



WESTERN TESTING CO., INC.

FORMATION TESTING

TICKET NO 11056

P. O. BOX 1599 PHONE (316) 262-5861 WICHITA, KANSAS 67201

Elevation _____ Formation LaCompton Eff. Pay _____ Ft.

District Pratt Date 5-15-81 Customer Order No. _____
COMPANY NAME J. Mark Richardson 640 Century Plaza Bldg 111 W. Anglin
ADDRESS Wichita KS 67202
LEASE AND WELL NO. Bender D #1 COUNTY Kiowa STATE KS Sec. 21 Twp. 30 Rge. 19W
Mail Invoice To Same No. Copies Requested Reg
Co. Name _____ Address _____
Mail Charts To Same No. Copies Requested Reg
Address _____

Formation Test No. 1 Interval Tested from 4050 ft. to 4120 ft. Total Depth 4475 ft.
Packer Depth 4045 ft. Size 6 3/4 in. Packer Depth 4120 ft. Size 6 3/4 in.
Packer Depth 4050 ft. Size 6 3/4 in. Packer Depth _____ ft. Size _____ in.

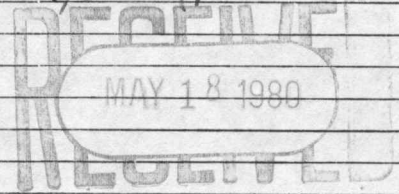
Depth of Selective Zone Set _____
Top Recorder Depth (Inside) 4070 ft. Recorder Number 5673 Cap. 5400
Bottom Recorder Depth (Outside) 4073 ft. Recorder Number WTC Cap. _____
Below Straddle Recorder Depth 4473 ft. Recorder Number 1565 Cap. 4900

Drilling Contractor Gabbert + Jones #9 Drill Collar Length 390 I. D. 2.2 in.
Mud Type Chem Viscosity 37 Weight Pipe Length _____ I. D. _____ in.
Weight 9.4 Water Loss 24.0 cc. Drill Pipe Length 3986 I. D. 3.8 in.
Chlorides 20,000 P.P.M. Test Tool Length 29 ft. Tool Size 5 1/2 OD in.
Jars: Make WTC Serial Number 405 Anchor Length DC 30-40 ft. Size 5 1/2 OD in.
Did Well Flow? NO Reversed Out NO Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.
Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 FH in.

Blow: Strong while packers leaked - Fair thru both flow periods after Reset

Recovered 420 ft. of Mud
Recovered 180 ft. of Watery Mud Chlorides 52,000 ppm
Recovered _____ ft. of _____
Recovered _____ ft. of _____
Recovered _____ ft. of _____

Remarks: Lost Fluid on IF - Reset Packers.



Time On Location 9:00 A.M. Time Pick Up Tool 10:30 A.M. Time Off Location 8:00 P.M.
Time Set Packer(s) 1:15 A.M. Time Started Off Bottom 4:15 P.M. Maximum Temperature 115°
Initial Hydrostatic Pressure (A) 2013 P.S.I.
Initial Flow Period (B) 30 Minutes (C) 286 P.S.I.
Initial Closed In Period (D) 30 Minutes (E) 1756 P.S.I.
Final Flow Period (F) 90 Minutes (G) 286 P.S.I.
Final Closed In Period (H) 30 Minutes (I) 1756 P.S.I.
Final Hydrostatic Pressure (J) 2013 P.S.I.

COMPANY TERMS

Western Testing Co., Inc. shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained directly or indirectly through the use of its equipment, of its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid at cost by the party for whom the test is made.

All charges subject to 12% interest after 60 days from date of invoice. Any expense incurred for collection will be added to the original amount.

Test Approved By J. Mark Richardson
Signature of Customer or his authorized representative

Western Representative [Signature] Thank you

FIELD INVOICE

Open Hole Test \$ 700.00
Misrun \$ _____
Straddle Test \$ 300.00
Jars \$ 300.00
Selective Zone \$ _____
Safety Joint \$ 165.00
Standby \$ _____
Evaluation \$ _____
Extra Packer \$ _____
Circ. Sub. \$ _____
Mileage 51 \$ 28.25
Fluid Sampler \$ _____
Extra Charts \$ _____
Insurance \$ _____
TOTAL \$ 1403.25

WESTERN TESTING CO., INC.

Pressure Data

Date 5-15

Test Ticket No. 11056

Recorder No. 5673

Capacity 5400

Location 4070 Ft.

Clock No. _____ Elevation _____

Well Temperature 115 °F

Point	Pressure	P.S.I.
A Initial Hydrostatic Mud	<u>2049</u>	P.S.I.
B First Initial Flow Pressure	<u>161</u>	P.S.I.
C First Final Flow Pressure	<u>287</u>	P.S.I.
D Initial Closed-in Pressure	<u>1750</u>	P.S.I.
E Second Initial Flow Pressure	<u>301</u>	P.S.I.
F Second Final Flow Pressure	<u>338</u>	P.S.I.
G Final Closed-in Pressure	<u>1629</u>	P.S.I.
H Final Hydrostatic Mud	<u>1995</u>	P.S.I.

	Time Given	Time Computed
Open Tool	<u>1:15 A</u> M	
First Flow Pressure	<u>30</u> Mins.	<u>40</u> Mins.
Initial Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
Second Flow Pressure	<u>90</u> Mins.	<u>90</u> Mins.
Final Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 8 Inc.
of 5 mins. and a
final inc. of 0 Min.

Initial Shut-In
Breakdown: 10 Inc.
of 3 mins. and a
final inc. of 0 Min.

Second Flow Pressure
Breakdown: 18 Inc.
of 5 mins. and a
final inc. of 0 Min.

