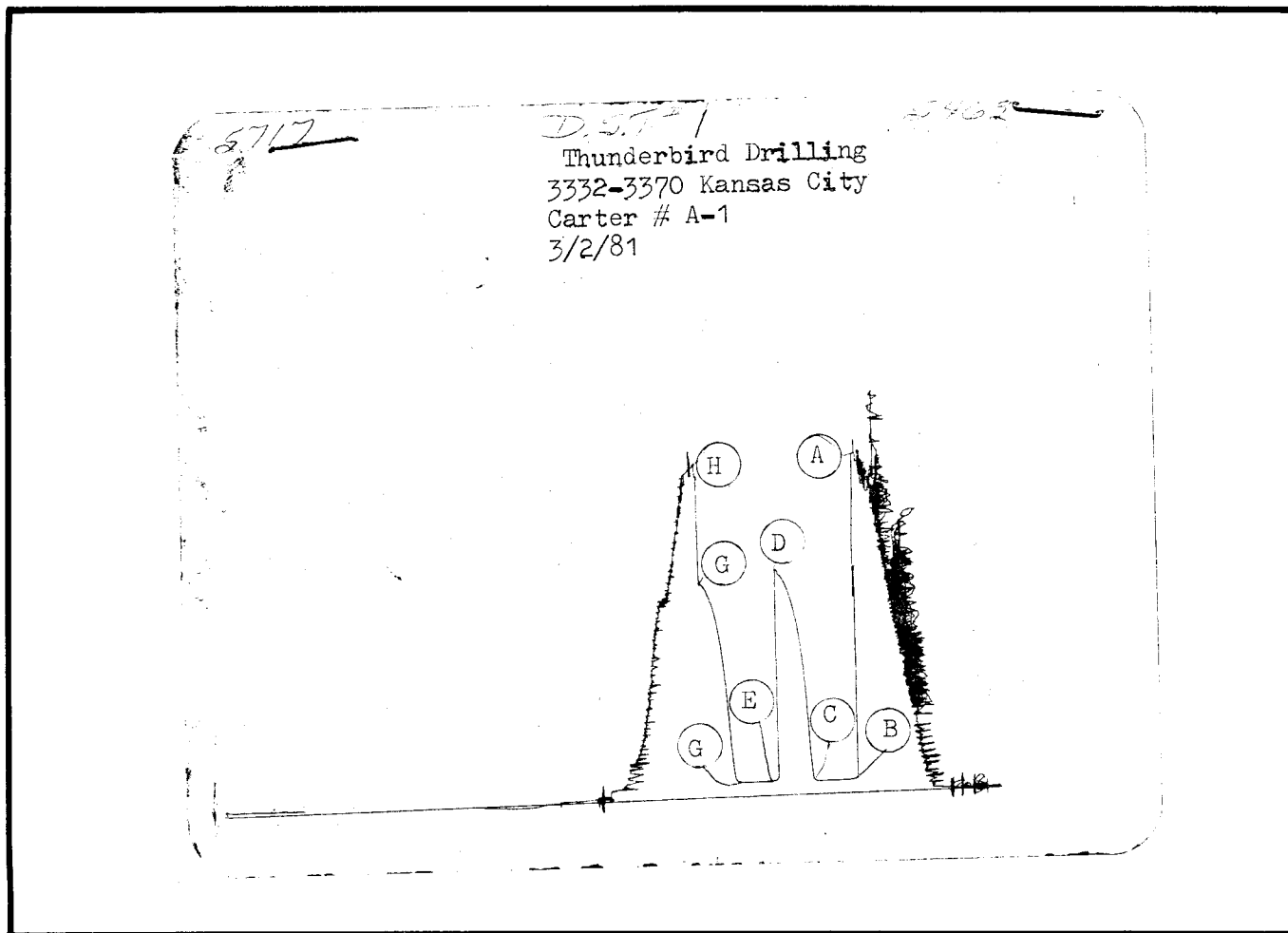


SUPERIOR TESTERS
368 West Second, Hoisington, Kansas

COMPANY Thunderbird Drilling STATE Kansas COUNTY Norton
 LEASE & WELL NO Carter # A-1 ELEVATION 2192 KB. DATE 3/2/81 FORMATION TESTED Kansas City
 SEC 31 TWP 4 RANGE 22 INTERVAL TESTED 3332 TO 3370 TOTAL DEPTH 3370
 TEST NO. # 1 O.K. yes TOP PACKER DEPTH 3327 FT. BOTTOM PACKER DEPTH 3332 FT. PACKER SIZE 6 3/4
 STRADDLE no CONV yes TOOL SIZE 5 1/2 OD. TOOL JOINT SIZE 4 1/2 FH. ANCHOR LENGTH 38 FT.
 HOLE SIZE 7 & 7/8 EXTRA EQUIPMENT none SURFACE CHOKE SIZE 1/2 IN. BOTTOM CHOKE SIZE 1/2 IN.
 REVERSED OUT no VISCOSITY 39 WEIGHT 9.4 DUAL PACKERS yes DID PACKER HOLD yes DID TOOL PLUG no
 DRILLING CONTRACTOR T-Bird # 1
 TOOL JOINT SIZE 4 1/2 FH. IN. LENGTH DRILL PIPE 2635 FT. I.D. DRILL PIPE 3.8 IN.
 TOOL JOINT SIZE 4 1/2 XH. IN. LENGTH WEIGHT PIPE 576 FT. I.D. WEIGHT PIPE 3.5 IN.
 TOOL JOINT SIZE ----- IN. LENGTH DRILL COLLARS ----- FT. I.D. DRILL COLLARS ----- IN.
 TOOL OPEN I.F.P. FROM 9:50 p. m to 10:20 p. Hr 30 min From (B) 54 P.S.I. to (C) 64 P.S.I.
 TOOL CLOSED I.C.I.P. FROM 10:20 p. m to 10:50 p. Hr 30 min (D) 1119 P.S.I.
