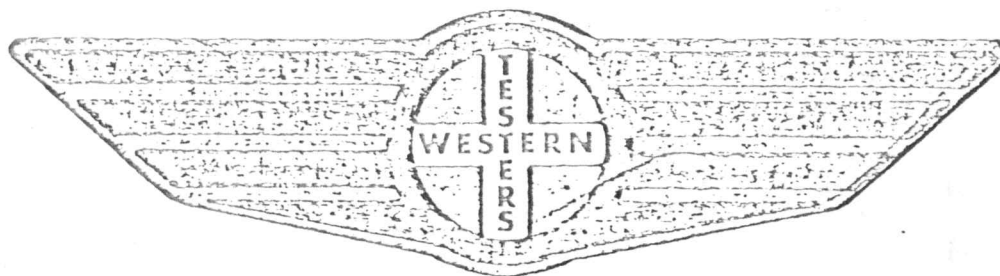


FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

WESTERN TESTING COMPANY INC.
SUBSURFACE PRESSURE SURVEY

DATE: 2/25/85
CUSTOMER: RAINS & WILLIAMSON OIL CO INC
WELL: 1 TEST: 1
ELEVATION (KB): 2584 FORMATION: KANSAS CITY
SECTION: 3 TOWNSHIP: 10S
RANGE: 26W COUNTY: SHERIDAN STATE: KS
GAUGE SN #4376 RANGE: 4000 CLOCK: 12

TICKET #7106
LEASE: ZIEGLER "A"
GEOLOGIST: HAGEMER
KANSAS CITY
10S
KS
12

INTERVAL TEST FROM: 3845 FT TO: 3890 FT TOTAL DEPTH: 3890 FT
DEPTH OF SELECTIVE ZONE: FT
PACKER DEPTH: 3840 FT SIZE: 6 3/4 IN PACKER DEPTH: 3845 FT SIZE: 6 3/4 IN
PACKER DEPTH: FT SIZE: IN PACKER DEPTH: FT SIZE: IN

DRILLING CONTRACTOR: RAINS & WILLIAMSON
MUD TYPE: CHEMICAL VISCOSITY: 38
WEIGHT: 9.3 WATER LOSS (CC): 6.4
CHLORIDES (P.P.M.): 4000

JARS - MAKE: SERIAL NUMBER:
DID WELL FLOW? REVERSED OUT?

| | | | |
|----------------------|----------|--------------------|-------------|
| DRILL COLLAR LENGTH: | FT | I.D.: | IN |
| WEIGHT PIPE LENGTH: | FT | I.D.: | IN |
| DRILL PIPE LENGTH: | 3823 FT | I.D.: | 3.6 IN |
| TEST TOOL LENGTH: | 22 FT | TOOL SIZE: | 5 1/2 IN |
| ANCHOR LENGTH: | 45 FT | SIZE: | 5 1/2 IN |
| 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 XH IN |

BLOW: INITIAL FLOW PERIOD WEAK BLOW BUILDING TO 2"
IN BUCKET.
FINAL FLOW PERIOD VERY WEAK BLOW BUILDING TO
1" IN BUCKET.

| | | |
|---------------|----|--------------------------------------|
| RECOVERED: 20 | FT | OF: MUDDY WATER (20% WATER; 80% MUD) |
| RECOVERED: 45 | FT | OF: MUD |
| RECOVERED: | FT | OF: |
| RECOVERED: | FT | OF: |
| RECOVERED: | FT | OF: |
| RECOVERED: | FT | OF: |
| RECOVERED: | FT | OF: |
| RECOVERED: | FT | OF: |
| RECOVERED: | FT | OF: |

REMARKS: CHLORIDES 21000 P.P.M.

TIME SET PACKER(S): 5:00 AM
WELL TEMPERATURE: 114 °F
INITIAL HYDROSTATIC PRESSURE:
INITIAL FLOW PERIOD MIN: 30
INITIAL CLOSED IN PERIOD MIN: 33
FINAL FLOW PERIOD MIN: 60
FINAL CLOSED IN PERIOD MIN: 33
FINAL HYDROSTATIC PRESSURE

TIME STARTED OFF BOTTOM: 7:30 AM
(A) 1951 PSI
(B) 45 PSI TO (C) 48 PSI
(D) 1105 PSI
(E) 56 PSI TO (F) 69 PSI
(G) 1055 PSI
(H) 1927 PSI

PRESSURE DATA

TICKET #7106

LEASE: ZIEGLER "A"

