

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE: 9/6/83
CUSTOMER: GRAVES DRILLING CO. INC.
WELL: 1 TEST: 1
ELEVATION (KB): 0
SECTION: 28
RANGE: 1W
GAUGE SN #13402

TICKET #1761
LEASE: RATZLAFF
GEOLOGIST: LINEHAN
FORMATION: MISSISSIPPI
TOWNSHIP: 17S
COUNTY: MCPHERSON
STATE: KANSAS
CLOCK: 12

INTERVAL TEST FROM: 2662 FT TO: 2670 FT TOTAL DEPTH: 2670 FT
DEPTH OF SELECTIVE ZONE: FT
PACKER DEPTH: 2657 FT SIZE: 6 3/4 IN PACKER DEPTH: 2662 FT SIZE: 6 3/4 IN
PACKER DEPTH: FT SIZE: IN PACKER DEPTH: FT SIZE: IN

DRILLING CONTRACTOR: DUKE

MUD TYPE: CHEMICAL VISCOSITY: 45
WEIGHT: 9.2 WATER LOSS (CC): 10.2
CHLORIDES (P.P.M.): 6000

JARS - MAKE: SERIAL NUMBER:
DID WELL FLOW? NO REVERSED OUT? NO

DRILL COLLAR LENGTH: 120 FT I.D.: 2.2 IN
WEIGHT PIPE LENGTH: FT I.D.: IN
DRILL PIPE LENGTH: 2522 FT I.D.: 3.8 IN
TEST TOOL LENGTH: 20 FT TOOL SIZE: 5 1/2 OD IN
ANCHOR LENGTH: 8 FT SIZE: 5 1/2 OD 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 -
DIED IN 11 MINUTES.
FINAL FLOW PERIOD NO BLOW.

RECOVERED: 10 FT OF: 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): 7:55 PM
WELL TEMPERATURE: 102 °F
INITIAL HYDROSTATIC PRESSURE:
INITIAL FLOW PERIOD MIN: 10
INITIAL CLOSED IN PERIOD MIN: 30
FINAL FLOW PERIOD MIN: 15
FINAL CLOSED IN PERIOD MIN: 0
FINAL HYDROSTATIC PRESSURE

TIME STARTED OFF BOTTOM: 8:55 PM
(A) 1336 PSI
(B) 32 PSI TO (C) 32 PSI
(D) 420 PSI
(E) 32 PSI TO (F) 32 PSI
(G) 0 PSI
(H) 1252 PSI