 TOOL OPEN F.F.P. FROM 10:50 p. m to 11:20 p. Hr 30 min From (E) 64 P.S.I. to (F) 73 P.S.I.
 TOOL CLOSED F.C.I.P. FROM 11:20 p. m to 11:50 p. Hr 30 min (G) 1073 P.S.I.
 INITIAL HYDROSTATIC PRESSURE (A) 1709 P.S.I. FINAL HYDROSTATIC PRESSURE (H) 1690 MAXIMUM TEMPERATURE 66 °F
 BLOW Weak steady blow 1st & 2nd opening.

RECOVERY - TOTAL FEET 20 ft.
 RECOVERED 20 FEET OF Slightly Oil speck Mud.
 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 None.

TICKET NO 5717
 WITNESSED BY Paul Montoia TOOL OPERATOR Kevin Riegel



This is an actual photograph of recorder chart.

POINT	PRESSURE		P.S.I.
	FIELD READING	OFFICE READING	
(A) Initial Hydrostatic Mud	<u>1709</u>	<u>1700</u>	P.S.I.
(B) First Initial Flow Pressure	<u>54</u>	<u>64</u>	P.S.I.
(C) First Final Flow Pressure	<u>64</u>	<u>64</u>	P.S.I.
(D) Initial Closed-in Pressure	<u>1119</u>	<u>1128</u>	P.S.I.
(E) Second Initial Flow Pressure	<u>64</u>	<u>64</u>	P.S.I.
(F) Second Final Flow Pressure	<u>73</u>	<u>69</u>	P.S.I.
(G) Final Closed-in Pressure	<u>1073</u>	<u>1073</u>	P.S.I.
(H) Final Hydrostatic Mud	<u>1690</u>	<u>1672</u>	P.S.I.

