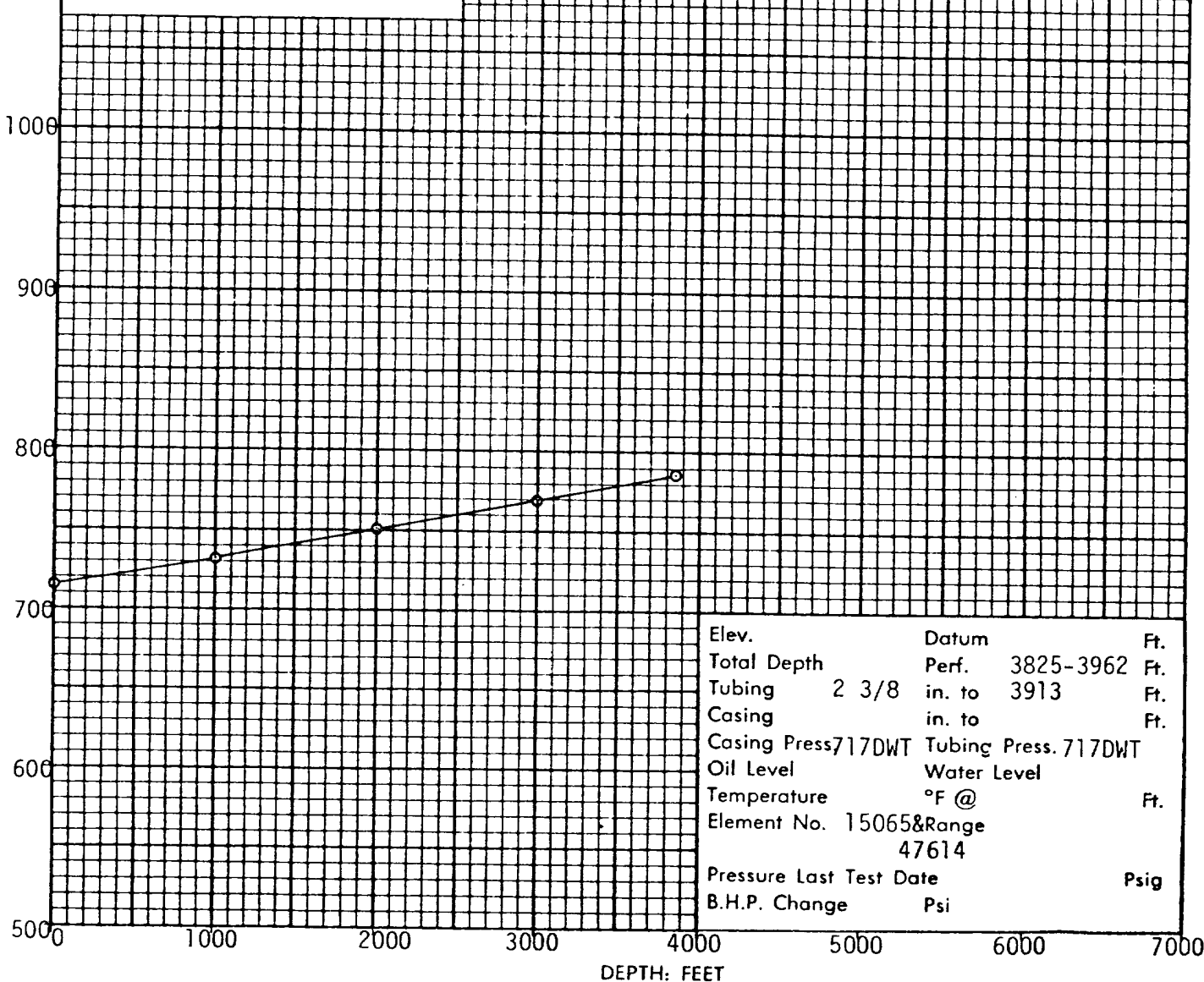
Page 4 of 4  
File 2-10648-BU

Company COTTON PETROLEUM CORPORATION Lease APACHE Well No. 29  
Field \_\_\_\_\_ County RIO ARRIBA State NEW MEXICO  
Formation CHACRA Test Date MAY 15, 1980

Status of Well Shut-in 164 hours

DEPTH Feet	PRESSURE Psig	GRADIENT Psi/Ft.
0	714	
1000	732	0.018
2000	751	0.019
3000	769	0.018
3850	787	0.021