TEST: 1

GEOLOGIST: HAGEMMEIER

FORMATION: KANSAS CITY

TOWNSHIP: 10S

COUNTY: SHERIDAN

STATE: KS

RANGE: 4000

CLOCK: 12

PSI

PSI

PSI

PSI

PSI

PSI

PSI

PSI

'F

'F

TIME - GIVEN TIME - ACTUAL

30 MIN 30 MIN

30 MIN 33 MIN

60 MIN 60 MIN

30 MIN 33 MIN

PRESSURE BREAKDOWN

| PT | FIRST FLOW | | INITIAL SHUT-IN | | SECOND FLOW | | FINAL SHUT-IN | |
|----|------------|----------|-----------------|----------|-------------|----------|---------------|----------|
| | MIN | PRESSURE | MIN | PRESSURE | MIN | PRESSURE | MIN | PRESSURE |
| 1 | 0 | 45 | 0 | 48 | 0 | 56 | 0 | 69 |
| 2 | 5 | 45 | 3 | 603 | 5 | 56 | 3 | 417 |
| 3 | 10 | 46 | 6 | 873 | 10 | 56 | 6 | 810 |
| 4 | 15 | 46 | 9 | 964 | 15 | 56 | 9 | 925 |
| 5 | 20 | 47 | 12 | 1008 | 20 | 57 | 12 | 966 |
| 6 | 25 | 47 | 15 | 1038 | 25 | 58 | 15 | 994 |
| 7 | 30 | 48 | 18 | 1056 | 30 | 59 | 18 | 1012 |
| 8 | | | 21 | 1069 | 35 | 60 | 21 | 1025 |
| 9 | | | 24 | 1079 | 40 | 62 | 24 | 1035 |
| 10 | | | 27 | 1088 | 45 | 64 | 27 | 1045 |
| 11 | | | 30 | 1097 | 50 | 66 | 30 | 1050 |
| 12 | | | 33 | 1105 | 55 | 68 | 33 | 1055 |
| 13 | | | | | 60 | 69 | | |

