

Company Mid Continent Energy Corporation Lease & Well No. Todd #1
 Elevation 1886 Ground Level Formation Pawnee Effective Pay ----- Ft. Ticket No. 3500
 Date 2/13/80 Sec. 12 Twp. 33S Range 18W County Comanche State Kansas
 Test Approved by --- Western Representative Mike Tritt

Formation Test No. 1 Interval Tested from 4979 ft. to 5015 ft. Total Depth 5015 ft.
 Packer Depth 4974 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
 Packer Depth 4979 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -
 Top Recorder Depth (Inside) 4986 ft. Recorder Number 3354 Cap. 4200
 Bottom Recorder Depth (Outside) 4989 ft. Recorder Number 2605 Cap. 4150
 Below Straddle Recorder Depth --- ft. Recorder Number - Cap. -

Drilling Contractor Slawson Drilling Rig #5 Drill Collar Length 442 I. D. 2 1/2 in.
 Mud Type drispac Viscosity 46 Weight Pipe Length 197 I. D. 3.8 in.
 Weight 9.0 Water Loss 19.8 cc. Drill Pipe Length 4350 I. D. 3.8 in.
 Chlorides 14,000 P.P.M. Test Tool Length 30 ft. Tool Size 5 1/2 OD in.
 Jars: Make WIC Serial Number 407 Anchor Length 36 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: Weak blow increasing to fair blow on first period. Fair blow decreasing to very weak blow on second flow period.

Recovered 280 ft. of slightly gas cut mud
 Recovered ft. of
 Recovered ft. of
 Recovered ft. of
 Recovered ft. of

Remarks: Flushed tool once on first flow period. Slipped tool around twenty to twenty-five feet.

Time Set Packer(s) 9:15 ~~P.M.~~ A.M. Time Started Off Bottom 11:35 ~~P.M.~~ A.M. Maximum Temperature 124°
 Initial Hydrostatic Pressure (A) 2773 P.S.I.
 Initial Flow Period Minutes 45 (B) 124 P.S.I. to (C) 133 P.S.I.
 Initial Closed In Period Minutes 36 (D) 1099 P.S.I.
 Final Flow Period Minutes 30 (E) 150 P.S.I. to (F) 153 P.S.I.
 Final Closed In Period Minutes 33 (G) 1156 P.S.I.
 Final Hydrostatic Pressure (H) 2377 P.S.I.

