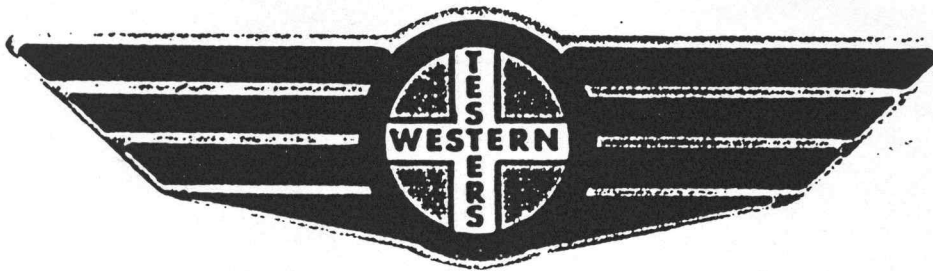


FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE	:	2-21-88	TICKET	:	12861
CUSTOMER	:	KACHINA OIL CO.	LEASE	:	HAGER
WELL	:	#1 TEST: 1	GEOLOGIST	:	M. DOUGLASS
ELEVATION	:	1893 KB	FORMATION	:	MISSISSIPPI
SECTION	:	31	TOWNSHIP	:	29S
RANGE	:	12W	STATE	:	KANSAS
GAUGE SN#	:	13552	RANGE	:	4050
			CLOCK	:	12

INTERVAL FROM	:	4320	TO	:	4390	TOTAL DEPTH	:	4390
DEPTH OF SELECTIVE ZONE	:							
PACKER DEPTH	:	4315	SIZE	:	6.63			
PACKER DEPTH	:	4320	SIZE	:	6.63			
PACKER DEPTH	:		SIZE	:				
PACKER DEPTH	:		SIZE	:				

DRILLING CON.	:	DUKE RIG 1			
MUD TYPE	:	LSND	VISCOSITY	:	62
WEIGHT	:	9.0	WATER LOSS (CC)	:	8.4
CHLORIDES (PPM)	:	3000			
JARS-MAKE	:	-	SERIAL NUMBER	:	-
DID WELL FLOW ?	:	NO	REVERSED OUT ?	:	NO

DRILL COLLAR LENGTH	:	0	FT	I.D. inch	:	0.00
WEIGHT PIPE LENGTH	:	910	FT	I.D. inch	:	2.70
DRILL PIPE LENGTH	:	3389	FT	I.D. inch	:	3.80
TEST TOOL LENGTH	:	21	FT	TOOL SIZE	:	5.50
ANCHOR LENGTH	:	70	FT	ANCHOR SIZE	:	5.50
SURFACE CHOKE SIZE	:	.75	IN	BOTTOM CHOKE SIZE	:	.75
MAIN HOLE SIZE	:	7.875	IN	TOOL JOINT SIZE	:	4.5 FH

BLOW COMMENT #1 : WEAK BLOW THROUGHOUT BOTH FLOW PERIODS.
BLOW COMMENT #2 :
BLOW COMMENT #3 :
BLOW COMMENT #4 :

RECOVERED : 90 FT OF: DRILLING MUD

Total Barrels Fluid = 0.64
Total Fluid Prod Rate = 10.80 BFPD
Indicated Wtr Rate = 1.08 BWPD

REMARK 1 :
REMARK 2 :
REMARK 3 :
REMARK 4 :

