15-179-20633

SUPERIOR TESTERS

368 West Second, Hoisington, Kansas

23-9s-27w

COMPANY F. & M. Oil Co. STATE Kansas COUNTY Sheridan

LEASE & WELL NO. Richards # 1 ELEVATION 2703 KB. DATE 12/9/81 FORMATION TESTED Kansas City

SEC 23 TWP 9 RANGE 27 INTERVAL TESTED 3825 TO 3875 TOTAL DEPTH 3875

TEST NO. #1 O.K. yes TOP PACKER DEPTH 3820 FT. BOTTOM PACKER DEPTH 3825 FT. PACKER SIZE 6 & 3/4

STRADDLE no CONV. yes TOOL SIZE 5½ OD. TOOL JOINT SIZE 4½ FH. ANCHOR LENGTH 50 FT.

HOLE SIZE 7 & 7/8 EXTRA EQUIPMENT none SURFACE CHOKE SIZE ½ IN. BOTTOM CHOKE SIZE ½ IN.

REVERSED OUT no VICOSITY 44 WEIGHT 9.5 DUAL PACKERS yes DID PACKER HOLD yes DID TOOL PLUG no

DRILLING CONTRACTOR Abercrombie # 10

TOOL JOINT SIZE 4" FH. IN. LENGTH DRILL PIPE 2997 FT. I.D. DRILL PIPE 3.3 IN.

TOOL JOINT SIZE 4"FH. IN. LENGTH WEIGHT PIPE 807 FT. I.D. WEIGHT PIPE 3.2 IN.

TOOL JOINT SIZE IN. LENGTH DRILL COLLARS FT. I.D. DRILL COLLARS IN.

TOOL OPEN I.F.P. FROM 9:10 a. m to 9:40 a. m Hr. 30 min From (B) 73 P.S.I. to (C) 155 P.S.I.

TOOL CLOSED I.C.I.P. FROM 9:40 a. m to 10:40 a. Hr. 60 min (O) 1220 P.S.I.

TOOL OPEN F.F.P. FROM 10:40 a. m to 11:10 a. m Hr. 30 min From (E) 192 P.S.I. to (F) 265 P.S.I.

TOOL CLOSED F.C.I.P. FROM 11:10 a. m to 12:10 p. m Hr. 60 min (G) 1220 P.S.I.

INITIAL HYDROSTATIC PRESSURE (A) 1968 P.S.I. FINAL HYDROSTATIC PRESSURE (H) 1940 MAXIMUM TEMPERATURE 112 °F

BLOW Good blow 1st opening.

Strong blow 2nd opening.

RECOVERY - TOTAL FEET 480

RECOVERED 120 FEET OF Slightly Oil specked muddy water.

RECOVERED 360 FEET OF Muddy water.