WESTERN TESTING CO., INC.
Pressure Data

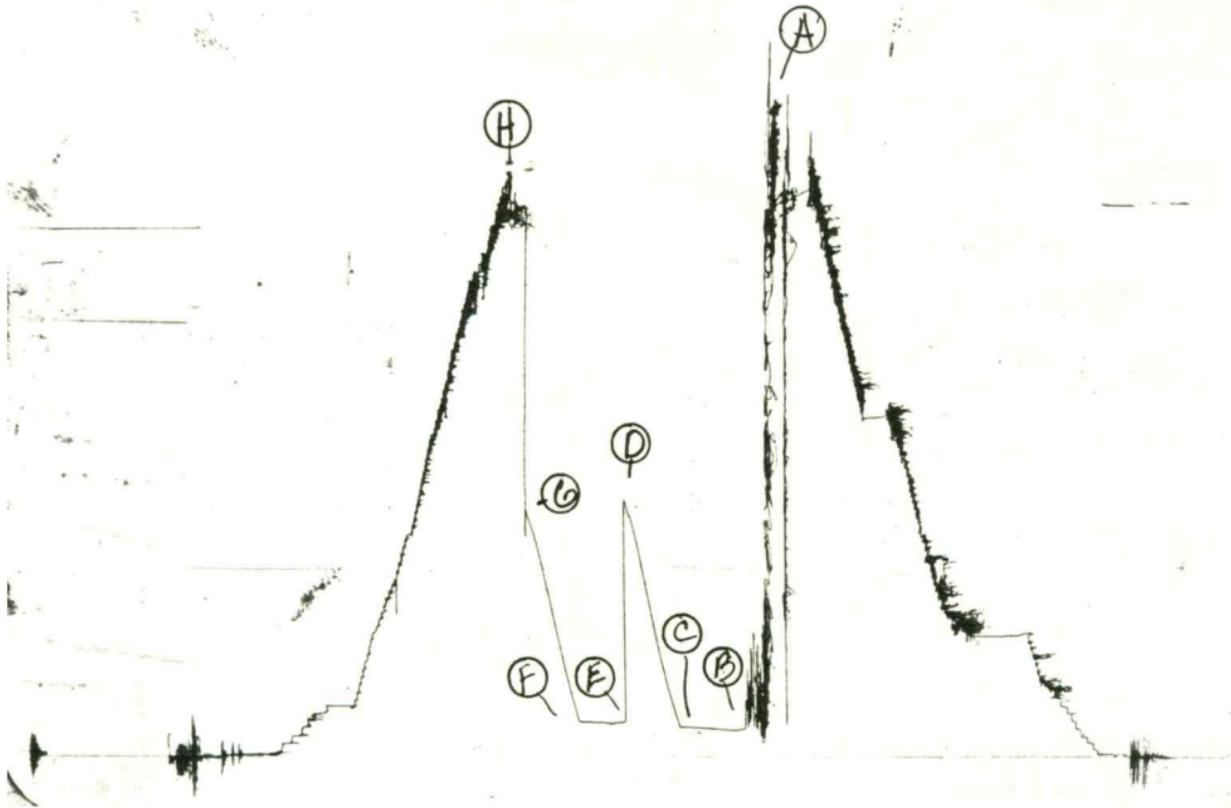
Date 2/13/80 Test Ticket No. 3500
 Recorder No. 3354 Capacity 4200 Location 4986 Ft.
 Clock No. --- Elevation 1886 Ground Level Well Temperature 124 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2773</u> P.S.I.	Open Tool	<u>9:15A</u> M	
B First Initial Flow Pressure	<u>124</u> P.S.I.	First Flow Pressure	<u>45</u> Mins.	<u>45</u> Mins.
C First Final Flow Pressure	<u>133</u> P.S.I.	Initial Closed-in Pressure	<u>30</u> Mins.	<u>36</u> Mins.
D Initial Closed-in Pressure	<u>1099</u> P.S.I.	Second Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
E Second Initial Flow Pressure	<u>150</u> P.S.I.	Final Closed-in Pressure	<u>30</u> Mins.	<u>33</u> Mins.
F Second Final Flow Pressure	<u>153</u> P.S.I.			
G Final Closed-in Pressure	<u>1156</u> P.S.I.			
H Final Hydrostatic Mud	<u>2377</u> P.S.I.			

PRESSURE BREAKDOWN

Point Mins.	First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
	Breakdown:	Inc.	Breakdown:	Inc.	Breakdown:	Inc.	Breakdown:	Inc.
	of <u>9</u> mins. and a final inc. of <u>0</u> Min.		of <u>12</u> mins. and a final inc. of <u>0</u> Min.		of <u>6</u> mins. and a final inc. of <u>0</u> Min.		of <u>11</u> mins. and a 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>124</u>	<u>0</u>	<u>133</u>	<u>0</u>	<u>150</u>	<u>0</u>	<u>153</u>	
P 2 <u>5</u>	<u>124</u>	<u>3</u>	<u>190</u>	<u>5</u>	<u>150</u>	<u>3</u>	<u>222</u>	
P 3 <u>10</u>	<u>118</u>	<u>6</u>	<u>257</u>	<u>10</u>	<u>149</u>	<u>6</u>	<u>300</u>	
P 4 <u>15</u>	<u>118</u>	<u>9</u>	<u>335</u>	<u>15</u>	<u>151</u>	<u>9</u>	<u>378</u>	
P 5 <u>20</u>	<u>122</u>	<u>12</u>	<u>411</u>	<u>20</u>	<u>151</u>	<u>12</u>	<u>459</u>	
P 6 <u>25</u>	<u>124</u>	<u>15</u>	<u>500</u>	<u>25</u>	<u>152</u>	<u>15</u>	<u>551</u>	
P 7 <u>30</u>	<u>128</u>	<u>18</u>	<u>595</u>	<u>30</u>	<u>153</u>	<u>18</u>	<u>643</u>	
P 8 <u>35</u>	<u>130</u>	<u>21</u>	<u>690</u>			<u>21</u>	<u>736</u>	
P 9 <u>40</u>	<u>132</u>	<u>24</u>	<u>785</u>			<u>24</u>	<u>819</u>	
P10 <u>45</u>	<u>133</u>	<u>27</u>	<u>886</u>			<u>27</u>	<u>907</u>	
P11		<u>30</u>	<u>977</u>			<u>30</u>	<u>983</u>	
P12		<u>33</u>	<u>1040</u>			<u>33</u>	<u>1156</u>	
P13		<u>36</u>	<u>1099</u>					
P14								
P15								
P16								
P17								
P18								
P19								
P20								

