

Initial Deliverability
Test

NEW MEXICO OIL CONSERVATION COMMISSION
GAS WELL TEST DATA SHEET - - SAN JUAN BASIN

(TO BE USED FOR FRUITLAND, PICTURED CLIFFS, MESAVERDE, & ALL DAKOTA
EXCEPT BARKER DOME STORAGE AREA)

Pool Tapasito-Pictured Cliffs Formation Pictured Cliffs County San Arriba
Purchasing Pipeline El Paso Natural Gas Company Date Test Filed 11-23-58
Operator PAN AMERICAN PETROLEUM CORP. Lease Fred Phillips #1 Well No. 1
Unit I Sec. 10 Twp. 25N Rge. 3N Pay Zone: From 3737 To 3767
Casing: OD 5-1/2 WT. 14 Set At 3826 Tubing: OD 2-3/8 WT. 4.7 T. Perf. 3727
Produced Through: Casing 1 Tubing 1 Gas Gravity: Measured 0.649 Estimated 0.649
Date of Flow Test: From 10-15-58 To 10-22-58 * Date S.I.P. Measured 8-19-58
Meter Run Size 4 Orifice Size 2.500 Type Chart 34-44 Type Taps flange

OBSERVED DATA

Flowing casing pressure (Dwt) _____ psig + 12 = _____ psia (a)
Flowing tubing pressure (Dwt) _____ psig + 12 = _____ psia (b)
Flowing meter pressure (Dwt) _____ psig + 12 = _____ psia (c)
Flowing meter pressure (meter reading when Dwt. measurement taken):
Normal chart reading _____ psig + 12 = _____ psia (d)
Square root chart reading (_____) ² x spring constant _____ = _____ psia (d)
Meter error (c) - (d) or (d) - (c) _____ ± _____ = _____ psi (e)
Friction loss, Flowing column to meter:
(b) - (c) Flow through tubing; (a) - (c) Flow through casing _____ = _____ psi (f)
Seven day average static meter pressure (from meter chart):
Normal chart average reading _____ psig + 12 = _____ psia (g)
Square root chart average reading (7.20) ² x sp. const. 5 _____ = _____ psia (g)
Corrected seven day avge. meter press. (p_f) (g) + (e) _____ = _____ psia (h)
P_t = (h) + (f) _____ = _____ psia (i)
Wellhead casing shut-in pressure (Dwt) 1050 psig + 12 = 1062 psia (j)
Wellhead tubing shut-in pressure (Dwt) 1050 psig + 12 = 1062 psia (k)
P_c = (j) or (k) whichever well flowed through _____ = 1062 psia (l)
Flowing Temp. (Meter Run) 69 °F + 460 _____ = 529 °Abs (r₁)
P_d = 1/2 P_c = 1/2 (l) _____ = 531 psia (r₁)

FLOW RATE CALCULATION

Q = _____ X $\left(\frac{\sqrt{(c)}}{\sqrt{(d)}} \right) =$ _____ MCF/day
(integrated)

DELIVERABILITY CALCULATION

D = Q 2370 $\left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^n =$ 2100 MCF/day
 $\left[\frac{1062^2 - 531^2}{1062^2 - 977.783^2} \right]^n$ 0.884

SUMMARY

P_c = 1062 psia
Q = 2370 Mcf/day
P_w = 387 psia
P_d = 531 psia
D = 2100 Mcf/day

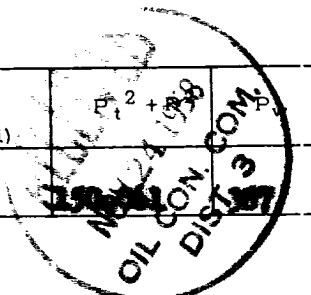
Company PAN AMERICAN PETROLEUM CORPORATION
By S. H. BAKER, JR.
Title Field Engineer
Witnessed by _____
Company _____

- * This is date of completion test.
- * Meter error correction factor

REMARKS OR FRICTION CALCULATIONS

GL	(1-e ^{-S})	(F _c Q) ²	(F _c Q) ² (1-e ^{-S}) R ²	P _t ² (Column i)	P _t ² + 4.8 DIST. 3
<u>2493</u>	<u>.366</u>	<u>499.880</u>	<u>62.980</u>	<u>67.081</u>	<u>290.061</u>

*Furnished by pipeline company



[illegible][illegible]