SUPERIOR TESTERS

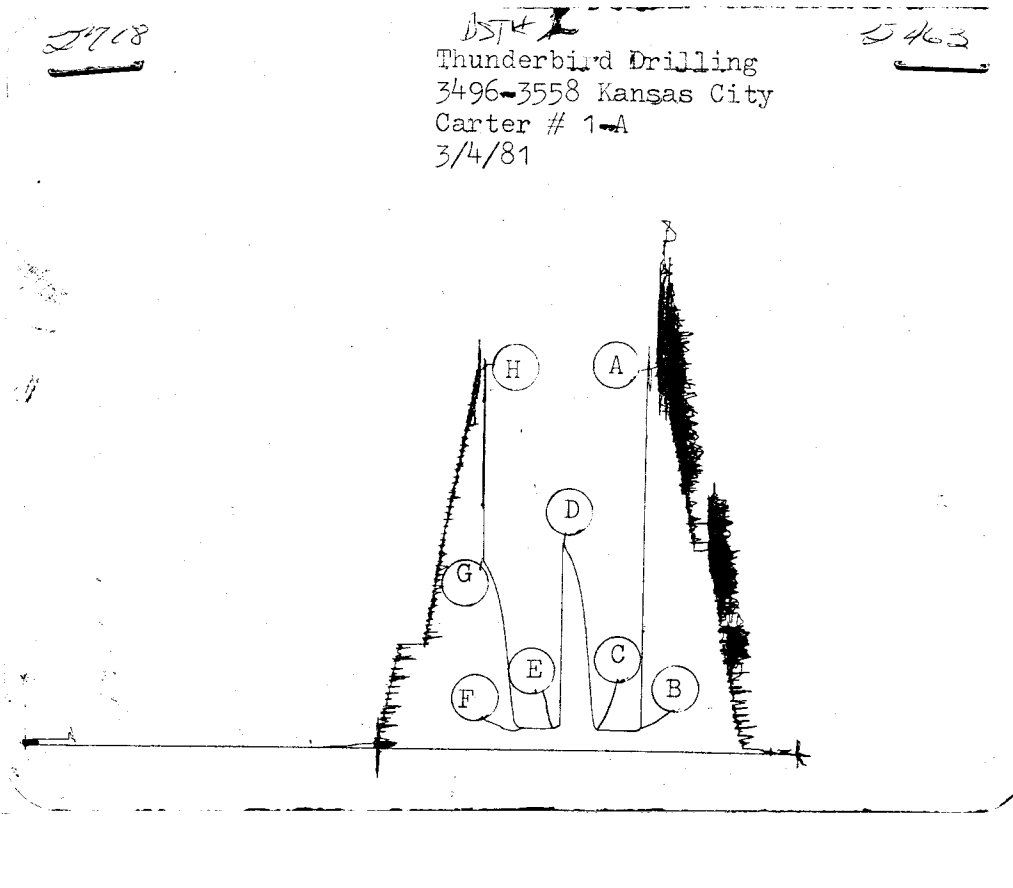
368 West Second, Hoisington, Kansas

COMPANY Thunderbird Drilling STATE Kansas COUNTY Norton
LEASE & WELL NO. Carter # 1 ELEVATION 2192 KB. DATE 3/4/81 FORMATION TESTED Kansas City
SEC 31 TWP 4 RANGE 22 INTERVAL TESTED 3496 TO 3558 TOTAL DEPTH 3558
TEST NO. # 2 O.K. yes TOP PACKER DEPTH 3491 FT. BOTTOM PACKER DEPTH 3496 FT. PACKER SIZE 6 3/4
STRADDLE no CONV. yes TOOL SIZE 5 1/2 OD. TOOL JOINT SIZE 4 1/2 FH. ANCHOR LENGTH 52 FT.
HOLE SIZE 7 & 7/8 EXTRA EQUIPMENT none SURFACE CHOKE SIZE 1/2 IN. BOTTOM CHOKE SIZE 1/2 IN.
REVERSED OUT no VISCOSITY 43 WEIGHT 9.3 DUAL PACKERS yes DID PACKER HOLD yes DID TOOL PLUG no
DRILLING CONTRACTOR T-Bird # 1
TOOL JOINT SIZE 4 1/2 FH. IN. LENGTH DRILL PIPE 2931 FT. I.D. DRILL PIPE 3.8 IN.
TOOL JOINT SIZE 4 1/2 XH. IN. LENGTH WEIGHT PIPE 544 FT. I.D. WEIGHT PIPE 3.5 IN.
TOOL JOINT SIZE ----- IN. LENGTH DRILL COLLARS ----- FT. I.D. DRILL COLLARS ----- IN.
TOOL OPEN I.F.P. FROM 2:10 a. m to 2:40 a. m Hr. 30 min From (B) 91 P.S.I. to (C) 100 P.S.I.
TOOL CLOSED I.C.I.P. FROM 2:40 a. m to 3:10 a. m Hr. 30 min (D) 981 P.S.I.
TOOL OPEN F.F.P. FROM 3:10 a. m to 3:40 a. m Hr. 30 min From (E) 100 P.S.I. to (F) 100 P.S.I.
TOOL CLOSED F.C.I.P. FROM 3:40 a. m to 4:10 a. m Hr. 30 min (G) 889 P.S.I.
INITIAL HYDROSTATIC PRESSURE (A) 1885 P.S.I. FINAL HYDROSTATIC PRESSURE (H) 1857 MAXIMUM TEMPERATURE 74 °F
BLOW Very weak blow 1st & 2nd openings.