TR4 # 3500
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Company Mid Continent Energy Corporation Lease & Well No. Todd #1
 Elevation 1886 Ground Level Mississippi Formation Mississippi Effective Pay ---- Ft. Ticket No. 5588
 Date 2/14/80 Sec. 12 Twp. 33S Range 18W County Comanche State Kansas

Test Approved by Klaus Kollmai Western Representative Dave Sloan

Formation Test No. 2 Interval Tested from 5079 ft. to 5105 ft. Total Depth 5105 ft.
 Packer Depth 5074 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
 Packer Depth 5079 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -
 Top Recorder Depth (Inside) 5093 ft. Recorder Number 2604 Cap 4150
 Bottom Recorder Depth (Outside) 5096 ft. Recorder Number 6246 Cap 5200
 Below Straddle Recorder Depth - ft. Recorder Number - Cap -

Drilling Contractor Slawson Drilling Rig #5 Drill Collar Length 436 I. D. 2.2 in.
 Mud Type drispac Viscosity 46 Weight Pipe Length 155 I. D. 3.2 in.
 Weight 9.0 Water Loss 24.4 cc. Drill Pipe Length 4460 I. D. 3.8 in.
 Chlorides 14,000 P.P.M. Test Tool Length 28 ft. Tool Size 5 1/2 OD in.
 Jars: Make WTC Serial Number 405 Anchor Length 26 ft. Size 5 1/2 OD in.
 Did Well Flow? - Reversed Out - 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: _____

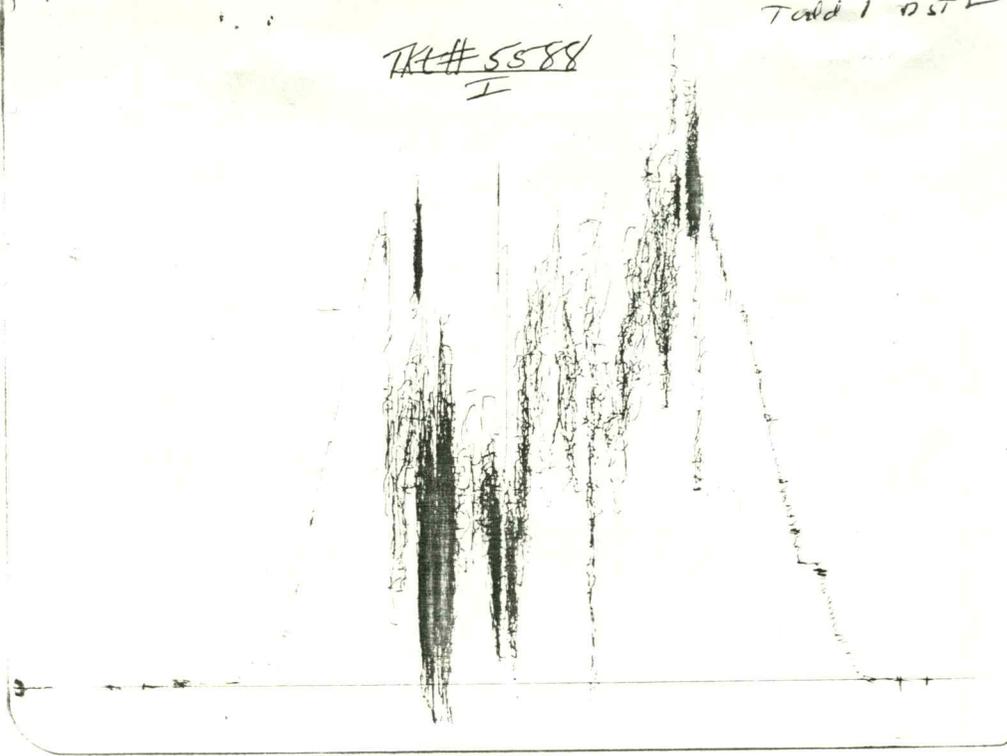
Recovered _____ ft. of Spudded tool forty feet to bottom; tool opened trying to get to
bottom. Tore up both packers. Could not set packers.
 Recovered _____ ft. of _____
 Recovered _____ ft. of _____ MISRUN
 Recovered _____ ft. of _____

Remarks: _____

Time Set Packer(s)	A.M. P.M.	Time Started Off Bottom	A.M. P.M.	Maximum Temperature
Initial Hydrostatic Pressure		(A)	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)	P.S.I.	