RECOVERED FEET OF

RECOVERED FEET OF

RECOVERED FEET OF

RECOVERED FEET OF

RECOVERED FEET OF

RECOVERED FEET OF

RECOVERED FEET OF

RECOVERED FEET OF

RECOVERED FEET OF

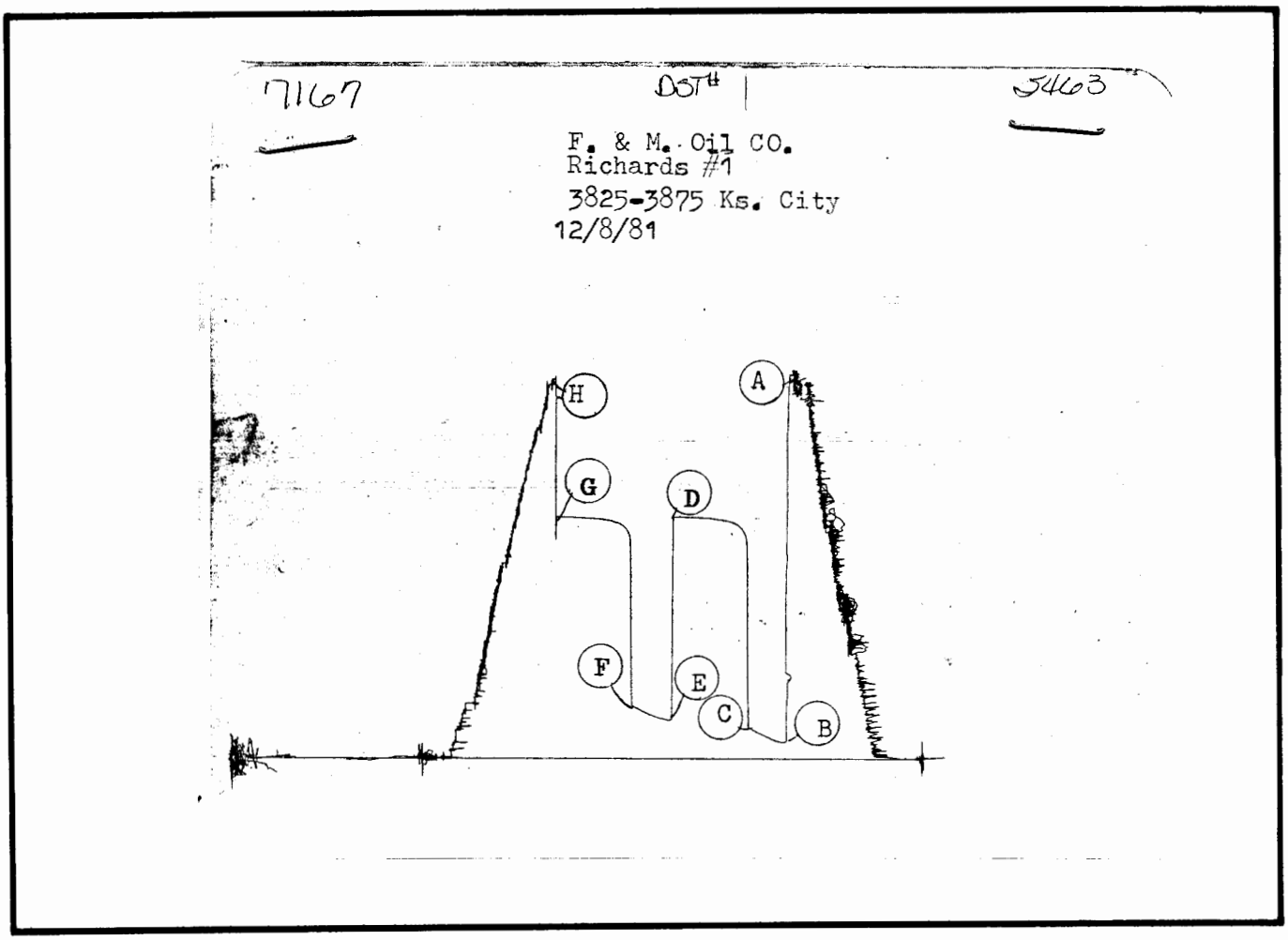
RECOVERED FEET OF

RECOVERED FEET OF

REMARKS None.

TICKET NO.

WITNESSED BY: Mike Spain TOOL OPERATOR: Kevin Riegel



This is an actual photograph of recorder chart.

POINT		PRESSURE FIELD READING	PRESSURE OFFICE READING	
(A)	Initial Hydrostatic Mud	1968	1959	P.S.I.
(B)	First Initial Flow Pressure	73	82	P.S.I.
(C)	First Final Flow Pressure	155 1220	155 1229	P.S.I.
(D)	Initial Closed-in Pressure			P.S.I.
(E)	Second Initial Flow Pressure	192	192	P.S.I.
(F)	Second Final Flow Pressure	265	269	P.S.I.
(G)	Final Closed-in Pressure	1220	1229	P.S.I.
(H)	Final Hydrostatic Mud	1940	1931	P.S.I.

COMPANY F. & M. Oil Company LEASE-WELL NO. Richards #1 SEC. 23 TWP. 9 RGE. 27 TEST NO. #1 DATE 12/8/81

SUPERIOR TESTERS

368 West Second, Hoisington, Kansas

COMPANY F. & M. Oil COmpany STATE Kansas COUNTY Sheridan

LEASE & WELL NO. Richards # 1 ELEVATION 2703 KB. DATE 12/9/81 FORMATION TESTED Kansas City

SEC 23 TWP 9 RANGE 27 INTERVAL TESTED 3879 TO 3950 TOTAL DEPTH 3950

TEST NO. #2 D.K. yes TOP PACKER DEPTH 3874 FT. BOTTOM PACKER DEPTH 3879 FT. PACKER SIZE 6 & 3/4

STRADDLE no CONV. yes TOOL SIZE 5½ OD. TOOL JOINT SIZE 4½ FH. ANCHOR LENGTH 71 FT.