SET PACKER(S) : 4:45 AM

TIME STARTED OFF BOTTOM : 7:45 AM

WELL TEMPERATURE : 125

INITIAL HYDROSTATIC PRESSURE

(A) 2155

INITIAL FLOW PERIOD MIN: 25

(B) 85 PSI TO (C) : 85

INITIAL CLOSED IN PERIOD MIN: 30

(D) 102

FINAL FLOW PERIOD MIN: 60

(E) 95 PSI TO (F) : 99

FINAL CLOSED IN PERIOD MIN: 57

(G) 118

FINAL HYDROSTATIC PRESSURE

(H) 2145

WESTERN TESTING CO. INC.
WICHITA-KANSAS

Pressure Transient Report

COMPANY : KACHINA OIL CO.
RIG : PRATT-KASNAS
FIELD : HAGER
WELL : #1
DATE : 2-21-88
GAUGE NO : 13552

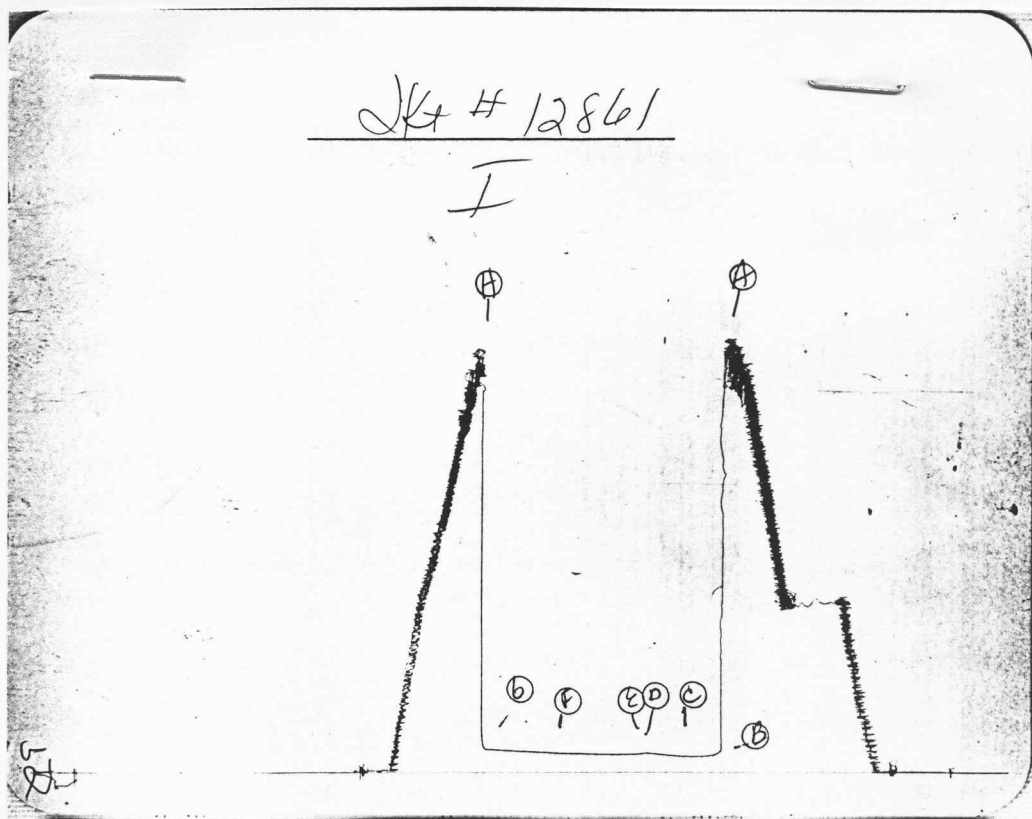
OPERATIONAL COMMENTS

COMPANY : KACHINA OIL CO.
WELL : #1
GAUGE # : 13552
DATE : 21/ 2/88

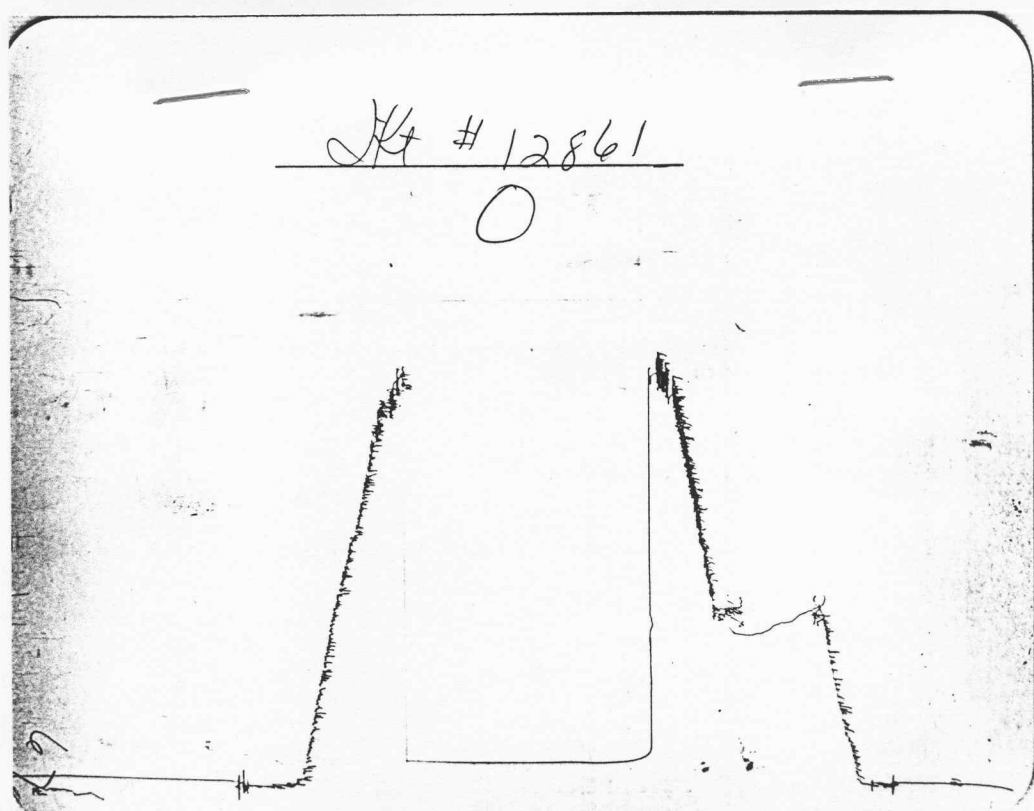
FIELD : HAGER
JOB # : 12861
DEPTH : 4390
TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
1	4:45: 0	0.000	85.000	125.00	0.000
2	4:49:59	0.083	85.000	125.00	0.000
3	4:55: 0	0.167	85.000	125.00	0.000
4	5: 0: 0	0.250	85.000	125.00	0.000
5	5: 4:59	0.333	85.000	125.00	0.000