RECOVERY - TOTAL FEET 30 ft.
RECOVERED 30 FEET OF Oil Cut Mud. (3%-Oil, 2%-water, 95%-mud.)
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 _____
RECOVERED _____ FEET OF _____

REMARKS None.

TICKET NO 5718
WITNESSED BY: Paul Montoia TOOL OPERATOR Kevin Riegel



This is an actual photograph of recorder chart.

POINT	PRESSURE		
	FIELD READING	OFFICE READING	
(A) Initial Hydrostatic Mud	1885	1857	P.S.I.
(B) First Initial Flow Pressure	91	91	P.S.I.
(C) First Final Flow Pressure	100	100	P.S.I.
(D) Initial Closed-in Pressure	981	981	P.S.I.
(E) Second Initial Flow Pressure	100	100	P.S.I.
(F) Second Final Flow Pressure	100	100	P.S.I.
(G) Final Closed-in Pressure	889	898	P.S.I.
(H) Final Hydrostatic Mud	1857	1838	P.S.I.

SUPERIOR TESTERS

368 West Second, Hoisington, Kansas

COMPANY Thunderbird Drilling STATE Kansas COUNTY Norton

LEASE & WELL NO. Carter # A-1 ELEVATION 2192 KB. DATE 3/4/81 FORMATION TESTED Reagon

SEC 31 TWP 4 RANGE 22 INTERVAL TESTED 3574 TO 3610 TOTAL DEPTH 3610

TEST NO. # 3 D.K. yes TOP PACKER DEPTH 3569 FT. BOTTOM PACKER DEPTH 3574 FT. PACKER SIZE 6 & 3/4

STRADDLE no CONV. yes TOOL SIZE 5 1/2 OD. TOOL JOINT SIZE 4 1/2 FH. ANCHOR LENGTH 36 FT.

HOLE SIZE 7 & 7/8 EXTRA EQUIPMENT none SURFACE CHOKE SIZE 1/2 IN. BOTTOM CHOKE SIZE 1/2 IN.

REVERSED OUT no VISCOSITY 46 WEIGHT 9.4 DUAL PACKERS yes DID PACKER HOLD yes DID TOOL PLUG no

DRILLING CONTRACTOR T-Bird # 1

TOOL JOINT SIZE 4 1/2 FH. IN. LENGTH DRILL PIPE 2977 FT. I.D. DRILL PIPE 3.8 IN.

TOOL JOINT SIZE 4 1/2 XH. IN. LENGTH WEIGHT PIPE 576 FT. I.D. WEIGHT PIPE 3.5 IN.

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

TOOL OPEN I.F.P. FROM 3:05 p. m to 3:35 p. m Hr. 30 min From (B) 109 P.S.I. to (C) 228 P.S.I.

TOOL CLOSED I.C.I.P. FROM 3:35 p. m to 4:35 p. Hr. 60 min (D) 889 P.S.I.

TOOL OPEN F.F.P. FROM 4:35 p. m to 5:05 p. m Hr. 30 min From (E) 302 P.S.I. to (F) 366 P.S.I.

TOOL CLOSED F.C.I.P. FROM 5:05 p. m to 6:05 p. m Hr. 60 min (G) 862 P.S.I.

INITIAL HYDROSTATIC PRESSURE (A) 1940 P.S.I. FINAL HYDROSTATIC PRESSURE (H) 1921 MAXIMUM TEMPERATURE 74 °F

BLOW Strong blow 1st opening.

Strong blow 2nd opening.

RECOVERY - TOTAL FEET 765 ft.

RECOVERED 120 FEET OF Clean Oil.

RECOVERED 240 FEET OF Muddy Oily water.

RECOVERED 45 FEET OF Muddy Oil.

RECOVERED 60 FEET OF Clean Oil.

RECOVERED 300 FEET OF Oily water.