HOLE SIZE 7 & 7⅞ EXTRA EQUIPMENT none SURFACE CHOKE SIZE ½ IN. BOTTOM CHOKE SIZE ½ IN.

REVERSED OUT no VICOSITY 49 WEIGHT 9.5 DUAL PACKERS yes DID PACKER HOLD yes DID TOOL PLUG no

DRILLING CONTRACTOR Abercrombie # 10

TOOL JOINT SIZE 4"FH. IN. LENGTH DRILL PIPE 3069 FT. I.D. DRILL PIPE 3.3 IN.

TOOL JDINT SIZE 4"FH. IN. LENGTH WEIGHT PIPE 807 FT. I.D. WEIGHT PIPE 3.2 IN.

TOOL JOINT SIZE IN. LENGTH DRILL COLLARS FT. I.D. DRILL COLLARS IN.

TOOL OPEN I.F.P. FROM 3:55 a.m to 4:25 a.m Hr. 30 min From (B) 302 P.S.I. to (C) 1018 P.S.I.

TOOL CLOSED I.C.I.P. FROM 4:25 a.m to 4:55 a. Hr. 30 min (D) 1266 P.S.I.

TOOL OPEN F.F.P. FROM 4:55 a.m to 5:25 a.m Hr. 30 min From (E) 1128 P.S.I. to (F) 1220 P.S.I.

TOOL CLOSED F.C.I.P. FROM 5:25 a.m to 5:55 a.m Hr. 30 min (G) 1266 P.S.I.

INITIAL HYDROSTATIC PRESSURE (A) 1986 P.S.I. FINAL HYDROSTATIC PRESSURE (H) 1958 MAXIMUM TEMPERATURE 116 °F

BLOW Strong blow 1st opening.

Strong blow 2nd opening.

RECOVERY - TOTAL FEET 2580ft.

RECOVERED 2580 FFET OF Muddy salt water.