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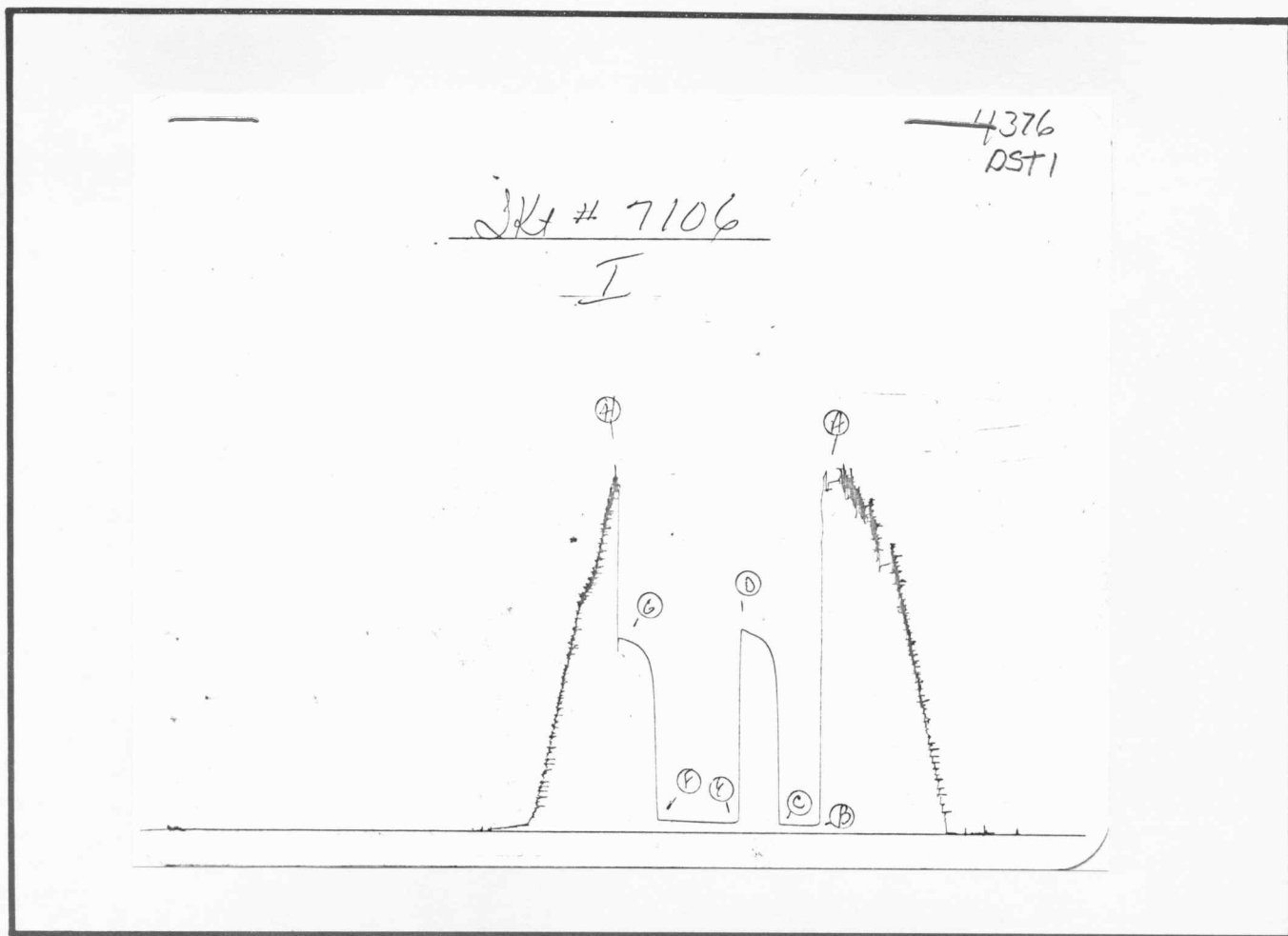
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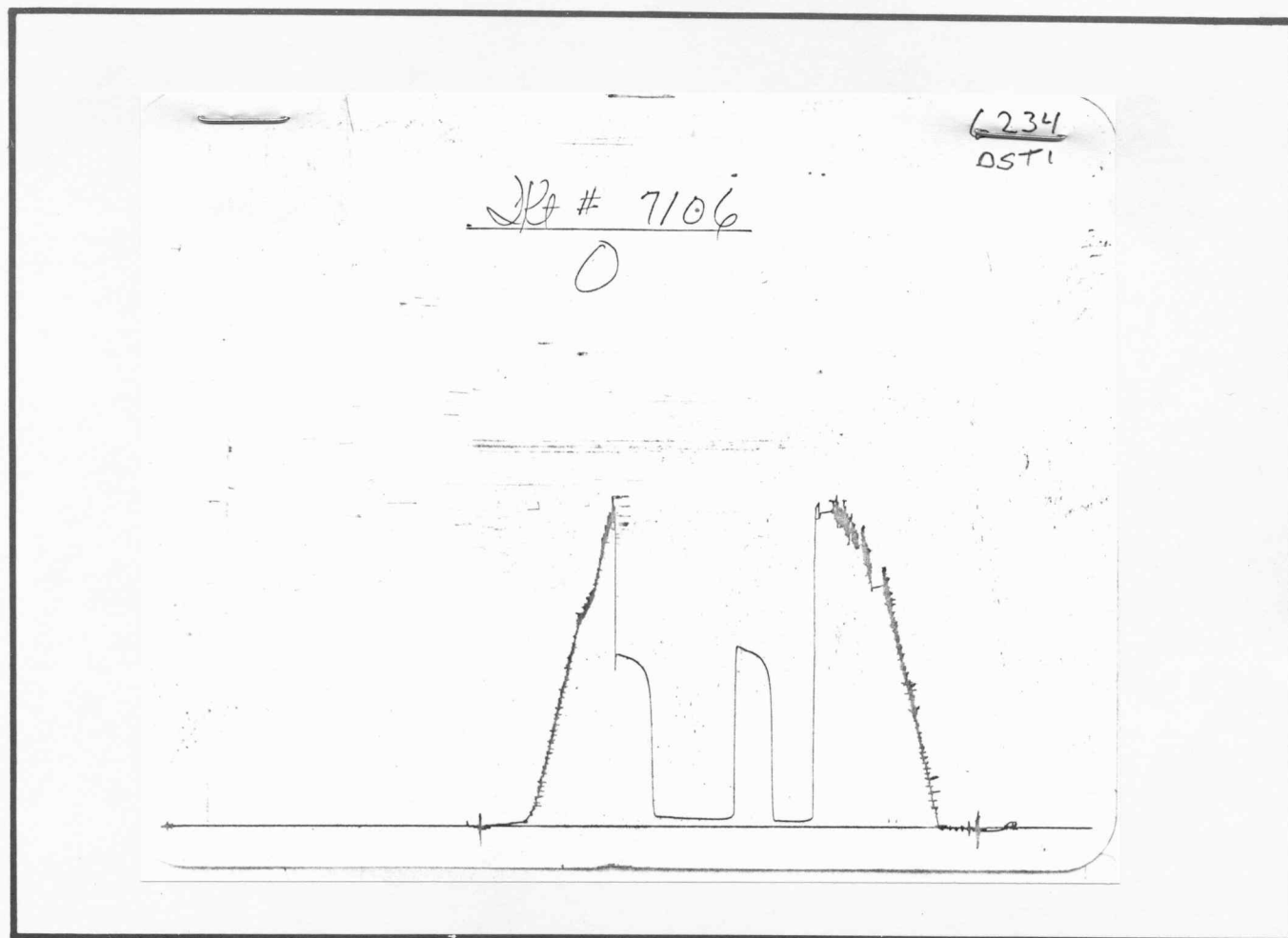
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Inside Recorder