Final Shut-In
Breakdown: 10 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<u>161</u>	0	<u>287</u>	0	<u>301</u>	0	<u>338</u>
P 2 5	<u>240</u>	3	<u>1160</u>	5	<u>297</u>	3	<u>1037</u>
P 3 10	<u>268</u>	6	<u>1436</u>	10	<u>298</u>	6	<u>1266</u>
P 4 15	<u>268</u>	9	<u>1545</u>	15	<u>301</u>	9	<u>1379</u>
P 5 20	<u>265</u>	12	<u>1607</u>	20	<u>303</u>	12	<u>1453</u>
P 6 25	<u>270</u>	15	<u>1650</u>	25	<u>306</u>	15	<u>1504</u>
P 7 30	<u>279</u>	18	<u>1683</u>	30	<u>309</u>	18	<u>1545</u>
P 8 35	<u>281</u>	21	<u>1707</u>	35	<u>311</u>	21	<u>1572</u>
P 9 40	<u>287</u>	24	<u>1729</u>	40	<u>314</u>	24	<u>1594</u>
P10 45		27	<u>1745</u>	45	<u>317</u>	27	<u>1610</u>
P11 50		30	<u>1750</u>	50	<u>320</u>	30	<u>1629</u>
P12 55		33		55	<u>323</u>	33	
P13 60		36		60	<u>325</u>	36	
P14		39		65	<u>328</u>	39	
P15		42		70	<u>330</u>	42	
P16		45		75	<u>332</u>	45	
P17		48		80	<u>334</u>	48	
P18		51		85	<u>336</u>	51	
P19		54		90	<u>338</u>	54	
P20		57				57	
		60				60	

Company J. Mark Richardson Lease & Well No. Bender "D" #1
 Elevation - Formation LaCompton Effective Pay - Ft. Ticket No. 11056
 Date 5/15/81 Sec. 21 Twp. 30S Range 19W County Kiowa State Kansas
 Test Approved by J. Mark Richardson Western Representative Jeff Piotrowski

Formation Test No. 1 Interval Tested from 4050 ft. to 4120 ft. Total Depth 4475 ft.
 Packer Depth 4045 ft. Size 6 3/4 in. Packer Depth 4120 ft. Size 6 3/4 in.
 Packer Depth 4050 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
 Depth of Selective Zone Set -

Top Recorder Depth (Inside) 4070 ft. Recorder Number 5673 Cap. 5400
 Bottom Recorder Depth (Outside) 4073 ft. Recorder Number WTC Cap. -
 Below Straddle Recorder Depth 4473 ft. Recorder Number 1565 Cap. 4900

Drilling Contractor Gabbert & Jones Rig #9 Drill Collar Length 390 I. D. 2.2 in.
 Mud Type Chemical Viscosity 37 Weight Pipe Length - I. D. - in.
 Weight 9.4 Water Loss 24.0 cc. Drill Pipe Length 3986 I. D. 3.8 in.
 Chlorides 20,000 P.P.M. Test Tool Length 29 ft. Tool Size 5 1/2 OD in.
 Jars: Make WTC Serial Number 405 Anchor Length DC 30 - 40 ft. Size 5 1/2 OD in.
 Did Well Flow? No Reversed Out No Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.
 Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 FH in.

Blow: Strong while packers leaked - fair throughout test after reset.

Recovered 420 ft. of mud
 Recovered 180 ft. of watery mud Chlorides 52,000 PPM
 Recovered ft. of
 Recovered ft. of
 Recovered ft. of

Remarks: Lost fluid on initial flow period. reset packers.

Time Set Packer(s) 1:15 ~~P.M.~~ ^{A.M.} Time Started Off Bottom 4:15 ~~P.M.~~ ^{A.M.} Maximum Temperature 115
 Initial Hydrostatic Pressure (A) 2049 P.S.I.
 Initial Flow Period Minutes 40 (B) 161 P.S.I. to (C) 287 P.S.I.
 Initial Closed In Period Minutes 30 (D) 1750 P.S.I.
 Final Flow Period Minutes 90 (E) 301 P.S.I. to (F) 338 P.S.I.
 Final Closed In Period Minutes 30 (G) 1629 P.S.I.
 Final Hydrostatic Pressure (H) 1995 P.S.I.

WESTERN TESTING CO., INC.
Pressure Data

11056

Date 5/15/81

Test Ticket No. 4070

Recorder No. 5673 Capacity 5400

Location 115 Ft.

Clock No. - Elevation - Well Temperature 115 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2049 P.S.I.	Open Tool	1:15A	M
B First Initial Flow Pressure	161 P.S.I.	First Flow Pressure	30 Mins.	40 Mins.
C First Final Flow Pressure	287 P.S.I.	Initial Closed-in Pressure	30 Mins.	30 Mins.
D Initial Closed-in Pressure	1750 P.S.I.	Second Flow Pressure	90 Mins.	90 Mins.
E Second Initial Flow Pressure	301 P.S.I.	Final Closed-in Pressure	30 Mins.	30 Mins.
F Second Final Flow Pressure	338 P.S.I.			
G Final Closed-in Pressure	1629 P.S.I.			
H Final Hydrostatic Mud	1995 P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure
Breakdown: 8 Inc.
of 5 mins. and a
final inc. of 0 Min.

Initial Shut-In
Breakdown: 10 Inc.
of 3 mins. and a
final inc. of 0 Min.

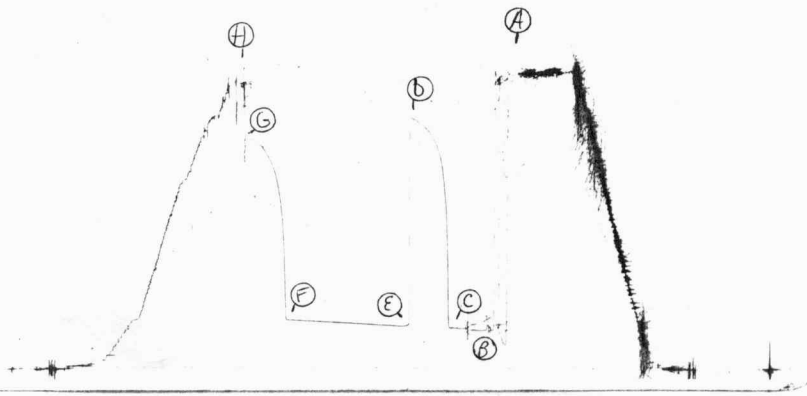
Second Flow Pressure
Breakdown: 18 Inc.
of 5 mins. and a
final inc. of 0 Min.

Final Shut-In
Breakdown: 10 Inc.
of 3 mins. and a
final inc. of 0 Min.

