

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE: 6/23/83 TICKET #19019
CUSTOMER: SIGMA PETROLEUM LEASE: BERGMAN
WELL: 1 TEST: 1 GEOLOGIST: B B ARD
ELEVATION (KB): 0 FORMATION: KANSAS CITY
SECTION: 19 TOWNSHIP: 30S
RANGE: 6W COUNTY: KINGMAN STATE: KANSAS
GAUGE SN #13547 RANGE: 4225 CLOCK: 12

INTERVAL TEST FROM: 3750 FT TO: 3760 FT TOTAL DEPTH: 3760 FT
DEPTH OF SELECTIVE ZONE: FT
PACKER DEPTH: 3745 FT SIZE: 6 5/8 IN PACKER DEPTH: 3750 FT SIZE: 6 5/8 IN
PACKER DEPTH: FT SIZE: IN PACKER DEPTH: FT SIZE: IN

DRILLING CONTRACTOR: DAMAC
MUD TYPE: CHEM-DRIS. VISCOSITY: 42
WEIGHT: 8.9 WATER LOSS (CC): 12.0
CHLORIDES (P.P.M.): 13000
JARS - MAKE: WTC SERIAL NUMBER: 410
DID WELL FLOW? NO REVERSED OUT? NO
DRILL COLLAR LENGTH: 470 FT I.D.: 2 1/4 IN
WEIGHT PIPE LENGTH: FT I.D.: IN
DRILL PIPE LENGTH: 3251 FT I.D.: 3.8 IN
TEST TOOL LENGTH: 29 FT TOOL SIZE: 5 1/2 OD IN
ANCHOR LENGTH: 10 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 FH IN

BLOW: INITIAL FLOW PERIOD WEAK BLOW-
DIED IN 20 MINUTES.
FINAL FLOW PERIOD NO BLOW.

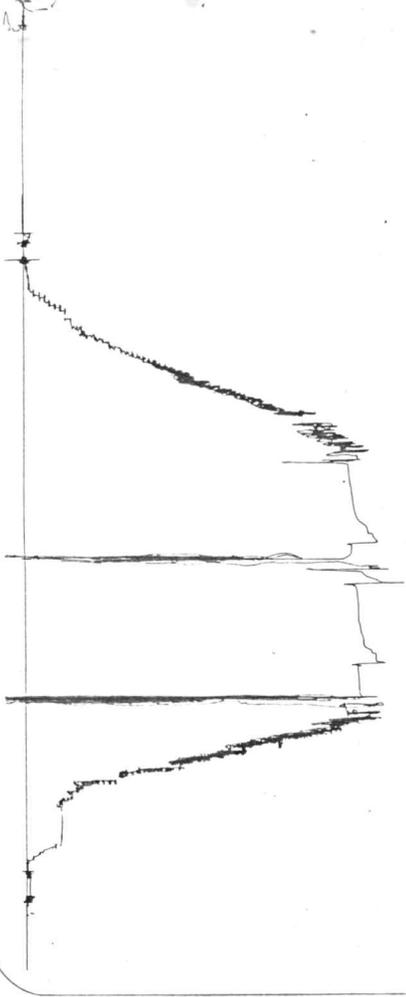
RECOVERED: 10 FT OF: DRILLING MUD
RECOVERED: FT OF:
RECOVERED: FT OF:

REMARKS: MISRUN.
FLUSHED TOOL ON SECOND FLOW.

TIME SET PACKER(S): 2:35 PM TIME STARTED OFF BOTTOM: 5:35 PM
WELL TEMPERATURE: 0 °F
INITIAL HYDROSTATIC PRESSURE: (A) 1765 PSI
INITIAL FLOW PERIOD MIN: 0 (B) 0 PSI TO (C) 0 PSI
INITIAL CLOSED IN PERIOD MIN: 0 (D) 0 PSI
FINAL FLOW PERIOD MIN: 0 (E) 0 PSI TO (F) 0 PSI
FINAL CLOSED IN PERIOD MIN: 0 (G) 0 PSI
FINAL HYDROSTATIC PRESSURE (H) 1765 PSI