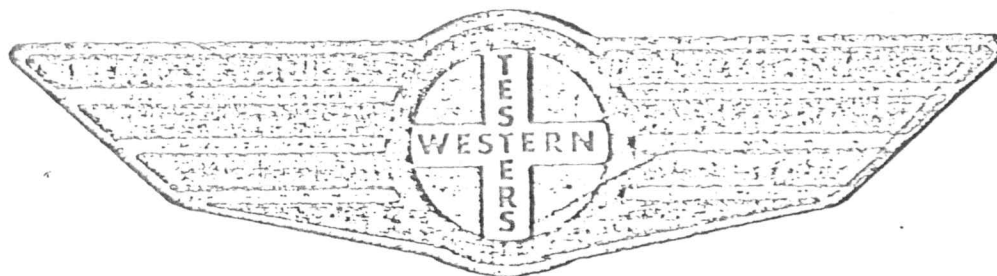


Outside Recorder

FORMATION

TEST

REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

WESTERN TESTING COMPANY INC.
SUBSURFACE PRESSURE SURVEY

DATE: 2/25/85
CUSTOMER: RAINS & WILLIAMSON OIL CO INC
WELL: 1 TEST: 2
ELEVATION (KB): 2584 FORMATION: KANSAS CITY
SECTION: 3 TOWNSHIP: 10S
RANGE: 26W COUNTY: SHERIDAN STATE: KS
GAUGE SN #4376 RANGE: 4000 CLOCK: 12

INTERVAL TEST FROM: 3968 FT TO: 3998 FT TOTAL DEPTH: 3998 FT
DEPTH OF SELECTIVE ZONE: FT
PACKER DEPTH: 3963 FT SIZE: 6 3/4 IN PACKER DEPTH: 3968 FT SIZE: 6 3/4 IN
PACKER DEPTH: FT SIZE: IN PACKER DEPTH: FT SIZE: IN

DRILLING CONTRACTOR: RAINS & WILLIAMSON
MUD TYPE: CHEMICAL VISCOSITY: 47
WEIGHT: 9.4 WATER LOSS (CC): 6.4
CHLORIDES (P.P.M.): 4000

JARS - MAKE: SERIAL NUMBER:
DID WELL FLOW? REVERSED OUT?

DRILL COLLAR LENGTH: FT I.D.: IN
WEIGHT PIPE LENGTH: FT I.D.: IN
DRILL PIPE LENGTH: 3946 FT I.D.: 3.6 IN
TEST TOOL LENGTH: 22 FT TOOL SIZE: 5 1/2 IN
ANCHOR LENGTH: 30 FT SIZE: 5 1/2 IN
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 XH IN

BLOW: INITIAL FLOW PERIOD WEAK BLOW BUILDING TO 3" IN
BUCKET.
FINAL FLOW PERIOD WEAK BLOW BUILDING TO 1 1/2"
IN BUCKET.

RECOVERED: 40 FT OF: MUDDY WATER WITH A SCUM OF OIL
RECOVERED: FT OF: (50% WATER; 50% MUD)
RECOVERED: 60 FT OF: MUDDY WATER WITH SLIGHT TRACE OF OIL
RECOVERED: FT OF: (50% WATER; 50% MUD)
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:

REMARKS: CHLORIDES 40000 P.P.M.

TIME SET PACKER(S): 2:05 AM
WELL TEMPERATURE: 115 °F

TIME STARTED OFF BOTTOM: 4:35 AM

INITIAL HYDROSTATIC PRESSURE: (A) 2032 PSI
INITIAL FLOW PERIOD MIN: 30 (B) 41 PSI TO (C) 47 PSI
INITIAL CLOSED IN PERIOD MIN: 30 (D) 230 PSI
FINAL FLOW PERIOD MIN: 60 (E) 55 PSI TO (F) 71 PSI
FINAL CLOSED IN PERIOD MIN: 30 (G) 224 PSI
FINAL HYDROSTATIC PRESSURE (H) 2002 PSI