TRT# 5588
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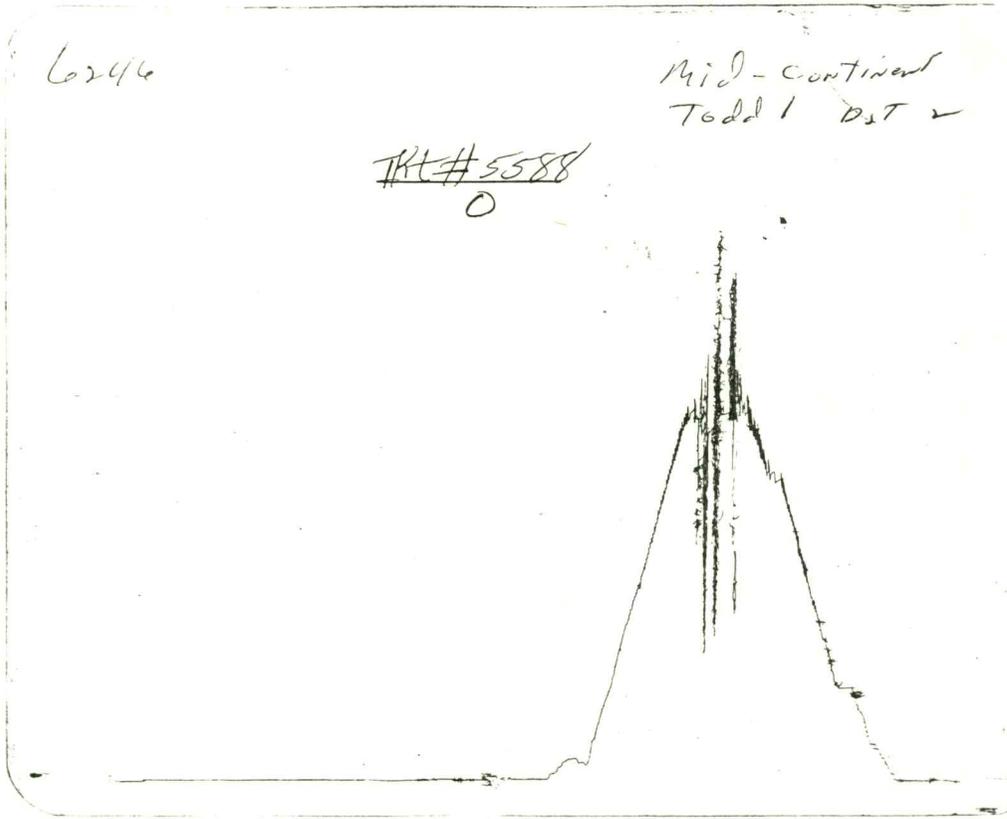
Todd 1 DST ✓



6246

Mid-Continent
Todd 1 DST ✓

TRT# 5588
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Company Mid Continent Energy Corporation Lease & Well No. Todd #1
 Elevation 1886 Ground Level Mississippi Effective Pay --- Ft. Ticket No. 5589
 Date 2/16/80 Sec. 12 Twp. 33S Range 18W County Comanche State Kansas

Test Approved by --Hillman Western Representative Dave Sloan

Formation Test No. 3 Interval Tested from 5068 ft. to 5105 ft. Total Depth 5105 ft.
 Packer Depth 5063 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
 Packer Depth 5068 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.

Depth of Selective Zone Set -
 Top Recorder Depth (Inside) 5092 ft. Recorder Number 2604 Cap. 4150
 Bottom Recorder Depth (Outside) 5095 ft. Recorder Number 6246 Cap. 5200
 Below Straddle Recorder Depth - ft. Recorder Number - Cap. -

Drilling Contractor Slawson Drilling Rig #5 Drill Collar Length 436 I. D. 2.2 in.
 Mud Type drispac Viscosity 45 Weight Pipe Length 155 I. D. 3.2 in.
 Weight 8.9 Water Loss 40.2 cc. Drill Pipe Length 4449 I. D. 3.8 in.
 Chlorides 22,000 P.P.M. Test Tool Length 28 ft. Tool Size 5 1/2 OD in.
 Jars: Make WTC Serial Number 405 Anchor Length 37 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: Weak blow throughout both flow periods.