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	161	0	287	0	301	0	338
P 2 5	240	3	1160	5	297	3	1037
P 3 10	268	6	1436	10	298	6	1266
P 4 15	268	9	1545	15	301	9	1379
P 5 20	265	12	1607	20	303	12	1453
P 6 25	270	15	1650	25	306	15	1504
P 7 30	279	18	1683	30	309	18	1545
P 8 35	281	21	1707	35	311	21	1572
P 9 40	287	24	1729	40	314	24	1594
P10		27	1745	45	317	27	1610
P11		30	1750	50	320	30	1629
P12				55	323		
P13				60	325		
P14				65	328		
P15				70	330		
P16				75	332		
P17				80	334		
P18				85	336		
P19				90	338		
P20							

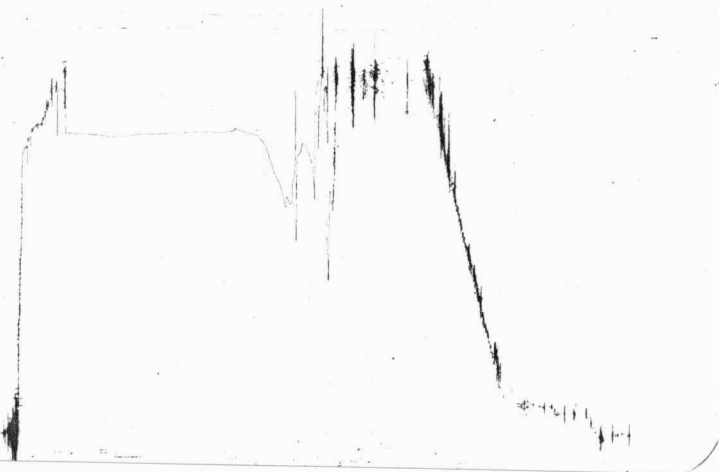
5073
DST #1

TKT # 11056
I



1565
DST #1

TKT # 11056
Below Straddle





WESTERN TESTING CO., INC.

FORMATION TESTING

TICKET

No 12126

P. O. BOX 1599 PHONE (316) 262-5861 WICHITA, KANSAS 67201

Elevation 2275 K.B. Formation Miss. Eff. Pay Ft.

District Great Bend Date 5-18-81 Customer Order No.

COMPANY NAME J. Mark Richardson ADDRESS 640 Century Plaza Bldg., 111 W. Douglas, Wichita, Ks. 67202

LEASE AND WELL NO. #1 Bender D COUNTY Kiowa STATE Ks. Sec. 21 Twp 30S Rge 19W

Mail Invoice To Same As Above Co. Name Address No. Copies Requested 5

Mail Charts To Address No. Copies Requested 5

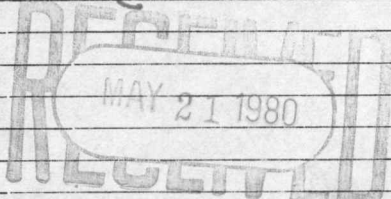
Formation Test No. 2 Interval Tested from 5110 ft. to 5160 ft. Total Depth 5160 ft. Packer Depth 5105 ft. Size 6 5/8 in. Packer Depth 5110 ft. Size 6 5/8 in.

Top Recorder Depth (Inside) 5120 ft. Recorder Number 3474 Cap. 3000 Bottom Recorder Depth (Outside) 5123 ft. Recorder Number 1049 Cap. 4000 Below Straddle Recorder Depth ft. Recorder Number Cap.

Drilling Contractor Gabber, T-Jones Rig 9 Drill Collar Length 420 I. D. 2.7 in. Mud Type Drispal Viscosity 62 Weight Pipe Length I. D. in. Weight 9.5 Water Loss 14.8 cc. Drill Pipe Length 4661 I. D. 3.8 in. Chlorides 25,000 P.P.M. Test Tool Length 29 ft. Tool Size 5 1/2 in. Jars: Make WTC Serial Number 403 Anchor Length 50 ft. Size 5 1/2 in. Did Well Flow? NO Reversed Out NO Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in. Main Hole Size 7 3/8 in. Tool Joint Size 4 1/2 FH in.

Blow: Good Throughout Initial flow period Good, decreased to fair (3") By End of Prod Opening, final flow period

Recovered 230 ft. of Only Mud Recovered ft. of Recovered ft. of Recovered ft. of Recovered ft. of Remarks:



Time On Location 1:00 A.M. Time Pick Up Tool 2:00 P.M. Time Off Location 10:00 A.M. Time Set Packer(s) 3:28 A.M. Time Started Off Bottom 6:30 P.M. Maximum Temperature 118 Initial Hydrostatic Pressure (A) 2624 P.S.I. Initial Flow Period Minutes 30 (B) 130 P.S.I. to (C) 138 P.S.I. Initial Closed In Period Minutes 30 (D) 223 P.S.I. Final Flow Period Minutes 90 (E) 138 P.S.I. to (F) 138 P.S.I. Final Closed In Period Minutes 30 (G) 207 P.S.I. Final Hydrostatic Pressure (H) 2624 P.S.I.

COMPANY TERMS Western Testing Co., Inc. shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained directly or indirectly through the use of its equipment, of its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid at cost by the party for whom the test is made. All charges subject to 12% interest after 60 days from date of invoice. Any expense incurred for collection will be added to the original amount.

FIELD INVOICE Open Hole Test \$ 775.00 Misrun \$ Straddle Test \$ Jars \$ 300.00 Selective Zone \$ Safety Joint \$ 65.00 Standby \$ Evaluation \$ Extra Packer \$ Circ. Sub. \$ Mileage \$ Fluid Sampler \$ Extra Charts \$ Insurance \$ TOTAL \$ 1140.00

Test Approved By J. Mark Richardson Signature of Customer or his authorized representative Western Representative Dennis Wondra Thank you Renee Hall Invoice

WESTERN TESTING CO., INC.

Pressure Data

Date 5-18

Test Ticket No. 12126

Recorder No. 3474

Capacity 3000

Location 5120 Ft.

Clock No. _____ Elevation 2275 KB

Well Temperature 118 °F

Point	Pressure	
A Initial Hydrostatic Mud	<u>2624</u>	P.S.I.
B First Initial Flow Pressure	<u>136</u>	P.S.I.
C First Final Flow Pressure	<u>141</u>	P.S.I.
D Initial Closed-in Pressure	<u>226</u>	P.S.I.
E Second Initial Flow Pressure	<u>159</u>	P.S.I.
F Second Final Flow Pressure	<u>150</u>	P.S.I.
G Final Closed-in Pressure	<u>212</u>	P.S.I.
H Final Hydrostatic Mud	<u>2624</u>	P.S.I.

	Time Given	Time Computed
Open Tool	<u>3:28 A</u>	M
First Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
Initial Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
Second Flow Pressure	<u>90</u> Mins.	<u>75</u> Mins.
Final Closed-in Pressure	<u>30</u> Mins.	<u>42</u> Mins.