PRESSURE DATA

CLOCK: 12

OPEN TOOL: 2:05 AM

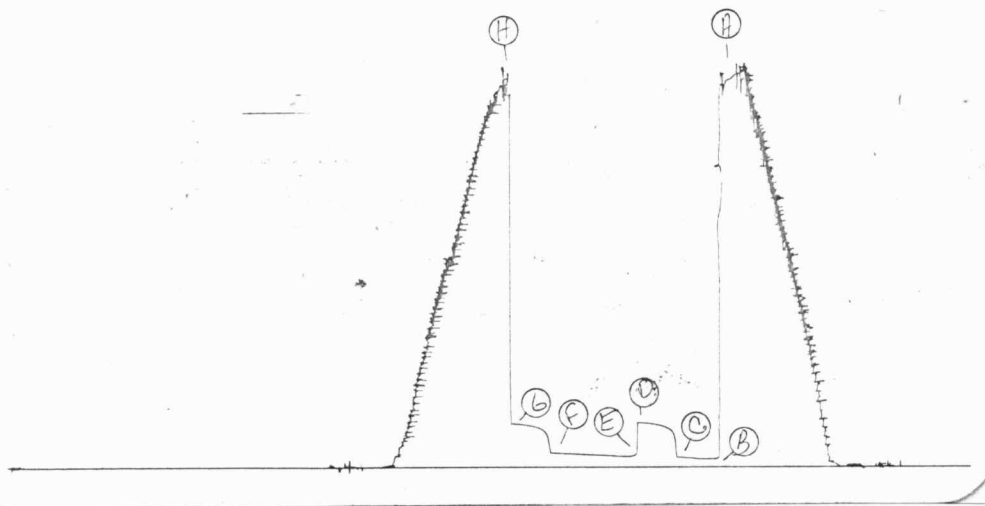
FINAL CLOSED-IN PRESSURE: 30 MIN 30 MIN

PRESSURE BREAKDOWN

TKT # 7107

I

4376
DST2

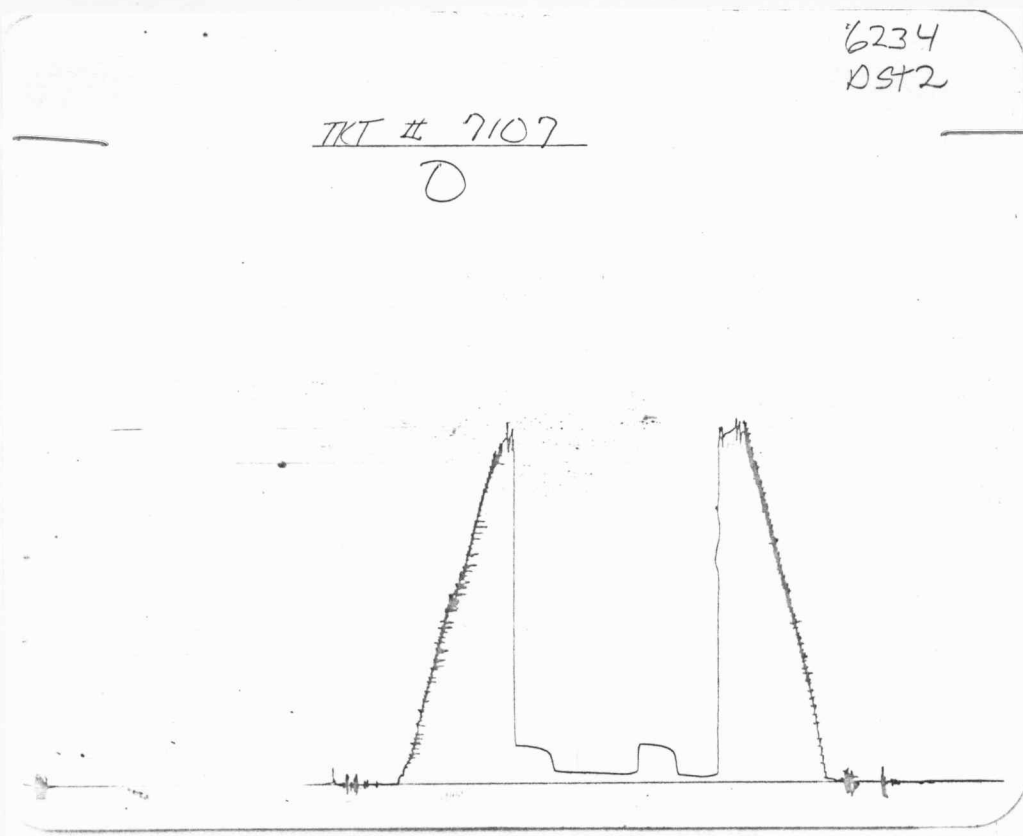


Inside Recorder

TKT # 7107

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DST2

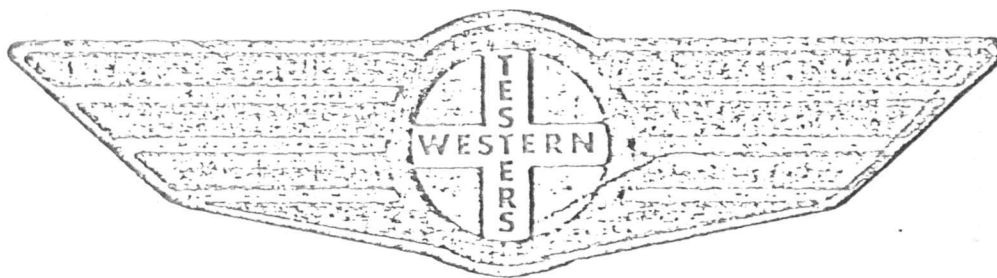


Outside Recorder

FORMATION

TEST

REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

WESTERN TESTING COMPANY INC.
SUBSURFACE PRESSURE SURVEY

DATE: 2/26/85

TICKET #7108

CUSTOMER: RAINS & WILLIAMSON OIL CO INC

LEASE: ZIEGLER "A"