Recovered 190 ft. of gas cut drilling mud Chlorides 22,000 ppm
 Recovered ft. of
 Recovered ft. of
 Recovered ft. of
 Recovered ft. of

Remarks:

Time Set Packer(s) 8:00 A.M. Time Started Off Bottom 12:30 A.M. Maximum Temperature 124°
P.M. P.M.
 Initial Hydrostatic Pressure (A) 2504 P.S.I.
 Initial Flow Period Minutes 30 (B) 85 P.S.I. to (C) 65 P.S.I.
 Initial Closed In Period Minutes 60 (D) 297 P.S.I.
 Final Flow Period Minutes 60 (E) 96 P.S.I. to (F) 90 P.S.I.
 Final Closed In Period Minutes 120 (G) 502 P.S.I.
 Final Hydrostatic Pressure (H) 2456 P.S.I.

WESTERN TESTING CO., INC.

Pressure Data

Date 2-16-80 Test Ticket No. 5589
 Recorder No. 2604 Capacity 4150 Location 5105 Ft.
 Clock No. - Elevation 1886 Ground Level Well Temperature 124 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	2504	P.S.I.	8:00A.	M
B First Initial Flow Pressure	85	P.S.I.	30	30
C First Final Flow Pressure	65	P.S.I.	60	60
D Initial Closed-in Pressure	297	P.S.I.	60	60
E Second Initial Flow Pressure	96	P.S.I.	120	120
F Second Final Flow Pressure	90	P.S.I.		
G Final Closed-in Pressure	502	P.S.I.		
H Final Hydrostatic Mud	2456	P.S.I.		

PRESSURE BREAKDOWN

First Flow Pressure		Initial Shut-In		Second Flow Pressure		Final Shut-In	
Breakdown: <u>6</u> Inc.		Breakdown: <u>20</u> Inc.		Breakdown: <u>12</u> Inc.		Breakdown: <u>40</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	0	65	0	96	0	90
P 2	5	3	70	5	85	3	95
P 3	10	6	77	10	83	6	102
P 4	15	9	83	15	83	9	111
P 5	20	12	96	20	83	12	119
P 6	25	15	107	25	83	15	128
P 7	30	18	119	30	83	18	137
P 8		21	133	35	84	21	147
P 9		24	147	40	84	24	157
P10		27	160	45	84	27	164
P11		30	173	50	86	30	175
P12		33	185	55	88	33	185
P13		36	200	60	90	36	196
P14		39	215			39	207
P15		42	228			42	216
P16		45	241			45	226
P17		48	254			48	237
P18		51	267			51	247
P19		54	283			54	257
P20		57	291			57	267
		60	297			60	277

WESTERN TESTING CO., INC.

Pressure Data

Date 2-16-80 Test Ticket No. 5589
 Recorder No. 2604 Capacity 4150 Location 5105 Ft.
 Clock No. - Elevation 1886 Ground Level Well Temperature 124 °F

Point	Pressure		Time Given	Time Computed
A Initial Hydrostatic Mud	<u>2504</u> P.S.I.	Open Tool	<u>8:00A.</u> M	
B First Initial Flow Pressure	<u>85</u> P.S.I.	First Flow Pressure	<u>30</u> Mins.	<u>30</u> Mins.
C First Final Flow Pressure	<u>65</u> P.S.I.	Initial Closed-in Pressure	<u>60</u> Mins.	<u>60</u> Mins.
D Initial Closed-in Pressure	<u>297</u> P.S.I.	Second Flow Pressure	<u>60</u> Mins.	<u>60</u> Mins.
E Second Initial Flow Pressure	<u>96</u> P.S.I.	Final Closed-in Pressure	<u>120</u> Mins.	<u>120</u> Mins.
F Second Final Flow Pressure	<u>90</u> P.S.I.			
G Final Closed-in Pressure	<u>502</u> P.S.I.			
H Final Hydrostatic Mud	<u>2456</u> P.S.I.			

PRESSURE BREAKDOWN

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

Initial Shut-In
 Breakdown: 20 Inc.
 of 3 mins. and a
 final inc. of 0 Min.