RECOVERED _____ FEET OF _____

RECOVERED _____ FEET OF _____

RECOVERED _____ FEET OF _____

RECOVERED _____ FEET OF _____

RECOVERED _____ FEET OF _____

RECOVERED _____ FEET OF _____

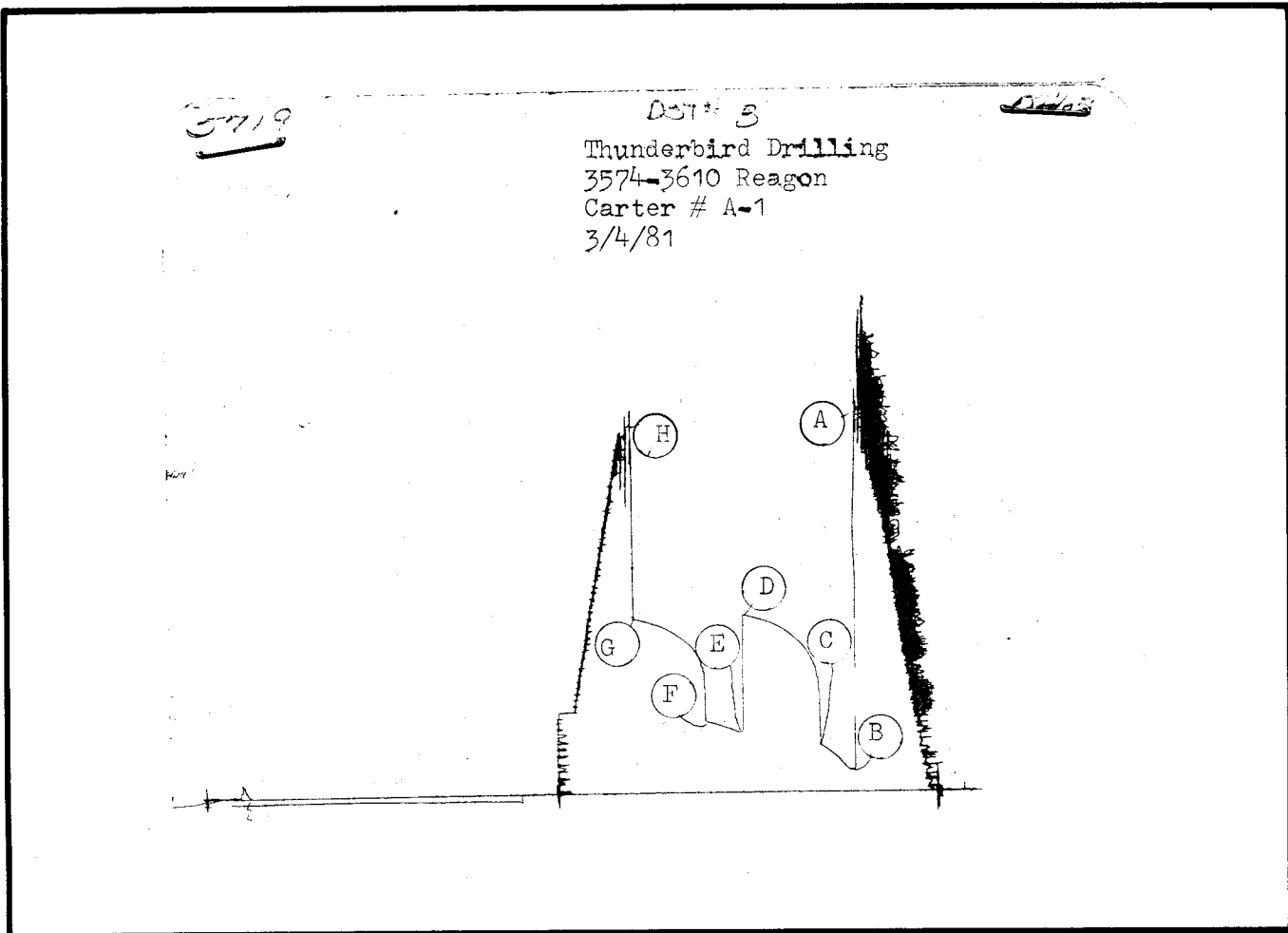
RECOVERED _____ FEET OF _____

RECOVERED _____ FEET OF _____

REMARKS None.

TICKET NO 5719

WITNESSED BY Paul Montoia TOOL OPERATOR Kevin Riegel



This is an actual photograph of recorder chart.

POINT	PRESSURE		
	FIELD READING	OFFICE READING	
(A) Initial Hydrostatic Mud	1940	1894	P.S.I.
(B) First Initial Flow Pressure	109	109	P.S.I.
(C) First Final Flow Pressure	228	238	P.S.I.
(D) Initial Closed-in Pressure	889	889	P.S.I.
(E) Second Initial Flow Pressure	302	302	P.S.I.
(F) Second Final Flow Pressure	366	366	P.S.I.
(G) Final Closed-in Pressure	862	862	P.S.I.
(H) Final Hydrostatic Mud	1921	1857	P.S.I.