WELL: 1

TEST: 3

GEOLOGIST: HAGEMER

ELEVATION (KB): 2584

FORMATION: KANSAS CITY

SECTION: 3

TOWNSHIP: 10S

RANGE: 26W

COUNTY: SHERIDAN

STATE: KS

GAUGE SN #4376

RANGE: 4000

CLOCK: 12

INTERVAL TEST FROM: 4000 FT TO: 4040 FT TOTAL DEPTH: 4040 FT
DEPTH OF SELECTIVE ZONE: FT

PACKER DEPTH: 3995 FT SIZE: 6 3/4 IN PACKER DEPTH: 4000 FT SIZE: 6 3/4 IN

PACKER DEPTH: FT SIZE: IN PACKER DEPTH: FT SIZE: IN

DRILLING CONTRACTOR: RAINS & WILLIAMSON

MUD TYPE: CHEMICAL

VISCOSITY: 43

WEIGHT: 9.4

WATER LOSS (CC): 6.4

CHLORIDES (P.P.M.): 6000

JARS - MAKE:

SERIAL NUMBER:

DID WELL FLOW?

REVERSED OUT?

DRILL COLLAR LENGTH: FT I.D.: IN

WEIGHT PIPE LENGTH: FT I.D.: IN

DRILL PIPE LENGTH: 3978 FT I.D.: 3.6 IN

TEST TOOL LENGTH: 22 FT TOOL SIZE: 5 1/2 IN

ANCHOR LENGTH: 40 FT SIZE: 5 1/2 IN

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 XH IN

BLOW: INITIAL FLOW PERIOD WEAK BLOW BUILDING TO 1" IN
BUCKET

FINAL FLOW PERIOD NO BLOW. FLUSHED TOOL.

RECOVERED: 20 FT OF: SLIGHT OIL CUT MUD (2% OIL; 98% MUD)

RECOVERED: FT OF:

RECOVERED: FT OF:

RECOVERED: FT OF:

RECOVERED: FT OF:

RECOVERED: FT OF:

RECOVERED: FT OF:

RECOVERED: FT OF:

RECOVERED: FT OF:

REMARKS:

TIME SET PACKER(S): 5:35 PM

TIME STARTED OFF BOTTOM: 7:30 PM

WELL TEMPERATURE: 115 °F

INITIAL HYDROSTATIC PRESSURE:

(A) 2082 PSI

INITIAL FLOW PERIOD MIN: 30

(B) 47 PSI TO (C) 47 PSI

INITIAL CLOSED IN PERIOD MIN: 33

(D) 50 PSI

FINAL FLOW PERIOD MIN: 25

(E) 46 PSI TO (F) 54 PSI

FINAL CLOSED IN PERIOD MIN: 30

(G) 60 PSI

FINAL HYDROSTATIC PRESSURE

(H) 2052 PSI

WESTERN TESTING COMPANY INC.
PRESSURE DATA

TICKET #7108

LEASE: ZIEGLER "A"

TEST: 3

GEOLOGIST: HAGEMMEIER

FORMATION: KANSAS CITY

TOWNSHIP: 10S

COUNTY: SHERIDAN

STATE: KS

RANGE: 4000

CLOCK: 12

(B) FIRST INITIAL FLOW PRESSURE: 47 PSI

(C) FIRST FINAL FLOW PRESSURE: 47 PSI

(D) INITIAL CLOSED-IN PRESSURE: 50 PSI

(F) SECOND INITIAL FLOW PRESSURE: 46 PSI

(F) SECOND FINAL FLOW PRESSURE: 54 PSI

(G) FINAL CLOSED-IN PRESSURE: 60 PSI

(H) FINAL HYDROSTATIC PRESSURE: 2052 PSI

| | | |
|-------------------|-----|----|
| WELL TEMPERATURE: | 115 | 'F |
|-------------------|-----|----|

OPEN TOOL: 5:35 PM

| | TIME - GIVEN | TIME - ACTUAL |
|----------------------|--------------|---------------|
| FIRST FLOW PRESSURE: | 30 MIN | 30 MIN |