1. *Introduction*

2. *Background*

3. *Method*

4. *Results*

5. *Discussion*

6. *Conclusion*

7. *References*

8. *Appendix*

9. *Tables*

10. *Figures*

11. *Supplementary Materials*

12. *Notes*

13. *Abbreviations*

14. *Conflicts of Interest*

15. *Acknowledgments*

16. *Author Contributions*

17. *Data Availability Statement*

18. *References*

19. *Appendix*

20. *Tables*

21. *Figures*

22. *Supplementary Materials*

23. *Notes*

24. *Abbreviations*

25. *Conflicts of Interest*

26. *Acknowledgments*

27. *Author Contributions*

28. *Data Availability Statement*

29. *References*

30. *Appendix*

31. *Tables*

32. *Figures*

33. *Supplementary Materials*

34. *Notes*

35. *Abbreviations*

36. *Conflicts of Interest*

37. *Acknowledgments*

38. *Author Contributions*

39. *Data Availability Statement*

40. *References*

41. *Appendix*

42. *Tables*

43. *Figures*

44. *Supplementary Materials*

45. *Notes*

46. *Abbreviations*

47. *Conflicts of Interest*

48. *Acknowledgments*

49. *Author Contributions*

50. *Data Availability Statement*

51. *References*

52. *Appendix*

53. *Tables*

54. *Figures*

55. *Supplementary Materials*

56. *Notes*

57. *Abbreviations*

58. *Conflicts of Interest*

59. *Acknowledgments*

60. *Author Contributions*

61. *Data Availability Statement*

62. *References*

63. *Appendix*

64. *Tables*

65. *Figures*

66. *Supplementary Materials*

67. *Notes*

68. *Abbreviations*

69. *Conflicts of Interest*

70. *Acknowledgments*

71. *Author Contributions*

72. *Data Availability Statement*

73. *References*

74. *Appendix*

75. *Tables*

76. *Figures*

77. *Supplementary Materials*

78. *Notes*

79. *Abbreviations*

80. *Conflicts of Interest*

81. *Acknowledgments*

82. *Author Contributions*

83. *Data Availability Statement*

84. *References*

85. *Appendix*

86. *Tables*

87. *Figures*

88. *Supplementary Materials*

89. *Notes*

90. *Abbreviations*

91. *Conflicts of Interest*

92. *Acknowledgments*

93. *Author Contributions*

94. *Data Availability Statement*

95. *References*

96. *Appendix*

97. *Tables*

98. *Figures*

99. *Supplementary Materials*

100. *Notes*

101. *Abbreviations*

102. *Conflicts of Interest*

103. *Acknowledgments*

104. *Author Contributions*

105. *Data Availability Statement*

106. *References*

107. *Appendix*

108. *Tables*

109. *Figures*

110. *Supplementary Materials*

111. *Notes*

112. *Abbreviations*

113. *Conflicts of Interest*

114. *Acknowledgments*

115. *Author Contributions*

116. *Data Availability Statement*

117. *References*

118. *Appendix*

119. *Tables*

120. *Figures*

121. *Supplementary Materials*

122. *Notes*

123. *Abbreviations*

124. *Conflicts of Interest*

125. *Acknowledgments*

126. *Author Contributions*

127. *Data Availability Statement*

128. *References*

129. *Appendix*

130. *Tables*

131. *Figures*

132. *Supplementary Materials*

133. *Notes*

134. *Abbreviations*

135. *Conflicts of Interest*

136. *Acknowledgments*

137. *Author Contributions*

138. *Data Availability Statement*

139. *References*

140. *Appendix*

141. *Tables*

142. *Figures*

143. *Supplementary Materials*

144. *Notes*

145. *Abbreviations*

146. *Conflicts of Interest*

147. *Acknowledgments*

148. *Author Contributions*

149. *Data Availability Statement*

150. *References*

151. *Appendix*

152. *Tables*

153. *Figures*

154. *Supplementary Materials*

155. *Notes*

156. *Abbreviations*

157. *Conflicts of Interest*

158. *Acknowledgments*

159. *Author Contributions*

160. *Data Availability Statement*

161. *References*

162. *Appendix*

163. *Tables*

164. *Figures*

165. *Supplementary Materials*

166. *Notes*

167. *Abbreviations*

168. *Conflicts of Interest*

169. *Acknowledgments*

170. *Author Contributions*

171. *Data Availability Statement*

172. *References*

173. *Appendix*

174. *Tables*

175. *Figures*

176. *Supplementary Materials*

177. *Notes*

178. *Abbreviations*

179. *Conflicts of Interest*

180. *Acknowledgments*

181. *Author Contributions*

182. *Data Availability Statement*

183. *References*

184. *Appendix*

185. *Tables*

186. *Figures*

187. *Supplementary Materials*

188. *Notes*

189. *Abbreviations*

190. *Conflicts of Interest*

191. *Acknowledgments*

192. *Author Contributions*

193. *Data Availability Statement*

194. *References*

195. *Appendix*

196. *Tables*

197. *Figures*

198. *Supplementary Materials*

199. *Notes*

200. *Abbreviations*

