Attachment 1 – Engineering Dept., Codes and Standards, "MAOP Determination", Sheet 8 and 9

Attachment 1

Sheet No. 8 of ___
Revision B

BACK-UP DATA
ENGINEERING DEPARTMENT
CODES AND STANDARDS
MAXIMUM ALLOWABLE OPERATING PRESSURE DETERMINATION

LINE NAME 1st California Loop (Keystone M/L Plant to Pecos River)

LINE NO. 1103 DIVISION Permian DISTRICT AREA JAL

SEGMENT FROM: MP/ES: 0 DATE CONSTRUCTED 1949

TO: MP/ES: 1.18

Procedure for establishing the Maximum Allowable Operating Pressure

A. Select the lowest of the following:

1. The design pressure of the weakest component determined in accordance with MES Section 104 and 105.

30" O.D., 0.335 w.t., X-52 A = 836.16 psig
B = 697 psig
C = 581 psig

400# valve - 960 psig (W.O. 327-1)

2. If tested, the pressure obtained by dividing the test pressure by a factor determined in accordance with the table in MES Section 110, Paragraph 10.1.2.2.

Test Pressure _____ ÷ _____ = _____ psig

Date of Test No test data Duration _____ hrs.

3. The highest actual operating pressure to which the segment was subjected during the 5 years preceding July 1, 1970 (July 1, 1965 through June, 1970).

Pressure 918 psig

Source 01-070-01 Meter No. _____ Date 97th day of 1967

4. The pressure determined by the operator to be the maximum safe pressure after considering the history of the segment, particularly known corrosion and the actual operating pressure.

Pressure limited to 837 psig per downstream piping

B. "Grandfather Clause":

1. Notwithstanding the requirements of Paragraph "A" an operator may operate a segment of pipeline to be in satisfactory condition to the pressure determined in A-3.

918 psig

Conclusion

Criteria used to establish MAOP A-4 (B-1)

MAOP of this segment is 837 psig. Set by dwk Date 5-24-77

1. The highest actual operating pressure to which the segment was subjected during the 5 years preceding July 1, 1970 (July 1, 1965 through June, 1970).

BACKUP DATA
ENGINEERING DEPARTMENT
CODES AND STANDARDS
MAXIMUM ALLOWABLE OPERATING PRESSURE DETERMINATION

LINE NAME 1st California Loop (Keystone M/L to Pecos River)

LINE NO. 1103 DIVISION Permian DISTRICT Jal

SEGMENT FROM: MP/~~EX~~ 1.18 DATE CONSTRUCTED 1950

TO: MP/~~EX~~ 56.93

Procedure for establishing the Maximum Allowable Operating Pressure

A. Select the lowest of the following:

1. The design pressure of the weakest component determined in accordance with MES Section 104 and 105.

30" O.D., 0.335" w.t., X-52 — A = 836.16 psig
B = 697 psig
C = 581 psig

400# valve - 960 psig (W.O. 327)

2. If tested, the pressure obtained by dividing the test pressure by a factor determined in accordance with the table in MES Section 110, Paragraph 10.1.2.2. (Test for C1-2 Area)

Test Pressure 1064 ÷ 1.25 = 852 psig

Date of Test 5-2-79 Duration 8 hrs.

3. The highest actual operating pressure to which the segment was subjected during the 5 years preceding July 1, 1970. (July 1, 1965 though June 1970).

Pressure 918 psig

Source 01-070-01 Date 97th day of 1967

4. The pressure determined by the operator to be the maximum safe pressure after considering the history of the segment, particularly known corrosion and the actual operating pressure.

Mill test API 5LX 1042 psig
Uprated to 837 psig on 5-2-70

B. "Grandfather Clause":

1. Notwithstanding the requirements of Paragraph "A" an operator may operate a segment of pipeline to be in satisfactory condition to the pressure determined in A-3 or A-4 (the pressure obtained by dividing the test pressure in MES Section 110, Paragraph 10.1.2.2.

918 psig

Conclusion

Criteria used to establish MAOP A-1; A-4

MAOP of this segment is 837 psig. Set by DMK Date 5-24-77

Uprated to 837 psig on May 2, 1979