INITIAL CLOSED-IN PRESSURE: 30 MIN 33 MIN

SECOND FLOW PRESSURE: 25 MIN 25 MIN

FINAL CLOSED-IN PRESSURE: 30 MIN 30 MIN

PRESSURE BREAKDOWN

| PT | FIRST FLOW | | INITIAL SHUT-IN | | SECOND FLOW | | FINAL SHUT-IN | |
|----|------------|----------|-----------------|----------|-------------|----------|---------------|----------|
| | MIN | PRESSURE | MIN | PRESSURE | MIN | PRESSURE | MIN | PRESSURE |
| 1 | 0 | 47 | 0 | 47 | 0 | 46 | 0 | 54 |
| 2 | 5 | 47 | 3 | 47 | 5 | 46 | 3 | 54 |
| 3 | 10 | 47 | 6 | 47 | 10 | 46 | 6 | 55 |
| 4 | 15 | 47 | 9 | 48 | 15 | 55 | 9 | 55 |
| 5 | 20 | 47 | 12 | 48 | 20 | 54 | 12 | 56 |
| 6 | 25 | 47 | 15 | 48 | 25 | 54 | 15 | 57 |
| 7 | 30 | 47 | 18 | 49 | | | 18 | 58 |
| 8 | | | 21 | 49 | | | 21 | 59 |
| 9 | | | 24 | 49 | | | 24 | 59 |
| 10 | | | 27 | 50 | | | 27 | 60 |
| 11 | | | 30 | 50 | | | 30 | 60 |
| 12 | | | 33 | 50 | | | | |