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In			
Breakdown: <u>6</u> Inc.		Breakdown: <u>10</u> Inc.		Breakdown: <u>15</u> Inc.		Breakdown: <u>14</u> Inc.			
of <u>5</u> mins. and a		of <u>3</u> mins. and a		of <u>5</u> mins. and a		of <u>3</u> mins. and a			
final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.			
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.		
P 1	<u>0</u>	<u>0</u>	<u>136</u>	<u>0</u>	<u>141</u>	<u>0</u>	<u>159</u>	<u>0</u>	<u>150</u>
P 2	<u>5</u>	<u>3</u>	<u>139</u>	<u>3</u>	<u>161</u>	<u>5</u>	<u>152</u>	<u>3</u>	<u>174</u>
P 3	<u>10</u>	<u>6</u>	<u>141</u>	<u>6</u>	<u>173</u>	<u>10</u>	<u>148</u>	<u>6</u>	<u>182</u>
P 4	<u>15</u>	<u>9</u>	<u>142</u>	<u>9</u>	<u>179</u>	<u>15</u>	<u>146</u>	<u>9</u>	<u>185</u>
P 5	<u>20</u>	<u>12</u>	<u>142</u>	<u>12</u>	<u>186</u>	<u>20</u>	<u>145</u>	<u>12</u>	<u>188</u>
P 6	<u>25</u>	<u>15</u>	<u>142</u>	<u>15</u>	<u>194</u>	<u>25</u>		<u>15</u>	<u>190</u>
P 7	<u>30</u>	<u>18</u>	<u>141</u>	<u>18</u>	<u>202</u>	<u>30</u>		<u>18</u>	<u>193</u>
P 8	<u>35</u>	<u>21</u>		<u>21</u>	<u>211</u>	<u>35</u>		<u>21</u>	<u>195</u>
P 9	<u>40</u>	<u>24</u>		<u>24</u>	<u>215</u>	<u>40</u>		<u>24</u>	<u>198</u>
P10	<u>45</u>	<u>27</u>		<u>27</u>	<u>223</u>	<u>45</u>		<u>27</u>	<u>202</u>
P11	<u>50</u>	<u>30</u>		<u>30</u>	<u>226</u>	<u>50</u>		<u>30</u>	<u>203</u>
P12	<u>55</u>	<u>33</u>		<u>33</u>		<u>55</u>		<u>33</u>	<u>205</u>
P13	<u>60</u>	<u>36</u>		<u>36</u>		<u>60</u>		<u>36</u>	<u>208</u>
P14		<u>39</u>		<u>39</u>		<u>65</u>		<u>39</u>	<u>211</u>
P15		<u>42</u>		<u>42</u>		<u>70</u>		<u>42</u>	<u>212</u>
P16		<u>45</u>		<u>45</u>		<u>75</u>		<u>45</u>	
P17		<u>48</u>		<u>48</u>		<u>80</u>		<u>48</u>	
P18		<u>51</u>		<u>51</u>		<u>85</u>		<u>51</u>	
P19		<u>54</u>		<u>54</u>		<u>90</u>		<u>54</u>	
P20		<u>57</u>		<u>57</u>				<u>57</u>	
		<u>60</u>		<u>60</u>				<u>60</u>	

Company J. Mark Richardson Lease & Well No. Bender 'D' #1
 Elevation 2275 Kelly Bushing Mississippi Formation Effective Pay - Ft. Ticket No. 12126
 Date 5/18/81 Sec. 21 Twp. 30S Range 19W County Kiowa State Kansas
 Test Approved by J. Mark Richardson Western Representative Denis Wondra

Formation Test No. 2 Interval Tested from 5110 ft. to 5160 ft. Total Depth 5160 ft.
 Packer Depth 5105 ft. Size 6 5/8 in. Packer Depth 5110 ft. Size 6 5/8 in.
 Packer Depth - ft. Size - in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -
 Top Recorder Depth (Inside) 5120 ft. Recorder Number 3474 Cap. 3000
 Bottom Recorder Depth (Outside) 5123 ft. Recorder Number 1049 Cap. 4000
 Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Gabbert-Jones Drilling Rig #9 Drill Collar Length 420 I. D. 2.7 in.
 Mud Type drispac Viscosity 62 Weight Pipe Length - I. D. - in.
 Weight 9.5 Water Loss 14.8 cc. Drill Pipe Length 4661 I. D. 3.8 in.
 Chlorides 25,000 P.P.M. Test Tool Length 29 ft. Tool Size 5 1/2 OD in.
 Jars: Make WIC Serial Number 403 Anchor Length 50 ft. Size 5 1/2 in.
 Did Well Flow? No Reversed Out No Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.
 Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 FH in.

Blow: Good throughout initial flow period. Good; decreased to fair (three inches)
by end of final flow period.

230 ft. of drilling mud
 Recovered _____ ft. of _____
 Recovered _____ ft. of _____
 Recovered _____ ft. of _____
 Recovered _____ ft. of _____
 Recovered _____ ft. of _____

Remarks: _____

Time Set Packer(s)	<u>2:38</u>	P.M. <u>A.M.</u>	Time Started Off Bottom	<u>6:30</u>	P.M. <u>A.M.</u>	Maximum Temperature	<u>118°</u>
Initial Hydrostatic Pressure			(A)	<u>2624</u>	P.S.I.		
Initial Flow Period		Minutes	(B)	<u>30</u>	P.S.I. to (C)	<u>141</u>	P.S.I.
Initial Closed In Period		Minutes	(D)	<u>30</u>	P.S.I.		
Final Flow Period		Minutes	(E)	<u>75</u>	P.S.I. to (F)	<u>150</u>	P.S.I.
Final Closed In Period		Minutes	(G)	<u>42</u>	P.S.I.		
Final Hydrostatic Pressure			(H)	<u>2624</u>	P.S.I.		

WESTERN TESTING CO., INC.