RECOVERED FEET OF

RECOVERED FEET OF

RECOVERED FEET OF

RECOVERED FEET OF

RECOVERED FEET OF

RECOVERED FEET OF

RECOVERED FEET OF

RECOVERED FEET OF

RECOVERED FEET OF

RECOVERED FEET OF

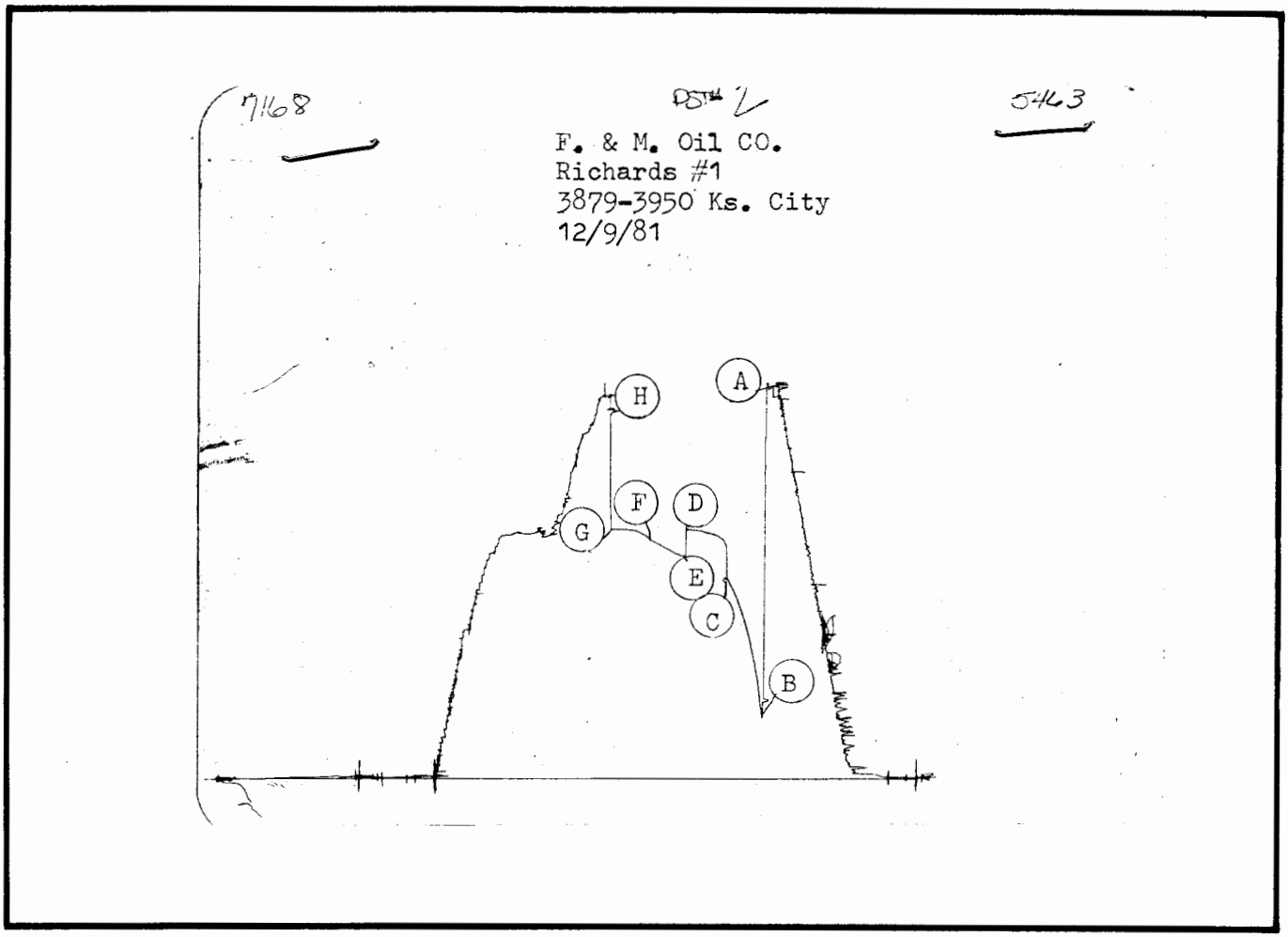
RECOVERED FEET OF

RECOVERED FEET OF

REMARKS Circ Pin $ 35.00

TICKET NO. 7168

WITNESSED BY: Mike Spain TOOL OPERATOR: Kevin Riegel



This is an actual photograph of recorder chart.

POINT		PRESSURE FIELD READING	PRESSURE OFFICE READING	
(A)	Initial Hydrostatic Mud	1986	1996	P.S.I.
(B)	First Initial Flow Pressure	302	320	P.S.I.
(C)	First Final Flow Pressure	1018	1018	P.S.I.
(D)	Initial Closed-in Pressure	1266	1266	P.S.I.
(E)	Second Initial Flow Pressure	1128	1128	P.S.I.
(F)	Second Final Flow Pressure	1220	1211	P.S.I.
(G)	Final Closed-in Pressure	1266	1266	P.S.I.
(H)	Final Hydrostatic Mud	1958	1950	P.S.I.

COMPANY F. & M. Oil COmpany LEASE- WELL NO Richards # 1 SEC 23 TWP 9 RGE. 27 TEST NO# 2 DATE 12/9/81

SUPERIOR TESTERS

368 West Second, Hoisington, Kansas

COMPANY F. & M. Oil COmpany STATE Kansas COUNTY Sheridan

LEASE & WELL NO. Richards # 1 ELEVATION 2703 KB. DATE 12/10/81 FORMATION TESTED Ks. City

SEC 23 TWP 9 RANGE 27 INTERVAL TESTED 3970 TO 4000 TOTAL DEPTH 4000

TEST NO. # 3 O.K. yes TOP PACKER DEPTH 3965 FT. BOTTOM PACKER DEPTH 3970 FT. PACKER SIZE 6 & 3/4

STRADDLE no CONV. yes TOOL SIZE 5½ OD. TOOL JOINT SIZE 4½ FH. ANCHOR LENGTH 30 FT.

HOLE SIZE 7 & 7/8 EXTRA EQUIPMENT none SURFACE CHOKE SIZE ½ IN. BOTTOM CHOKE SIZE ½ IN.