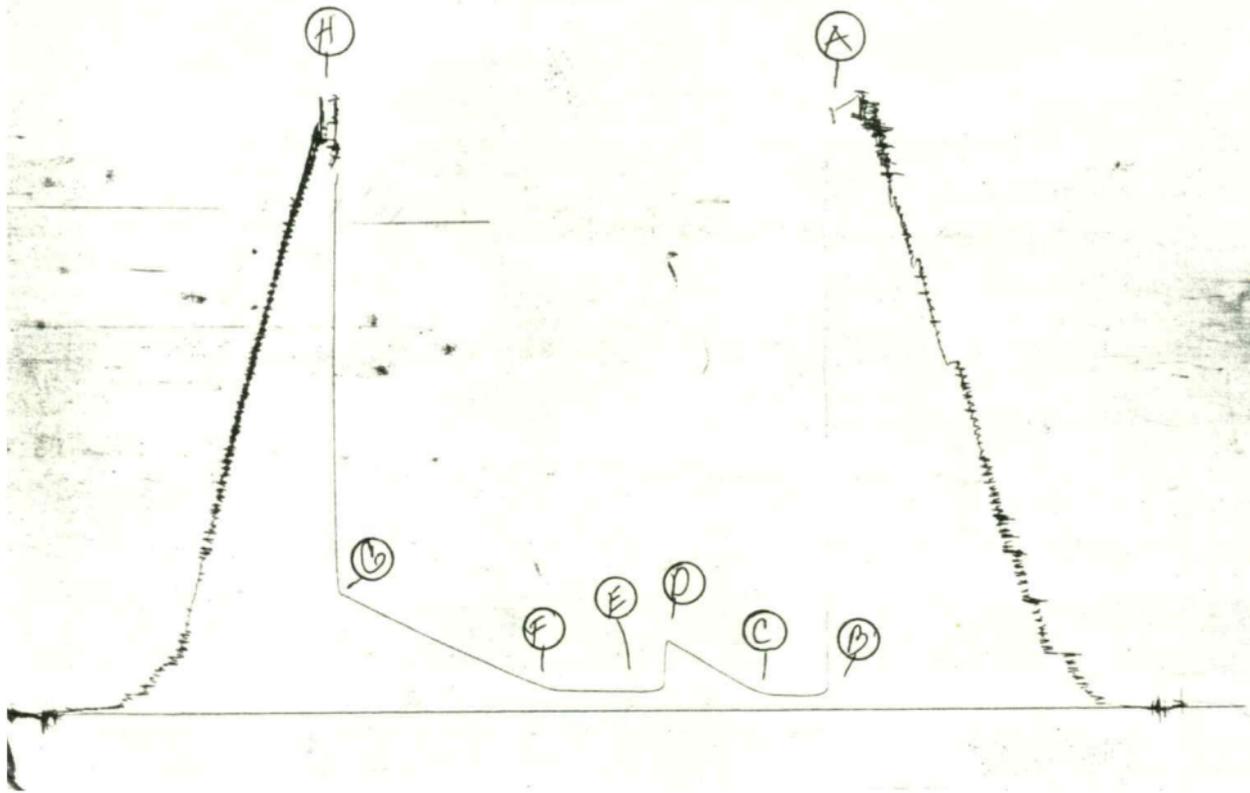
Second Flow Pressure
 Breakdown: 12 Inc.
 of 5 mins. and a
 final inc. of 0 Min.

Final Shut-In
 Breakdown: 40 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						63	288
P 2						66	299
P 3						69	310
P 4						72	318
P 5						75	329
P 6						78	340
P 7						81	352
P 8						84	362
P 9						87	374
P10						90	386
P11						93	398
P12						96	408
P13						99	417
P14						102	429
P15						105	442
P16						108	457
P17						111	467
P18						114	476
P19						117	488
P20						120	502

Todd #1 Oct 3

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Company Mid Continent Energy Corporation Lease & Well No. Todd #1
 Elevation 1886 Ground Level Formation Dennis Effective Pay - Ft. Ticket No. 5621
 Date 2/19/80 Sec. 12 Twp. 33S Range 18W County Comanche State Kansas

Test Approved by -- Western Representative Rod Tritt

Formation Test No. 3 4 Interval Tested from 4700 ft. to 4750 ft. Total Depth 5240 ft.
 Packer Depth 4695 ft. Size 6 3/4 in. Packer Depth 4750 ft. Size 6 3/4 in.
 Packer Depth 4700 ft. Size 6 3/4 in. Packer Depth - ft. Size - in.
 Depth of Selective Zone Set 4850