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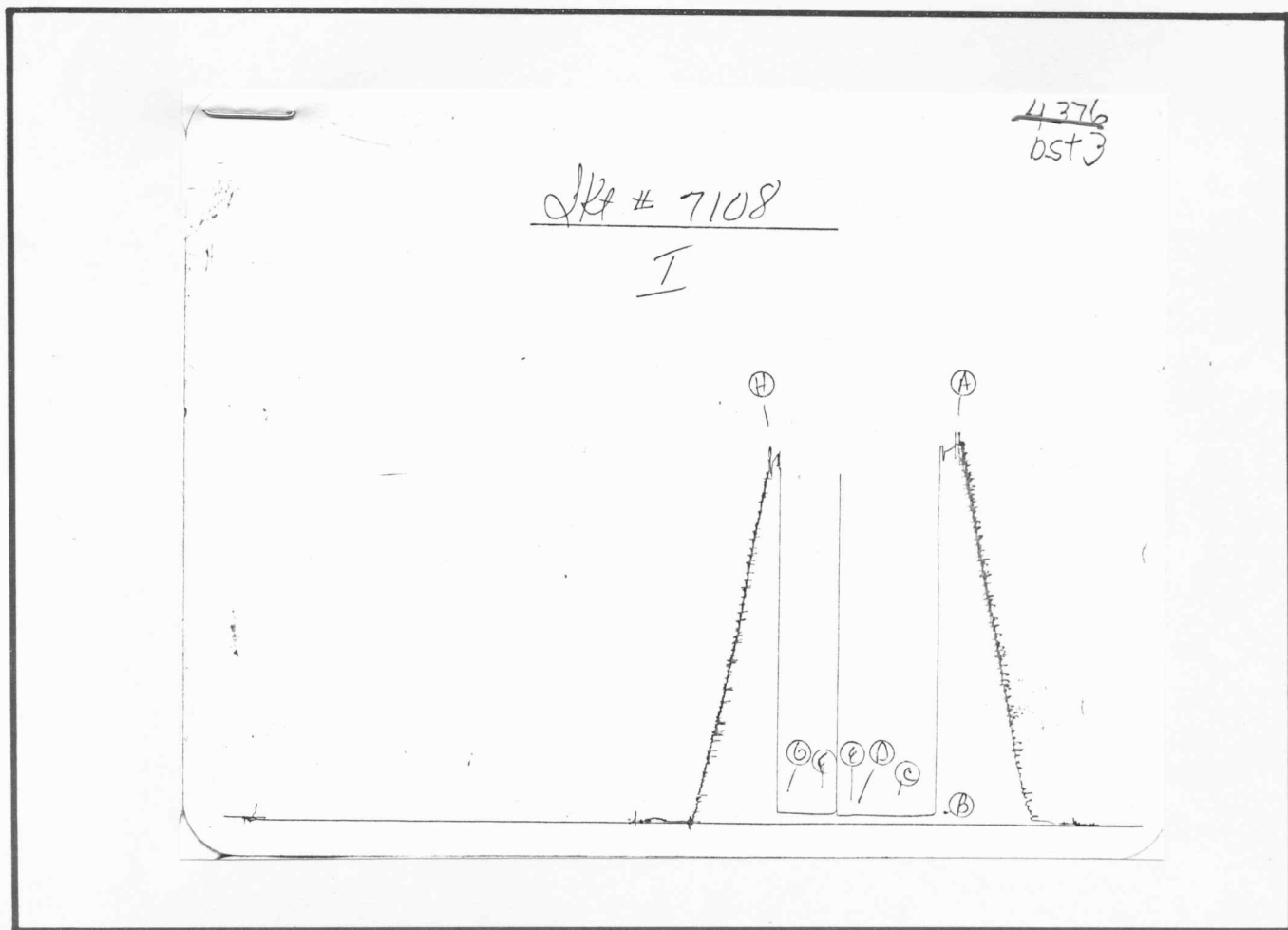
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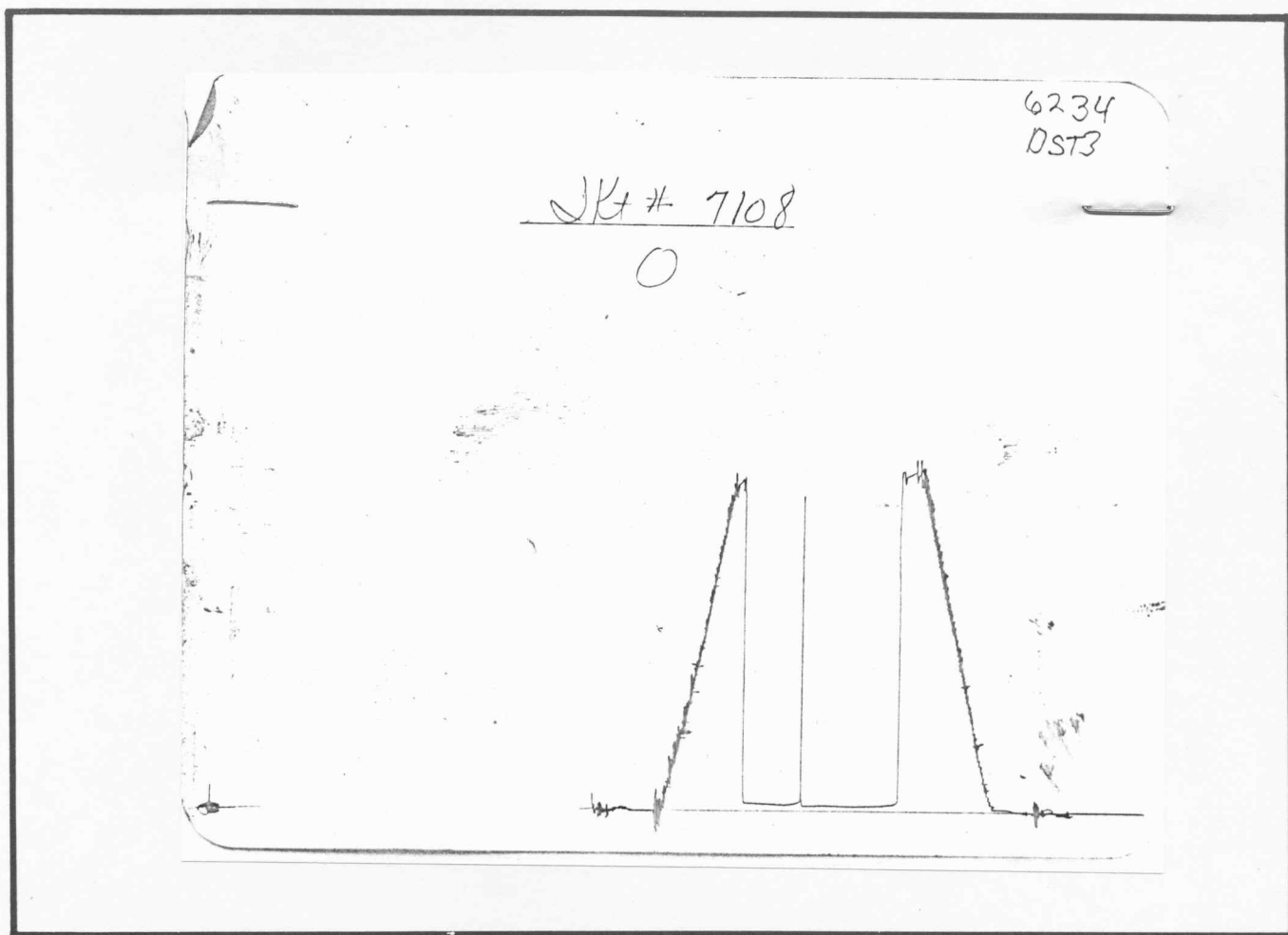
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Inside Recorder



Outside Recorder