REVERSED OUT no VICOSITY 44 WEIGHT 9.5 DUAL PACKERS yes DID PACKER HOLD yes DID TOOL PLUG no

DRILLING CONTRACTOR Abercrombie # 10

TOOL JOINT SIZE 4" FH. IN. LENGTH DRILL PIPE 3142 FT. I.D. DRILL PIPE 3.3 IN.

TOOL JOINT SIZE 4"FH. IN. LENGTH WEIGHT PIPE 807 FT. I.D. WEIGHT PIPE 3.2 IN.

TOOL JOINT SIZE IN. LENGTH DRILL COLLARS FT. I.D. DRILL COLLARS IN.

TOOL OPEN I.F.P. FROM 6:30 p. m to 7:00 p. m Hr. 30 min From (B) 73 P.S.I. to (C) 82 P.S.I.

TOOL CLOSED I.C.I.P. FROM 7:00 p. m to 7:30 p. Hr. 30 min (D) 1220 P.S.I.

TOOL OPEN F.F.P. FROM 7:30 p. m to 8:00 p. m Hr. 30 min From (E) 137 P.S.I. to (F) 155 P.S.I.

TOOL CLOSED F.C.I.P. FROM 8:00 p. m to 8:30 p. m Hr. 30 min (G) 1174 P.S.I.

INITIAL HYDROSTATIC PRESSURE (A) 2023 P.S.I. FINAL HYDROSTATIC PRESSURE (H) 1996 MAXIMUM TEMPERATURE 118 °F

BLOW Good blow 1st opening.

Good blow 2nd opening.

RECOVERY - TOTAL FEET 240 ft.

RECOVERED 15 FEET OF Very heavy Oil cut mud.

RECOVERED 105 FEET OF Slightly Oil cut muddy water.

RECOVERED 120 FEET OF Salt water.

RECOVERED FEET OF

RECOVERED FEET OF

RECOVERED FEET OF

RECOVERED FEET OF

RECOVERED FEET OF

RECOVERED FEET OF

RECOVERED FEET OF

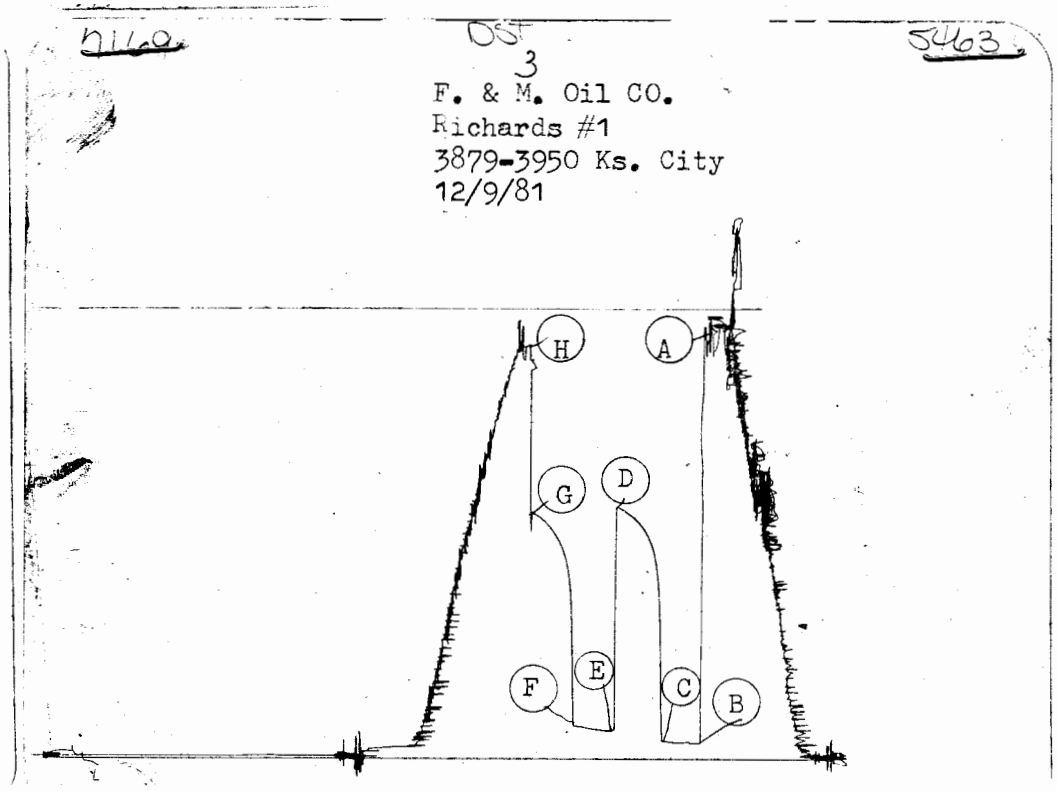
RECOVERED FEET OF

RECOVERED FEET OF

REMARKS None.