Top Recorder Depth (Inside) 4702 ft. Recorder Number 1562 Cap. 3150
 Bottom Recorder Depth (Outside) 4705 ft. Recorder Number 4332 Cap. 4200
 Below Straddle Recorder Depth 4758 ft. Recorder Number 2606 Cap. 4150

Drilling Contractor Slawson Drilling Rig #5 Drill Collar Length 245 I. D. 2 1/4 in.
 Mud Type premix-starch Viscosity 45 Weight Pipe Length 93 I. D. 2 1/2 in.
 Weight 8.9 Water Loss 20.2 cc. Drill Pipe Length 4360 I. D. 3.8 in.
 Chlorides 28,000 P.P.M. Test Tool Length 28 ft. Tool Size 5 1/2 OD in.
 Jars: Make WTC Serial Number 408 Anchor Length 26 + W.P. 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 5 1/2 FH in.

Blow: Weak blow on initial flow period;died in four minutes.
Weak blow on final flow period;died in two minutes.

Recovered 240 ft. of water cut mud chlorides 68,000 ppm
 Recovered ft. of
 Recovered ft. of
 Recovered ft. of
 Recovered ft. of

Remarks: READ OUTSIDE RECORDER

Time Set Packer(s) 8:10 ~~P.M.~~ ^{A.M.} Time Started Off Bottom 10:10 ~~P.M.~~ ^{A.M.} Maximum Temperature 126°
 Initial Hydrostatic Pressure (A) 2370 P.S.I.
 Initial Flow Period Minutes 30 (B) 75 P.S.I. to (C) 71 P.S.I.
 Initial Closed In Period Minutes 33 (D) 1722 P.S.I.
 Final Flow Period Minutes 30 (E) 142 P.S.I. to (F) 147 P.S.I.
 Final Closed In Period Minutes 33 (G) 1697 P.S.I.
 Final Hydrostatic Pressure (H) 2362 P.S.I.

WESTERN TESTING CO., INC.

Pressure Data

Date 2/19/80 Test Ticket No. 5621
 Recorder No. 4332 Capacity 4200 Location 4705 Ft.
 Clock No. ----- Elevation 1886 Ground Level Well Temperature 126 °F

Point	Pressure			Time Given	Time Computed
A Initial Hydrostatic Mud	2370	P.S.I.	Open Tool	8:10A	M
B First Initial Flow Pressure	75	P.S.I.	First Flow Pressure	30	Mins. 30 Mins.
C First Final Flow Pressure	71	P.S.I.	Initial Closed-in Pressure	30	Mins. 33 Mins.
D Initial Closed-in Pressure	1722	P.S.I.	Second Flow Pressure	30	Mins. 30 Mins.
E Second Initial Flow Pressure	142	P.S.I.	Final Closed-in Pressure	30	Mins. 33 Mins.
F Second Final Flow Pressure	147	P.S.I.			
G Final Closed-in Pressure	1697	P.S.I.			
H Final Hydrostatic Mud	2362	P.S.I.			

PRESSURE BREAKDOWN

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

Initial Shut-In
 Breakdown: 11 Inc.
 of 3 mins. and a
 final inc. of 0 Min.