PRESSURE DATA

CLOCK: 12

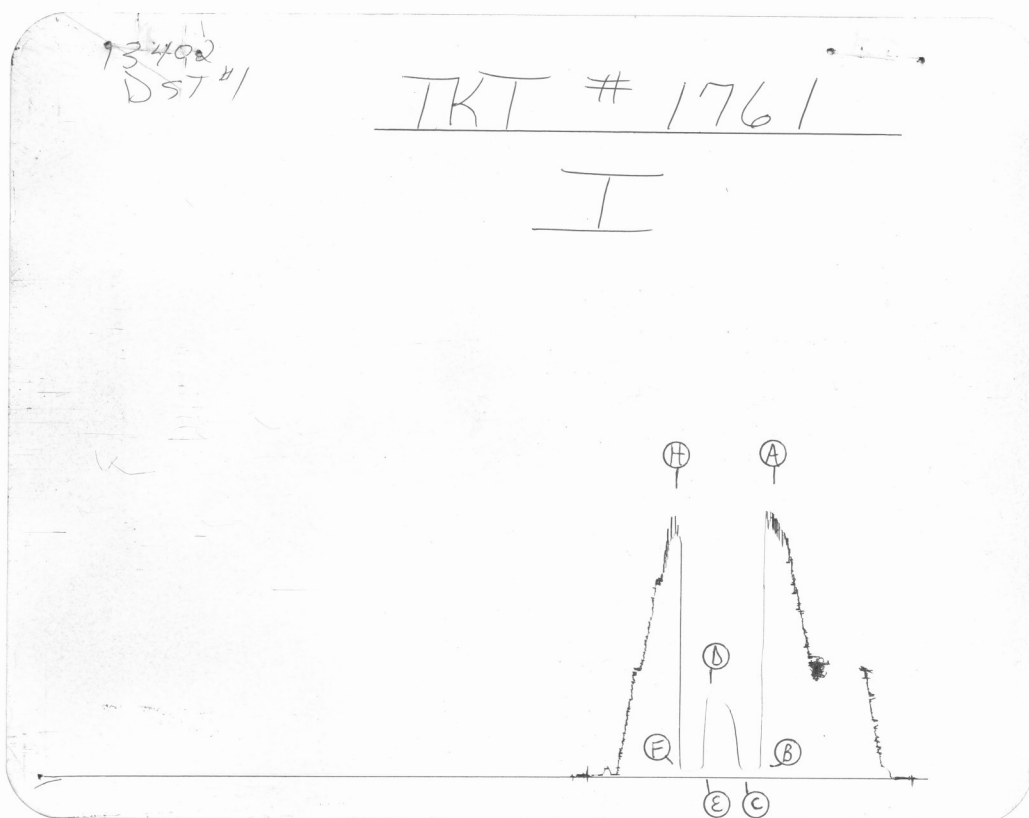
FORMATION: MISSISSIPPI

TOWNSHIP: 17S

OPEN TOOL: 7:55 PM

FINAL CLOSED-IN PRESSURE: MIN 0 MIN

29

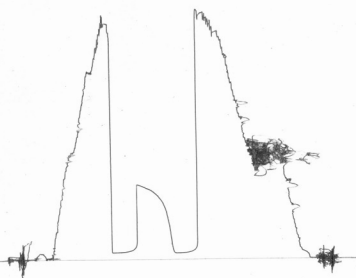


This is an actual photograph of recorder chart.

POINT	PRESSURE	
	Field Reading	Office Reading
(A) Initial Hydrostatic Mud	1304	1336 PSI
(B) First Initial Flow Pressure	49	32 PSI
(C) First Final Flow Pressure	49	32 PSI
(D) Initial Closed-in Pressure	423	420 PSI
(E) Second Initial Flow Pressure	49	32 PSI
(F) Second Final Flow Pressure	39	32 PSI
(G) Final Closed-in Pressure	-	- PSI
(H) Final Hydrostatic Mud	1264	1252 PSI

155.9
DST #1

TKT # 1761



NOMENCLATURE

b	== Approximate Radius of Investigation	Feet
b¹	== Approximate Radius of Investigation (Net Pay Zone h¹)	Feet
D.R.	== Damage Ratio	—
EI	== Elevation	Feet
GD	== B.T. Gauge Depth (From Surface Reference)	Feet
h	== Interval Tested	Feet
h¹	== Net Pay Thickness	Feet
K	== Permeability	md
K¹	== Permeability (From Net Pay Zone h¹)	md
m	== Slope Extrapolated Pressure Plot (Psi²/cycle Gas)	psi/cycle
OF¹	== Maximum Indicated Flow Rate	MCF/D
OF²	== Minimum Indicated Flow Rate	MCF/D
OF³	== Theoretical Open Flow Potential with/Damage Removed Max.	MCF/D
OF⁴	== Theoretical Open Flow Potential with/Damage Removed Min.	MCF/D
P^S	== Extrapolated Static Pressure	Psig.
P^F	== Final Flow Pressure	Psig.
P^{WT}	== Potentiometric Surface (Fresh Water*)	Feet
Q	== Average Adjusted Production Rate During Test	bbls/day
Q¹	== Theoretical Production w/Damage Removed	bbls/day
Q^g	== Measured Gas Production Rate	MCF/D
R	== Corrected Recovery	bbls
r^w	== Radius of Well Bore	Feet
t	== Flow Time	Minutes
t^o	== Total Flow Time	Minutes
T	== Temperature Rankine	°R
Z	== Compressibility Factor	—
u	== Viscosity Gas or Liquid	CP
Log	== Common Log	

* Potentiometric Surface Reference to Rotary Table When Elevation Not Given, Fresh Water Corrected to 100° F.