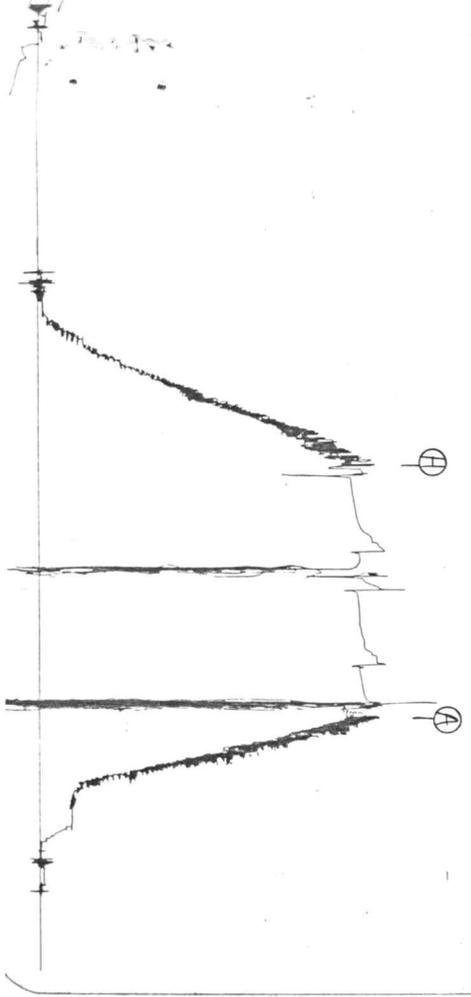
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IRI # 19019

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WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE: 6/25/83 TICKET #1436
CUSTOMER: SIGMA PETROLEUM LEASE: BERGMAN
WELL: 1 TEST: 2 GEOLOGIST: ?
ELEVATION (KB): 0 FORMATION: MISSISSIPPI
SECTION: 19 TOWNSHIP: 30S
RANGE: 6W COUNTY: KINGMAN STATE: KANSAS
GAUGE SN #13402 RANGE: 4025 CLOCK: 12

INTERVAL TEST FROM: 4161 FT TO: 4180 FT TOTAL DEPTH: 4180 FT
DEPTH OF SELECTIVE ZONE: FT
PACKER DEPTH: 4156 FT SIZE: 6 3/4 IN PACKER DEPTH: 4161 FT SIZE: 6 3/4 IN
PACKER DEPTH: FT SIZE: IN PACKER DEPTH: FT SIZE: IN

DRILLING CONTRACTOR: DAMAC
MUD TYPE: CHEMICAL VISCOSITY: 35
WEIGHT: 9.0 WATER LOSS (CC): 16.0
CHLORIDES (P.P.M.): 16000
JARS - MAKE: WTC SERIAL NUMBER: 411
DID WELL FLOW? NO REVERSED OUT? NO
DRILL COLLAR LENGTH: 480 FT I.D.: 2.2 IN
WEIGHT PIPE LENGTH: FT I.D.: IN
DRILL PIPE LENGTH: 3652 FT I.D.: 3.8 IN
TEST TOOL LENGTH: 29 FT TOOL SIZE: 5 1/2 OD IN
ANCHOR LENGTH: 19 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: STRONG.
GAS TO SURFACE IN 5 MINUTES.
SEE ATTACHED GAS SHEET.

RECOVERED: 60 FT OF: MUD (GAS CUT)
RECOVERED: 60 FT OF: MUD-FEW OIL SPECKS (GAS CUT)
RECOVERED: 240 FT OF: WATERY MUD-FEW OIL SPECKS (GAS CUT)
RECOVERED: FT OF: 70% MUD; 20% WATER; 1% OIL; 9% GAS
RECOVERED: FT OF:
RECOVERED: FT OF: CHLORIDES 42000 PPM
RECOVERED: FT OF:
RECOVERED: FT OF:
RECOVERED: FT OF:

REMARKS: SLID TOOL 15 FT. DURING INITIAL FLOW.
SLID 5 FT. DURING INITIAL SHUT-IN.

TIME SET PACKER(S): 6:15 AM TIME STARTED OFF BOTTOM: 10:15 AM
WELL TEMPERATURE: 119 °F
INITIAL HYDROSTATIC PRESSURE: (A) 1982 PSI
INITIAL FLOW PERIOD MIN: 50 (B) 111 PSI TO (C) 151 PSI
INITIAL CLOSED IN PERIOD MIN: 60 (D) 1386 PSI
FINAL FLOW PERIOD MIN: 60 (E) 135 PSI TO (F) 146 PSI
FINAL CLOSED IN PERIOD MIN: 63 (G) 1358 PSI
FINAL HYDROSTATIC PRESSURE (H) 1968 PSI