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

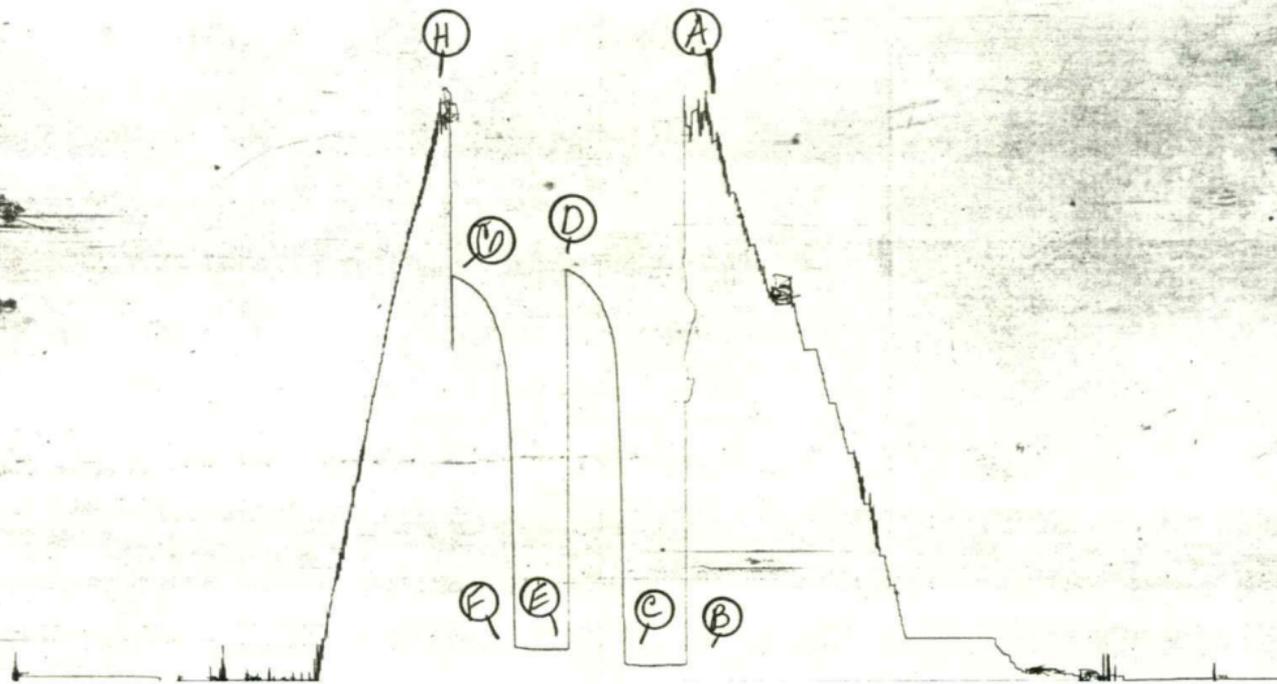
Final Shut-In
 Breakdown: 11 Inc.
 of 3 mins. and a
 final inc. of 0 Min.

Point Mins.	Press.	Point Minutes	Press.	Point Minutes	Press.	Point Minutes	Press.
P 1 <u>0</u>	<u>75</u>	<u>0</u>	<u>71</u>	<u>0</u>	<u>142</u>	<u>0</u>	<u>147</u>
P 2 <u>5</u>	<u>69</u>	<u>3</u>	<u>822</u>	<u>5</u>	<u>136</u>	<u>3</u>	<u>966</u>
P 3 <u>10</u>	<u>69</u>	<u>6</u>	<u>1328</u>	<u>10</u>	<u>136</u>	<u>6</u>	<u>1306</u>
P 4 <u>15</u>	<u>67</u>	<u>9</u>	<u>1470</u>	<u>15</u>	<u>136</u>	<u>9</u>	<u>1455</u>
P 5 <u>20</u>	<u>66</u>	<u>12</u>	<u>1544</u>	<u>20</u>	<u>136</u>	<u>12</u>	<u>1515</u>
P 6 <u>25</u>	<u>67</u>	<u>15</u>	<u>1597</u>	<u>25</u>	<u>143</u>	<u>15</u>	<u>1566</u>
P 7 <u>30</u>	<u>71</u>	<u>18</u>	<u>1631</u>	<u>30</u>	<u>147</u>	<u>18</u>	<u>1604</u>
P 8 _____	_____	<u>21</u>	<u>1659</u>	_____	_____	<u>21</u>	<u>1631</u>
P 9 _____	_____	<u>24</u>	<u>1686</u>	_____	_____	<u>24</u>	<u>1650</u>
P10 _____	_____	<u>27</u>	<u>1699</u>	_____	_____	<u>27</u>	<u>1665</u>
P11 _____	_____	<u>30</u>	<u>1712</u>	_____	_____	<u>30</u>	<u>1680</u>
P12 _____	_____	<u>33</u>	<u>1722</u>	_____	_____	<u>33</u>	<u>1697</u>
P13 _____	_____	_____	_____	_____	_____	_____	_____
P14 _____	_____	_____	_____	_____	_____	_____	_____
P15 _____	_____	_____	_____	_____	_____	_____	_____
P16 _____	_____	_____	_____	_____	_____	_____	_____
P17 _____	_____	_____	_____	_____	_____	_____	_____
P18 _____	_____	_____	_____	_____	_____	_____	_____
P19 _____	_____	_____	_____	_____	_____	_____	_____
P20 _____	_____	_____	_____	_____	_____	_____	_____

H35A

1251 J

TR # 5621
0.



2606 DST #3

TRK #5621
Below Straddle