Datum Pressure \_\_\_\_\_ Psig



Apache

Undesignated Chacra-Pictured Cliffs Field

Rio Arriba County, New Mexico

RECOMPLETION PROCEDURE

- 7-25-80 Move in and rig up Flint Rig #1437. Bled TP of 200 psi and CP of 400 psi to pit. Nipple down tree and nipple up BOP. POOH with 123 jts 2 3/8" tubing and std seating nipple. Tubing measures 3900.55'. SI for weekend. Baker Retrievmatic "D" not expected until late Saturday.
- 7-26-80 Crew off.
- 7-27-80 Sunday-Crew off
- 7-28-80 SICP 200 psi. Bled pressure. Rig up Jetronics and ran Baker Retrievmatic "D" packer with expendable plug in place and set at 3810' KB. (15' above Chacra perfs). Rig up Western and loaded hole with 57 bbls 2% KCL water, pressured casing to 4000 psi, zero bleed off in 5 minutes. Ran gamma-ray correlation log 3100' to 2800'. Perforated Pictured Cliffs 1 JSPF 2964-84 and 2990-96. Total of 26 holes. Spearheaded frack with 2600 gallons 15% acid and fracked with 23486 gallons 70 quality foam, 15 ball sealers, and 24000# 20/40 sand. Total nitrogen 297,489 SCF. Total LW 287 bbls. AIR 25 bpm. Max trt pressure 1800 psi, Min trt pressure 1600 psi. Avg trt pressure 1700 psi. Had 200 psi increase when balls hit. Tagged sand with RA material. ISIP 1400 psi, 5 & 10 min SIP 1350 psi, 15 min SIP 1300 psi. Open well through 3/4" choke at 4:23 p.m. After 1/2 hr, shut in to inspect fittings- All OK. Flared gas at 6:22 p.m. At 7 p.m. well dead. Started surging well with 1 hr SI and 1/2 hr flow and unload water. Left with night watchman.
- 7-29-80 Surged well throughout night and recovered good slugs of foamy frack water on each opening. For night well was SI 8 hrs and flowed 5 hrs. 3 hr SICP 600 psi. 1 hr SICP 360 psi. Well flaring on 3/4" choke on arrival. Flared 8 hrs continuously with FCP 30 psi, rate 519 MCFPD with slight to moderate spray of water. Left open on 3/4" choke overnight to clean up.
- 7-30-80 Well flowing and flaring on arrival at FCP 30 psi on 3/4" choke or 519 MCFPD with 1/8" stream of water out bottom of flowline. After 7 hrs, no change in rate on water production. Removed 3/4" choke and ran 1 jt 2 3/8" tubing and 4' sub and closed pipe rams on 4' sub. Installed 2" full opening valve on sub and closed in for pressure buildup.
- 7-31-80 SICP 340 psi after 17 hrs SI. Technical surveys, broke down, did not rig up. RIH with 119 jts tubing measuring 3775.28' and tag at 3760' KB. CO with nitrogen to 3804' KB. Circulate hole. SD and tagged at 3794'. Blew hole with nitrogen for 45 minutes. POOH. Ran final production tubing as follows:

	Baker Expendable Check Valve	.60'
	2 1/16" IJ sub	10.06'
	Anchor Seal Assembly	2.25'
	Locator Sub	.75'
	Extension Sub	.60'
	FL on-off tool	1.70'
	2 3/8" sub	9.90'
	Model "L" Sliding Sleeve (1.81" ID)	2.65'
24 jts	2 3/8" tubing	761.24'
	2 3/8" sub	8.20'
	2 3/8" sub	8.00'
	3-3.062" OD Blast Joints	60.00'
91 jts	2 3/8" tubing	2884.79'
	2 3/8" sub	6.00'

Cotton Pet.

Apache #29

Undesignated Chacra-Pictured Cliffs Field

Rio Arriba County, New Mexico

Elledge Consulting & Production Company

RECOMPLETION PROCEDURE CONTINUED

	2 3/8" sub		6.00'
	2 3/8" sub		4.00'
	2 3/8" sub		3.00'
<u>1 jt</u>	2 3/8" tubing		32.00'
116 jts		<u>12.91'</u>	<u>3788.83'</u>

TOTAL STRING	3801.74'
landed below KB	<u>13.00'</u>
	3814.74' KB

Top of Sliding Sleeve 3786' KB. Blast jts from 3010 to 2950' KB. Set 6000# on packer. Nipple down BOP and nipple up tree. Drop ball for expendable check valve. Nowsco ran out of nitrogen with 500# on tubing. Left on location 9 jts tubing measuring 284.43'. SI for night.

8-1-80

Rig up Nowsco and pump out plug in tubing. Left well SI.