WESTERN TESTING CO. INC.
GAS FLOW REPORT

DATE: 6/25/83
 CUSTOMER: SIGMA PETROLEUM
 WELL: 1 TEST: 2
 ELEVATION (KB): 0 FORMATION: MISSISSIPPI
 SECTION: 19 TOWNSHIP: 30S
 RANGE: 6W COUNTY: KINGMAN STATE: KANSAS
 GAUGE SN #13402 RANGE: 4025 CLOCK: 12

TIME GAUGE (MIN) TESTER TYPE ORIFICE SIZE PRESSURE (PSI) FLOW DESCRIPTION

PRE FLOW

TIME (MIN)	TESTER TYPE	ORIFICE SIZE	PRESSURE (PSI)	FLOW DESCRIPTION
5				GAS TO SURFACE
5	MERLA	1/2	7 PSIG	94500 CFPD
10		1/2	11 PSIG	121000 CFPD
20		1/2	17 PSIG	159000 CFPD
30		1/2	19 PSIG	171000 CFPD
40		1/2	22 PSIG	189000 CFPD
50		1/2	28 PSIG	222000 CFPD
55		1/2	30 PSIG	231000 CFPD

SECOND FLOW

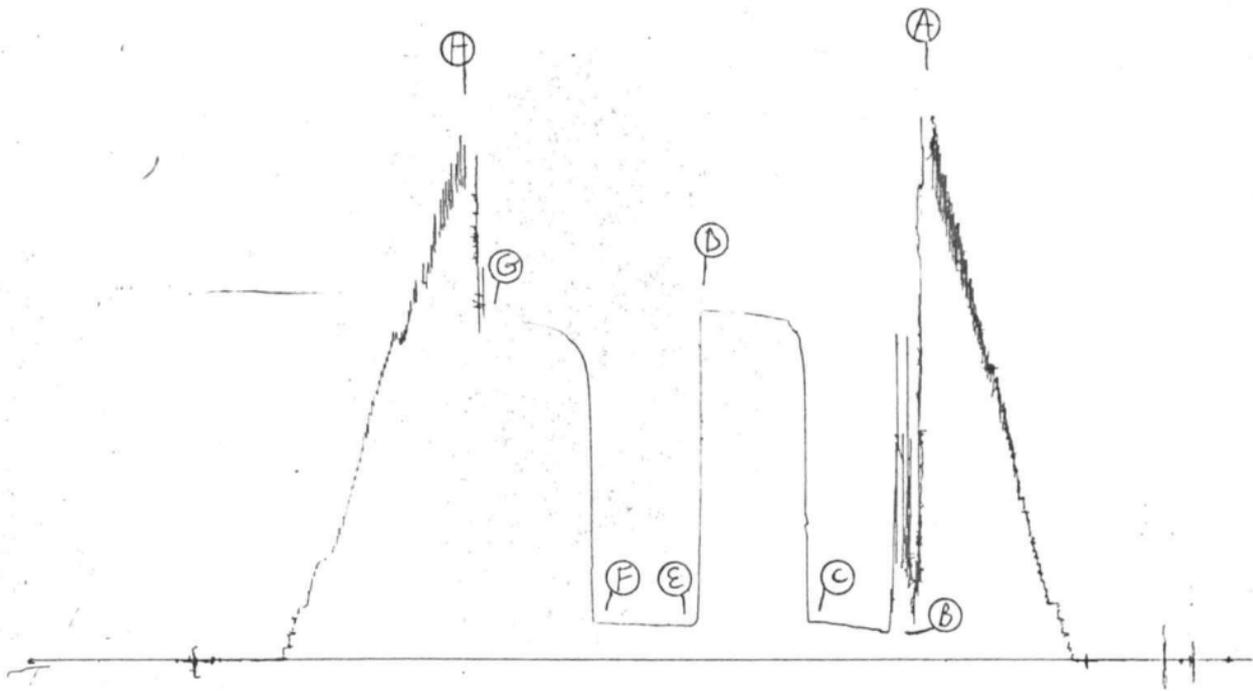
TIME (MIN)	TESTER TYPE	ORIFICE SIZE	PRESSURE (PSI)	FLOW DESCRIPTION
10	MERLA	3/4	10 PSIG	259000 CFPD
20		3/4	10 PSIG	259000 CFPD
30		3/4	10 PSIG	259000 CFPD
40		3/4	10 PSIG	259000 CFPD
50		3/4	10 PSIG	259000 CFPD
60		3/4	10 PSIG	259000 CFPD