Pressure Data

Date 5/18/81 Test Ticket No. 12126
 Recorder No. 3474 Capacity 3000 Location 5120 Ft.
 Clock No. -- Elevation 2275 Kelly Bushing Well Temperature 118 °F

Point	Pressure			Time Given	Time Computed
		P.S.I.			
A Initial Hydrostatic Mud	<u>2624</u>	<u>P.S.I.</u>	Open Tool	<u>3:28A</u>	<u>M</u>
B First Initial Flow Pressure	<u>136</u>	<u>P.S.I.</u>	First Flow Pressure	<u>30</u>	<u>Mins. 30 Mins.</u>
C First Final Flow Pressure	<u>141</u>	<u>P.S.I.</u>	Initial Closed-in Pressure	<u>30</u>	<u>Mins. 30 Mins.</u>
D Initial Closed-in Pressure	<u>226</u>	<u>P.S.I.</u>	Second Flow Pressure	<u>90</u>	<u>Mins. 75 Mins.</u>
E Second Initial Flow Pressure	<u>159</u>	<u>P.S.I.</u>	Final Closed-in Pressure	<u>30</u>	<u>Mins. 42 Mins.</u>
F Second Final Flow Pressure	<u>150</u>	<u>P.S.I.</u>			
G Final Closed-in Pressure	<u>212</u>	<u>P.S.I.</u>			
H Final Hydrostatic Mud	<u>2624</u>	<u>P.S.I.</u>			

PRESSURE BREAKDOWN

First Flow Pressure
 Breakdown: 6 Inc.
 of 5 mins. and a
 final inc. of 0 Min.

Initial Shut-In
 Breakdown: 10 Inc.
 of 3 mins. and a
 final inc. of 0 Min.

Second Flow Pressure
 Breakdown: 15 Inc.
 of 5 mins. and a
 final inc. of 0 Min.

Final Shut-In
 Breakdown: 14 Inc.
 of 3 mins. and a
 final inc. of 0 Min.

Point Mins.	First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1	<u>0</u>	<u>136</u>	<u>0</u>	<u>141</u>	<u>0</u>	<u>159</u>	<u>0</u>	<u>150</u>
P 2	<u>5</u>	<u>139</u>	<u>3</u>	<u>161</u>	<u>5</u>	<u>152</u>	<u>3</u>	<u>174</u>
P 3	<u>10</u>	<u>141</u>	<u>6</u>	<u>173</u>	<u>10</u>	<u>148</u>	<u>6</u>	<u>182</u>
P 4	<u>15</u>	<u>142</u>	<u>9</u>	<u>179</u>	<u>15</u>	<u>146</u>	<u>9</u>	<u>185</u>
P 5	<u>20</u>	<u>142</u>	<u>12</u>	<u>186</u>	<u>20</u>	<u>145</u>	<u>12</u>	<u>188</u>
P 6	<u>25</u>	<u>142</u>	<u>15</u>	<u>194</u>	<u>25</u>	<u>145</u>	<u>15</u>	<u>190</u>
P 7	<u>30</u>	<u>141</u>	<u>18</u>	<u>202</u>	<u>30</u>	<u>145</u>	<u>18</u>	<u>193</u>
P 8			<u>21</u>	<u>211</u>	<u>35</u>	<u>145</u>	<u>21</u>	<u>195</u>
P 9			<u>24</u>	<u>215</u>	<u>40</u>	<u>145</u>	<u>24</u>	<u>198</u>
P10			<u>27</u>	<u>223</u>	<u>45</u>	<u>145</u>	<u>27</u>	<u>202</u>
P11			<u>30</u>	<u>226</u>	<u>50</u>	<u>143</u>	<u>30</u>	<u>203</u>
P12					<u>55</u>	<u>143</u>	<u>33</u>	<u>205</u>
P13					<u>60</u>	<u>142</u>	<u>36</u>	<u>208</u>
P14					<u>65</u>	<u>142</u>	<u>39</u>	<u>211</u>
P15					<u>70</u>	<u>150</u>	<u>42</u>	<u>212</u>
P16					<u>75</u>	<u>150</u>		
P17								
P18								
P19								
P20								



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET No 12127

P. O. BOX 1599 PHONE (316) 262-5861
WICHITA, KANSAS 67201

Elevation 2275 K.B Formation MISS. Eff. Pay Ft.

District Great Bend Date 5-19-81 Customer Order No.

COMPANY NAME J. Mark Richardson

ADDRESS 640 Century Plaza Bldg. 111 W. Douglas, Wichita, Ks 67201

LEASE AND WELL NO. #1 Bender "D" COUNTY Kiowa STATE Ks. Sec. 21 Twp 30s Rge 19w

Mail Invoice To Same As Above No. Copies Requested 5

Co. Name " Address " No. Copies Requested 5

Mail Charts To " Address " No. Copies Requested 5

Formation Test No. 2 Interval Tested from 5155 ft. to 5185 ft. Total Depth 5185 ft.

Packer Depth 5150 ft. Size 6 5/8 in. Packer Depth 5155 ft. Size 6 5/8 in.

Packer Depth ft. Size in. Packer Depth ft. Size in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 5175 ft. Recorder Number 3474 Cap. 3000

Bottom Recorder Depth (Outside) 5178 ft. Recorder Number 1049 Cap. 4250

Below Straddle Recorder Depth ft. Recorder Number Cap.

Drilling Contractor Gabbe-T-Jones Rig 9 Drill Collar Length 420 I. D. 2.7 in.

Mud Type Chemical Viscosity 62 Weight Pipe Length I. D. in.

Weight 9.5 Water Loss 14.8 cc. Drill Pipe Length 4706 I. D. 3.8 in.

Chlorides 25,000 P.P.M. Test Tool Length 29 ft. Tool Size 5200 in.

Jars: Make WTC Serial Number 403 Anchor Length 30 ft. Size 5300 in.

Did Well Flow? NO Reversed Out NO Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.

Main Hole Size 7 3/8 in. Tool Joint Size 42 FH in.

Blow:

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:

NO Packer Seat

Time On Location 9:00 A.M. Time Pick Up Tool 10:00 A.M. Time Off Location 3:00 P.M.

Time Set Packer(s) 11:00 A.M. Time Started Off Bottom 11:05 P.M. Maximum Temperature

Initial Hydrostatic Pressure (A) X 2670 P.S.I.

Initial Flow Period Minutes (B) P.S.I. to (C) P.S.I.

Initial Closed In Period Minutes (D) P.S.I.

Final Flow Period Minutes (E) P.S.I. to (F) P.S.I.

Final Closed In Period Minutes (G) P.S.I.

Final Hydrostatic Pressure (H) X 2639 P.S.I.

COMPANY TERMS

Western Testing Co., Inc. shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained directly or indirectly through the use of its equipment, of its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid at cost by the party for whom the test is made.

All charges subject to 12% interest after 60 days from date of invoice. Any expense incurred for collection will be added to the original amount.