201. *Conflicts of Interest*

202. *Acknowledgments*

203. *Author Contributions*

204. *Data Availability Statement*

205. *References*

206. *Appendix*

207. *Tables*

208. *Figures*

209. *Supplementary Materials*

210. *Notes*

211. *Abbreviations*

212. *Conflicts of Interest*

213. *Acknowledgments*

214. *Author Contributions*

215. *Data Availability Statement*

216. *References*

217. *Appendix*

218. *Tables*

219. *Figures*

220. *Supplementary Materials*

221. *Notes*

222. *Abbreviations*

223. *Conflicts of Interest*

224. *Acknowledgments*

225. *Author Contributions*

226. *Data Availability Statement*

227. *References*

228. *Appendix*

229. *Tables*

230. *Figures*

231. *Supplementary Materials*

232. *Notes*

233. *Abbreviations*

234. *Conflicts of Interest*

235. *Acknowledgments*

236. *Author Contributions*

237. *Data Availability Statement*

238. *References*

239. *Appendix*

240. *Tables*

241. *Figures*

242. *Supplementary Materials*

243. *Notes*

244. *Abbreviations*

245. *Conflicts of Interest*

246. *Acknowledgments*

247. *Author Contributions*

248. *Data Availability Statement*

249. *References*

250. *Appendix*

251. *Tables*

252. *Figures*

253. *Supplementary Materials*

254. *Notes*

255. *Abbreviations*

256. *Conflicts of Interest*

257. *Acknowledgments*

258. *Author Contributions*

259. *Data Availability Statement*

260. *References*

261

[illegible][illegible][illegible][illegible]

Case	Model	Method	Results
1	Model 1	Method 1	Results 1
2	Model 2	Method 2	Results 2
3	Model 3	Method 3	Results 3
4	Model 4	Method 4	Results 4
5	Model 5	Method 5	Results 5
6	Model 6	Method 6	Results 6
7	Model 7	Method 7	Results 7
8	Model 8	Method 8	Results 8
9	Model 9	Method 9	Results 9
10	Model 10	Method 10	Results 10
11	Model 11	Method 11	Results 11
12	Model 12	Method 12	Results 12
13	Model 13	Method 13	Results 13
14	Model 14	Method 14	Results 14
15	Model 15	Method 15	Results 15
16	Model 16	Method 16	Results 16
17	Model 17	Method 17	Results 17
18	Model 18	Method 18	Results 18
19	Model 19	Method 19	Results 19
20	Model 20	Method 20	Results 20
21	Model 21	Method 21	Results 21
22	Model 22	Method 22	Results 22
23	Model 23	Method 23	Results 23
24	Model 24	Method 24	Results 24
25	Model 25	Method 25	Results 25
26	Model 26	Method 26	Results 26
27	Model 27	Method 27	Results 27
28	Model 28	Method 28	Results 28
29	Model 29	Method 29	Results 29
30	Model 30	Method 30	Results 30
31	Model 31	Method 31	Results 31
32	Model 32	Method 32	Results 32
33	Model 33	Method 33	Results 33
34	Model 34	Method 34	Results 34
35	Model 35	Method 35	Results 35
36	Model 36	Method 36	Results 36
37	Model 37	Method 37	Results 37
38	Model 38	Method 38	Results 38
39	Model 39	Method 39	Results 39
40	Model 40	Method 40	Results 40
41	Model 41	Method 41	Results 41
42	Model 42	Method 42	Results 42
43	Model 43	Method 43	Results 43
44	Model 44	Method 44	Results 44
45	Model 45	Method 45	Results 45
46	Model 46	Method 46	Results 46
47	Model 47	Method 47	Results 47
48	Model 48	Method 48	Results 48
49	Model 49	Method 49	Results 49
50	Model 50	Method 50	Results 50
51	Model 51	Method 51	Results 51
52	Model 52	Method 52	Results 52
53	Model 53	Method 53	Results 53
54	Model 54	Method 54	Results 54
55	Model 55	Method 55	Results 55
56	Model 56	Method 56	Results 56
57	Model 57	Method 57	Results 57
58	Model 58	Method 58	Results 58
59	Model 59	Method 59	Results 59
60	Model 60	Method 60	Results 60
61	Model 61	Method 61	Results 61
62	Model 62	Method 62	Results 62
63	Model 63	Method 63	Results 63
64	Model 64	Method 64	Results 64
65	Model 65	Method 65	Results 65
66	Model 66	Method 66	Results 66
67	Model 67	Method 67	Results 67
68	Model 68	Method 68	Results 68
69	Model 69	Method 69	Results 69
70	Model 70	Method 70	Results 70
71	Model 71	Method 71	Results 71
72	Model 72	Method 72	Results 72
73	Model 73	Method 73	Results 73
74	Model 74	Method 74	Results 74
75	Model 75	Method 75	Results 75
76	Model 76	Method 76	Results 76
77	Model 77	Method 77	Results 77
78	Model 78	Method 78	Results 78
79	Model 79	Method 79	Results 79
80	Model 80	Method 80	Results 80
81	Model 81	Method 81	Results 81
82	Model 82	Method 82	Results 82
83	Model 83	Method 83	Results 83
84	Model 84	Method 84	Results 84
85	Model 85	Method 85	Results 85
86	Model 86	Method 86	Results 86
87	Model 87	Method 87	Results 87
88	Model 88	Method 88	Results 88
89	Model 89	Method 89	Results 89
90	Model 90	Method 90	Results 90
91	Model 91	Method 91	