TICKET NO. 7169

WITNESSED BY: Mike Spain TOOL OPERATOR: Kevin Riegel



This is an actual photograph of recorder chart.

POINT		PRESSURE FIELD READING	PRESSURE OFFICE READING	
(A)	Initial Hydrostatic Mud	2023	2005	P.S.I.
(B)	First Initial Flow Pressure	73	73	P.S.I.
(C)	First Final Flow Pressure	82	82	P.S.I.
(D)	Initial Closed-in Pressure	1220	1202	P.S.I.
(E)	Second Initial Flow Pressure	137	128	P.S.I.
(F)	Second Final Flow Pressure	155	155	P.S.I.
(G)	Final Closed-in Pressure	1174	1174	P.S.I.
(H)	Final Hydrostatic Mud	1996	1977	P.S.I.

COMPANY F. & M. Oil Company LEASE- WELL NO Richards #1 SEC 23 TWP 9 RGE. 27 TEST NO. #3 DATE 12/9/81

SUPERIOR TESTERS

368 West Second, Hoisington, Kansas

COMPANY F. & M. Oil CO. STATE Kansas COUNTY Sheridan

LEASE & WELL NO. Richards # 1 ELEVATION 2703 KB. DATE 12/10/81 FORMATION TESTED Ks. City

SEC 23 TWP 9 RANGE 27 INTERVAL TESTED 3706 TO 3790 TOTAL DEPTH 3790

TEST NO. # 4 O.K. yes TOP PACKER DEPTH 3701 FT. BOTTOM PACKER DEPTH 3706 FT. PACKER SIZE 6 & 3/4

STRADDLE yes CONV. no TOOL SIZE 5½ OD. TOOL JOINT SIZE 4½ FH. ANCHOR LENGTH 84 FT.

HOLE SIZE 7 & 7/8 EXTRA EQUIPMENT none1 SURFACE CHOKE SIZE ½ IN. BOTTOM CHOKE SIZE ½ IN.

REVERSED OUT no VICOSITY 43 WEIGHT 9.5 DUAL PACKERS yes DID PACKER HOLD yes DID TOOL PLUG no

DRILLING CONTRACTOR Abercrombie # 10

TOOL JOINT SIZE 4" FH. IN. LENGTH DRILL PIPE 3212 FT. I.D. DRILL PIPE 3.3 IN.

TOOL JOINT SIZE 4" FH. IN. LENGTH WEIGHT PIPE 463 FT. I.D. WEIGHT PIPE 3.2 IN.

TOOL JOINT SIZE IN. LENGTH DRILL COLLARS FT. I.D. DRILL COLLARS IN.

TOOL OPEN I.F.P. FROM 9:10 p. m to 9:40 p. m Hr. 30 min From (B) 128 P.S.I. to (C) 302 P.S.I.

TOOL CLOSED I.C.I.P. FROM 9:40 p. m to 10:10 p. Hr. 30 min (D) 1147 P.S.I.

TOOL OPEN F.F.P. FROM 10:10 p. m to 10:40 p. m Hr. 30 min From (E) 412 P.S.I. to (F) 503 P.S.I.

TOOL CLOSED F.C.I.P. FROM 10:40 p. m to 11:10 p. m Hr. 30 min (G) 1147 P.S.I.

INITIAL HYOROSTATIC PRESSURE (A) 1940 P.S.I. FINAL HYDROSTATIC PRESSURE (H) 1912 MAXIMUM TEMPERATURE °F

BLOW Strong blow 1st opening.

Same blow 2nd opening.

RECOVERY - TOTAL FEET 1020

RECOVERED 1020 FFET OF Muddy water with few specks Oil.