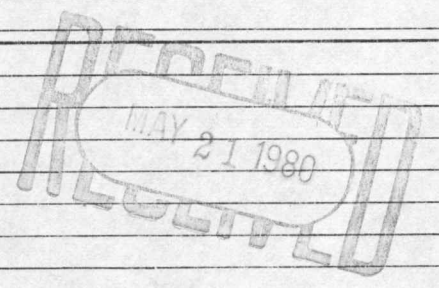
Test Approved By J. Mark Richardson
Signature of Customer or his authorized representative

Western Representative Louis Wanda Thank you

Please bill Louisa

FIELD INVOICE

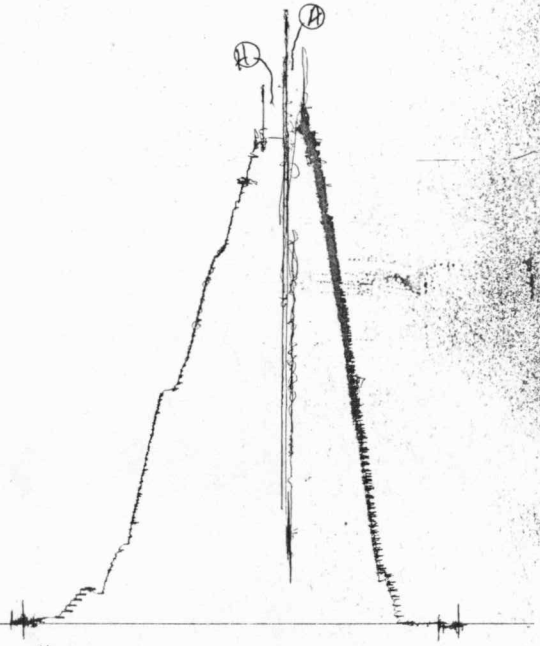
Open Hole Test	\$	<u> </u>
Misrun	\$	<u>400.00</u>
Straddle Test	\$	<u> </u>
Jars	\$	<u>300.00</u>
Selective Zone	\$	<u> </u>
Safety Joint	\$	<u>65.00</u>
Standby	\$	<u> </u>
Evaluation	\$	<u> </u>
Extra Packer	\$	<u> </u>
Circ. Sub.	\$	<u> </u>
Mileage	\$	<u> </u>
Fluid Sampler	\$	<u> </u>
Extra Charts	\$	<u> </u>
Insurance	\$	<u> </u>
TOTAL	\$	<u>765.00</u>



TKT # 12127

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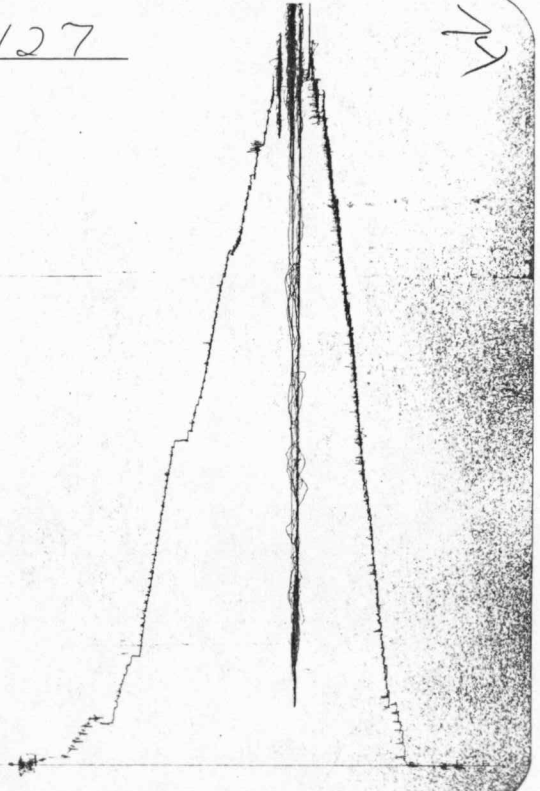
1049



TKT # 12127

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Company J. Mark Richardson Lease & Well No. Bender "D" #1
 Elevation 2275 Kelly Bushing Formation Mississippi Effective Pay - Ft. Ticket No. 12127
 Date 5/19/81 Sec. 21 Twp. 30S Range 19W County Kiowa State Kansas
 Test Approved by J. Mark Richardson Western Representative Denis Wondra

Formation Test No. 3 Interval Tested from 5155 ft. to 5185 ft. Total Depth 5185 ft.
 Packer Depth 5120 ft. Size 6 5/8 in. Packer Depth 5155 ft. Size 6 5/8 in.
 Packer Depth -- ft. Size - in. Packer Depth - 42 ft. Size - in.

Depth of Selective Zone Set -
 Top Recorder Depth (Inside) 5175 ft. Recorder Number 3474 Cap. 3000
 Bottom Recorder Depth (Outside) 5178 ft. Recorder Number 1049 Cap. 4250
 Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Gabbert-Jones Drilling Rig #9 K D Collar Length 420 I. D. 2.7 in.
 Mud Type chemical Viscosity 62 Weight Pipe Length - I. D. - in.
 Weight 9.5 Water Loss 14.8 cc. Drill Pipe Length 4706 I. D. 3.8 in.
 Chlorides 25,000 P.P.M. Test Tool Length 29 ft. Tool Size 5 1/2 OD in.
 Jars: Make WIC Serial Number 403 Anchor Length 30 ft. Size 5 1/2 OD in.
 Did Well Flow? No Reversed Out No Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.
 Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 FH in.

Blow: MISRUN

Recovered ft. of
 Recovered ft. of
 Recovered ft. of
 Recovered ft. of
 Recovered ft. of

Remarks: NO PACKER SEAT

Read Outside Chart

MISRUN

Time Set Packer(s) 11:00 ~~A.M.~~ P.M. Time Started Off Bottom 11:05 ~~A.M.~~ P.M. Maximum Temperature ?
 Initial Hydrostatic Pressure (A) 2670 P.S.I.
 Initial Flow Period (B) - Minutes P.S.I. to (C) - P.S.I.
 Initial Closed In Period (D) - Minutes P.S.I.
 Final Flow Period (E) - Minutes P.S.I. to (F) - P.S.I.
 Final Closed In Period (G) - Minutes P.S.I.
 Final Hydrostatic Pressure (H) 2639 P.S.I.



WESTERN TESTING CO., INC.
FORMATION TESTING

TICKET No 12128

P. O. BOX 1599 PHONE (316) 262-5861
WICHITA, KANSAS 67201

Elevation 2275 K.B. Formation Miss. Eff. Pay Ft.