GAS BOTTLE SN #:
 DATE BOTTLE FILLED:
 DATE TO BE INVOICED: 6/25/83

13402
DST#2

TKT # 1436

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WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE: 6/26/83 TICKET #1437
CUSTOMER: SIGMA PETROLEUM LEASE: BERGMAN
WELL: 1 TEST: 3 GEOLOGIST: BRUCE ARD
ELEVATION (KB): 0 FORMATION: MISSISSIPPI
SECTION: 19 TOWNSHIP: 30S
RANGE: 6W COUNTY: KINGMAN STATE: KANSAS
GAUGE SN #13402 RANGE: 4025 CLOCK: 12

INTERVAL TEST FROM: 4180 FT TO: 4200 FT TOTAL DEPTH: 4200 FT
DEPTH OF SELECTIVE ZONE: FT
PACKER DEPTH: 4175 FT SIZE: 6 3/4 IN PACKER DEPTH: 4180 FT SIZE: 6 3/4 IN
PACKER DEPTH: FT SIZE: IN PACKER DEPTH: FT SIZE: IN

DRILLING CONTRACTOR: DAMAC
MUD TYPE: CHEMICAL VISCOSITY: 43
WEIGHT: 9.1 WATER LOSS (CC): 12.6
CHLORIDES (P.P.M.): 15000
JARS - MAKE: WTC SERIAL NUMBER: 411
DID WELL FLOW? NO REVERSED OUT? NO
DRILL COLLAR LENGTH: 480 FT I.D.: 2.2 IN
WEIGHT PIPE LENGTH: FT I.D.: IN
DRILL PIPE LENGTH: 3671 FT I.D.: 3.8 IN
TEST TOOL LENGTH: 29 FT TOOL SIZE: 5 1/2 OD IN
ANCHOR LENGTH: 20 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: STRONG.
GAS TO SURFACE IN 5 MINUTES.
SEE ATTACHED GAS SHEET.

RECOVERED: 360 FT OF: FROGGY OIL
RECOVERED: 120 FT OF: CLEAN GASSY OIL
RECOVERED: 600 FT OF: WATER CHLORIDES 85000 PPM
RECOVERED: FT OF:
RECOVERED: FT OF:

REMARKS:

TIME SET PACKER(S): 12:40 AM TIME STARTED OFF BOTTOM: 4:40 AM
WELL TEMPERATURE: 118 °F
INITIAL HYDROSTATIC PRESSURE: (A) 1988 PSI
INITIAL FLOW PERIOD MIN: 60 (B) 141 PSI TO (C) 275 PSI
INITIAL CLOSED IN PERIOD MIN: 72 (D) 1278 PSI
FINAL FLOW PERIOD MIN: 60 (E) 324 PSI TO (F) 436 PSI
FINAL CLOSED IN PERIOD MIN: 60 (G) 1236 PSI
FINAL HYDROSTATIC PRESSURE (H) 1966 PSI

WESTERN TESTING CO. INC.
GAS FLOW REPORT

DATE: 6/26/83
CUSTOMER: SIGMA PETROLEUM
WELL: 1 TEST: 3
ELEVATION (KB): 0 FORMATION: MISSISSIPPI
SECTION: 19 TOWNSHIP: 30S
RANGE: 6W COUNTY: KINGMAN STATE: KANSAS
GAUGE SN #13402 RANGE: 4025 CLOCK: 12

TIME GAUGE TESTER TYPE ORIFICE PRESSURE FLOW DESCRIPTION
(MIN) (PSI)

PRE FLOW

5 GAS TO SURFACE
10 MERLA 1/2 5.5 PSIG 81800 CFPD
20 1/2 5.5 PSIG 81800 CFPD
30 1/2 5.0 PSIG 78100 CFPD
40 1/2 4.5 PSIG 73600 CFPD
50 1/2 3.5 PSIG 64000 CFPD
55 1/2 3.0 PSIG 59200 CFPD

SECOND FLOW

10 MERLA 1/2 20" WTR 28000 CFPD
20 1/2 32" WTR 35500 CFPD
30 1/2 30" WTR 34300 CFPD
40 1/2 22" WTR 29400 CFPD
50 1/2 15" WTR 24500 CFPD
60 1/2 18" WTR 26600 CFPD

GAS BOTTLE SN #:
DATE BOTTLE FILLED:
DATE TO BE INVOICED: 6/26/83

17402
DST # 3

TKT # 1437

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