RECOVERED FEET OF

RECOVERED FEET OF

RECOVERED FEET OF

RECOVERED FEET OF

RECOVERED FEET OF

RECOVERED FEET OF

RECOVERED FEET OF

RECOVERED FEET OF

RECOVERED FEET OF

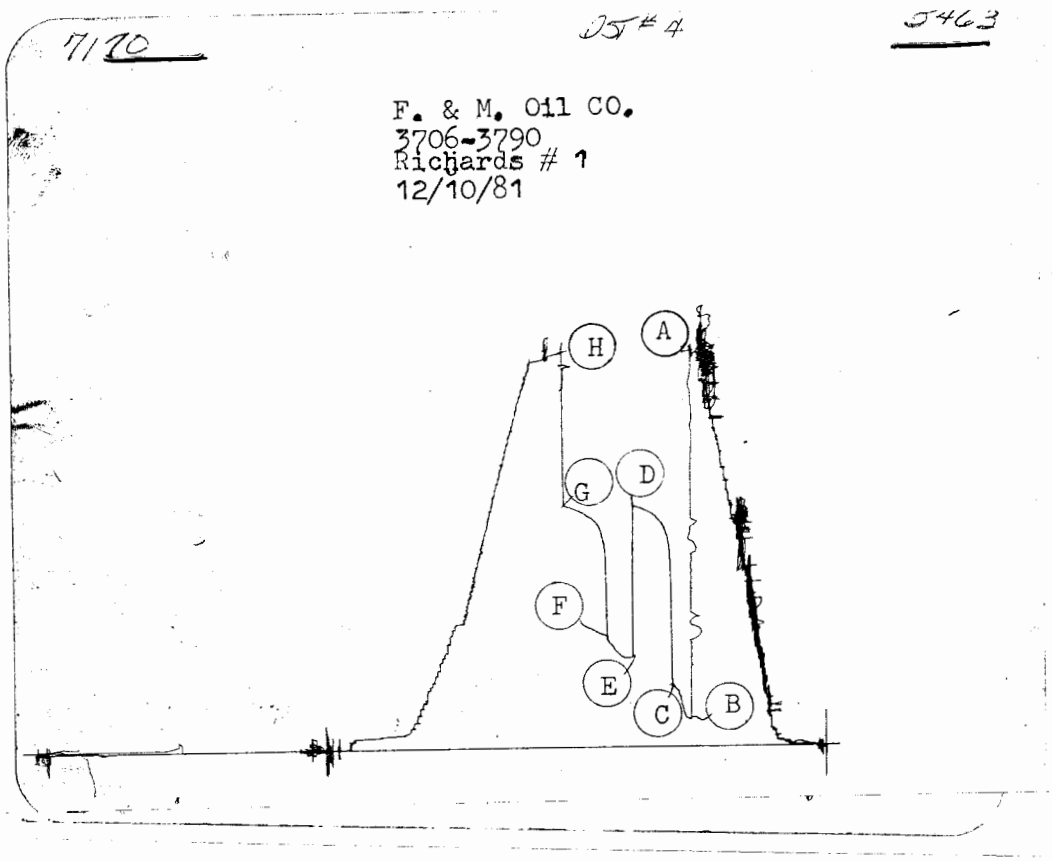
RECOVERED FEET OF

RECOVERED FEET OF

REMARKS None. Straddle, $300.00.

TICKET NO. 7170

WITNESSED BY: Mike SPain TOOL OPERATOR: Kevin Riegel



This is an actual photograph of recorder chart.

POINT		PRESSURE FIELD READING	PRESSURE OFFICE READING	
(A)	Initial Hydrostatic Mud	1940	1912	P.S.I.
(B)	First Initial Flow Pressure	128	128	P.S.I.
(C)	First Final Flow Pressure	302	293	P.S.I.
(D)	Initial Closed-in Pressure	1147	1147	P.S.I.
(E)	Second Initial Flow Pressure	412	421	P.S.I.
(F)	Second Final Flow Pressure	503	503	P.S.I.
(G)	Final Closed-in Pressure	1147	1147	P.S.I.
(H)	Final Hydrostatic Mud	1912	1894	P.S.I.

COMPANY F. & M. Oil COmpany LEASE-WELL NO. Richards # 1 SEC. 23 TWP. 9 RGE. 27 TEST NO. # 4 DATE 12/10/81