District Great Bend Date 5-19-81 Customer Order No.

COMPANY NAME J. Mark Richardson

ADDRESS 640 Century Plaza, Bldg. 111, W. Douglas, Wichita, Ks. 67202

LEASE AND WELL NO #1 Bender "D" COUNTY Kiowa STATE Ks. Sec. 21 Twp 30S Rge 19W

Mail Invoice To Same As Above No. Copies Requested 5

Mail Charts To Co. Name Address No. Copies Requested 5

Formation Test No. 4 Interval Tested from 5165 ft. to 5195 ft. Total Depth 5195 ft.

Packer Depth 5160 ft. Size 6 5/8 in. Packer Depth 5165 ft. Size 6 5/8 in.

Packer Depth ft. Size in. Packer Depth ft. Size in.

Depth of Selective Zone Set

Top Recorder Depth (Inside) 5185 ft. Recorder Number 3474 Cap. 3000

Bottom Recorder Depth (Outside) 5188 ft. Recorder Number 1049 Cap. 4250

Below Straddle Recorder Depth ft. Recorder Number Cap.

Drilling Contractor Gabbert-Jones Rig 9 Drill Collar Length 420 I. D. 2.7 in.

Mud Type Chemical Viscosity 36 Weight Pipe Length I. D. in.

Weight 9.3 Water Loss 24.6 cc. Drill Pipe Length 4716 I. D. 3.8 in.

Chlorides 28,000 P.P.M. Test Tool Length 29 ft. Tool Size 6 3/4 in.

Jars: Make WTC Serial Number 403 Anchor Length 30 ft. Size 5200 in.

Did Well Flow? NO Reversed Out NO Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.

Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 in.

Blow: Fair, slightly decreasing throughout. 1" decreasing to few bubbles by end of formation flow period.

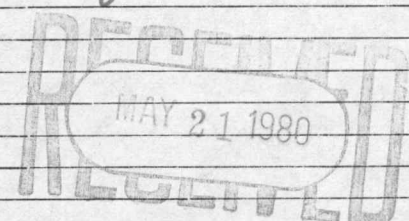
Recovered 360 ft. of Dry Mud

Recovered ft. of

Recovered ft. of

Recovered ft. of

Remarks:



Time On Location 9:00 A.M. Time Pick Up Tool 10:00 A.M. Time Off Location P.M.

Time Set Packer(s) 11:48 A.M. Time Started Off Bottom 2:50 A.M. Maximum Temperature 118 P.M.

Initial Hydrostatic Pressure (A) 2709 P.S.I.

Initial Flow Period Minutes 30 (B) 207 P.S.I. to (C) 215 P.S.I.

Initial Closed In Period Minutes 30 (D) 507 P.S.I.

Final Flow Period Minutes 90 (E) 223 P.S.I. to (F) 223 P.S.I.

Final Closed In Period Minutes 30 (G) 276 P.S.I.

Final Hydrostatic Pressure (H) 2709 P.S.I.

COMPANY TERMS

Western Testing Co., Inc. shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained directly or indirectly through the use of its equipment, of its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid at cost by the party for whom the test is made.

All charges subject to 12% interest after 60 days from date of invoice. Any expense incurred for collection will be added to the original amount.

Test Approved By J. Mark Richardson Signature of Customer or his authorized representative

Western Representative Dennis Wanda Thanks you

Please hold invoice

FIELD INVOICE

Table with 2 columns: Item, Amount. Includes Open Hole Test (\$775.00), Misrun, Straddle Test, Jars (\$300.00), Selective Zone, Safety Joint (\$65.00), Standby, Evaluation, Extra Packer, Circ. Sub., Mileage, Fluid Sampler, Extra Charts, Insurance, TOTAL (\$1140.00).

WESTERN TESTING CO., INC.
Pressure Data

Date 5-19
Recorder No. 3474
Clock No. _____

Test Ticket No. 12128
Location 5185 Ft.
Well Temperature 118 °F

Capacity 3000

Elevation 2275 K.B

Point	Pressure	P.S.I.
A Initial Hydrostatic Mud	<u>2698</u>	P.S.I.
B First Initial Flow Pressure	<u>205</u>	P.S.I.
C First Final Flow Pressure	<u>214</u>	P.S.I.
D Initial Closed-in Pressure	<u>503</u>	P.S.I.
E Second Initial Flow Pressure	<u>235</u>	P.S.I.
F Second Final Flow Pressure	<u>221</u>	P.S.I.
G Final Closed-in Pressure	<u>273</u>	P.S.I.
H Final Hydrostatic Mud	<u>2647</u>	P.S.I.

	Time Given	Time Computed
Open Tool	<u>11:48 A</u>	M
First Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
Initial Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
Second Flow Pressure	<u>90</u> Mins.	<u>90</u> Mins.
Final Closed-in Pressure	<u>30</u> Mins.	<u>33</u> Mins.

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>6</u> Inc.		Breakdown: <u>10</u> Inc.		Breakdown: <u>18</u> Inc.		Breakdown: <u>11</u> Inc.	
of <u>5</u> mins. and a		of <u>3</u> mins. and a		of <u>5</u> mins. and a		of <u>3</u> mins. and a	
final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.		final inc. of <u>0</u> Min.	
Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 0	<u>205</u>	0	<u>214</u>	0	<u>235</u>	0	<u>221</u>
P 2 5	<u>212</u>	3	<u>238</u>	5	<u>226</u>	3	<u>226</u>
P 3 10	<u>213</u>	6	<u>270</u>	10	<u>223</u>	6	<u>227</u>
P 4 15	<u>(</u>	9	<u>302</u>	15	<u>(</u>	9	<u>231</u>
P 5 20	<u>(</u>	12	<u>335</u>	20	<u>(</u>	12	<u>235</u>
P 6 25	<u>213</u>	15	<u>370</u>	25	<u>(</u>	15	<u>241</u>
P 7 30	<u>214</u>	18	<u>398</u>	30	<u>(</u>	18	<u>245</u>
P 8 35		21	<u>436</u>	35	<u>(</u>	21	<u>250</u>
P 9 40		24	<u>467</u>	40	<u>223</u>	24	<u>256</u>
P10 45		27	<u>492</u>	45	<u>221</u>	27	<u>264</u>
P11 50		30	<u>503</u>	50	<u>(</u>	30	<u>267</u>
P12 55		33		55	<u>(</u>	33	<u>273</u>
P13 60		36		60	<u>221</u>	36	
P14		39		65	<u>223</u>	39	
P15		42		70	<u>223</u>	42	
P16		45		75	<u>221</u>	45	
P17		48		80	<u>221</u>	48	
P18		51		85	<u>221</u>	51	
P19		54		90	<u>221</u>	54	
P20		57				57	
		60				60	

Company J. Mark Richardson Lease & Well No. Bender "D" #1
 Elevation 2275 Kelly Bushing Mississippi Formation Mississippi Effective Pay - Ft. Ticket No. 12128
 Date 5/19/81 Sec. 21 Twp 30S Range 19W County Kiowa State Kansas
 Test Approved by J. Mark Richardson Western Representative Denis Wondra

Formation Test No. 4 Interval Tested from 5165 ft. to 5195 ft. Total Depth 5195 ft.
 Packer Depth 5160 ft. Size 6 5/8 in. Packer Depth 5165 ft. Size 6 5/8 in.
 Packer Depth - ft. Size - in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -
 Top Recorder Depth (Inside) 5185 ft. Recorder Number 3474 Cap. 3000
 Bottom Recorder Depth (Outside) 5188 ft. Recorder Number 1049 Cap. 4250
 Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Gabbert-Jones Drilling Rig #9 Drill Collar Length 420 I. D. 2.7 in.
 Mud Type chemical Viscosity 36 Weight Pipe Length - I. D. - in.
 Weight 9.3 Water Loss 24.6 cc. Drill Pipe Length 4716 I. D. 3.8 in.
 Chlorides 28,000 P.P.M. Test Tool Length 29 ft. Tool Size 5 1/2 OD in.
 Jars: Make WTC Serial Number 403 Anchor Length 30 ft. Size 5 1/2 OD in.
 Did Well Flow? No Reversed Out No Surface Choke Size 3/4 in. Bottom Choke Size 3/4 in.
 Main Hole Size 7 7/8 in. Tool Joint Size 4 1/2 FH in.

Blow: Fair; slightly decreasing throughout initial flow period. One inch decreasing to few bubbles by end of final flow period.

Recovered 360 ft. of drilling mud
 Recovered ft. of
 Recovered ft. of
 Recovered ft. of
 Recovered ft. of

Remarks:

Time Set Packer(s) 11:48 ^{A.M.}/_{P.M.} Time Started Off Bottom 2:50 ^{A.M.}/_{P.M.} Maximum Temperature 118°
 Initial Hydrostatic Pressure (A) 2698 P.S.I.
 Initial Flow Period Minutes 30 (B) 205 P.S.I. to (C) 214 P.S.I.
 Initial Closed In Period Minutes 30 (D) 503 P.S.I.
 Final Flow Period Minutes 90 (E) 235 P.S.I. to (F) 221 P.S.I.
 Final Closed In Period Minutes 33 (G) 273 P.S.I.
 Final Hydrostatic Pressure (H) 2647 P.S.I.

WESTERN TESTING CO., INC.
Pressure Data

Date 5/19/81 Test Ticket No. 12128
 Recorder No. 3474 Capacity 3000 Location 5185 Ft.
 Clock No. - Elevation 2275 Kelly Bushing Well Temperature 118 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2698</u> P.S.I.	Open Tool	<u>11:48A</u> M	
B First Initial Flow Pressure	<u>205</u> P.S.I.	First Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>214</u> P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins.	<u>30</u> Mins.
D Initial Closed-in Pressure	<u>503</u> P.S.I.	Second Flow Pressure	<u>90</u> Mins.	<u>90</u> Mins.
E Second Initial Flow Pressure	<u>235</u> P.S.I.	Final Closed-in Pressure	<u>30</u> Mins.	<u>33</u> Mins.
F Second Final Flow Pressure	<u>221</u> P.S.I.			
G Final Closed-in Pressure	<u>273</u> P.S.I.			
H Final Hydrostatic Mud	<u>2647</u> P.S.I.			

PRESSURE BREAKDOWN

First Flow Pressure Breakdown: <u>6</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.	Initial Shut-In Breakdown: <u>10</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.	Second Flow Pressure Breakdown: <u>18</u> Inc. of <u>5</u> mins. and a final inc. of <u>0</u> Min.	Final Shut-In Breakdown: <u>11</u> Inc. of <u>3</u> mins. and a final inc. of <u>0</u> Min.
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Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.	
P 1	<u>0</u>	<u>205</u>	<u>0</u>	<u>214</u>	<u>0</u>	<u>235</u>	<u>0</u>	<u>221</u>
P 2	<u>5</u>	<u>212</u>	<u>3</u>	<u>238</u>	<u>5</u>	<u>226</u>	<u>3</u>	<u>226</u>
P 3	<u>10</u>	<u>213</u>	<u>6</u>	<u>270</u>	<u>10</u>	<u>223</u>	<u>6</u>	<u>227</u>
P 4	<u>15</u>	<u>213</u>	<u>9</u>	<u>302</u>	<u>15</u>	<u>223</u>	<u>9</u>	<u>231</u>
P 5	<u>20</u>	<u>213</u>	<u>12</u>	<u>335</u>	<u>20</u>	<u>223</u>	<u>12</u>	<u>235</u>
P 6	<u>25</u>	<u>213</u>	<u>15</u>	<u>370</u>	<u>25</u>	<u>223</u>	<u>15</u>	<u>241</u>
P 7	<u>30</u>	<u>214</u>	<u>18</u>	<u>398</u>	<u>30</u>	<u>223</u>	<u>18</u>	<u>245</u>
P 8			<u>21</u>	<u>436</u>	<u>35</u>	<u>223</u>	<u>21</u>	<u>250</u>
P 9			<u>24</u>	<u>467</u>	<u>40</u>	<u>223</u>	<u>24</u>	<u>256</u>
P10			<u>27</u>	<u>492</u>	<u>45</u>	<u>221</u>	<u>27</u>	<u>264</u>
P11			<u>30</u>	<u>503</u>	<u>50</u>	<u>221</u>	<u>30</u>	<u>267</u>
P12					<u>55</u>	<u>221</u>	<u>33</u>	<u>273</u>
P13					<u>60</u>	<u>221</u>		
P14					<u>65</u>	<u>223</u>		
P15					<u>70</u>	<u>223</u>		
P16					<u>75</u>	<u>221</u>		
P17					<u>80</u>	<u>221</u>		
P18					<u>85</u>	<u>221</u>		
P19					<u>90</u>	<u>221</u>		
P20								

TKT # 12128
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