6	5:10: 0	0.417	85.000	125.00	0.000
7	5:13: 0	0.467	85.000	125.00	0.000
8	5:16: 0	0.517	86.000	125.00	1.000
9	5:19: 0	0.567	88.000	125.00	2.000
10	5:22: 0	0.617	90.000	125.00	2.000
11	5:25: 0	0.667	92.000	125.00	2.000
12	5:28: 0	0.717	94.000	125.00	2.000
13	5:31: 0	0.767	96.000	125.00	2.000
14	5:34: 0	0.817	98.000	125.00	2.000
15	5:37: 0	0.867	100.000	125.00	2.000
16	5:40: 0	0.917	102.000	125.00	2.000
17	5:41: 0	0.933	95.000	125.00	-7.000
18	5:45: 0	1.000	95.000	125.00	0.000
19	5:50: 0	1.083	95.000	125.00	0.000
20	5:55: 0	1.167	95.000	125.00	0.000
21	6: 0: 0	1.250	95.000	125.00	0.000
22	6: 5: 0	1.333	95.000	125.00	0.000
23	6:10: 0	1.417	95.000	125.00	0.000
24	6:15: 0	1.500	96.000	125.00	1.000
25	6:20: 0	1.583	97.000	125.00	1.000
26	6:25: 0	1.667	98.000	125.00	1.000
27	6:30: 0	1.750	98.000	125.00	0.000
28	6:35: 0	1.833	99.000	125.00	1.000
29	6:40: 0	1.917	99.000	125.00	0.000
30	6:43: 0	1.967	100.000	125.00	1.000
31	6:46: 0	2.017	101.000	125.00	1.000
32	6:49: 0	2.067	102.000	125.00	1.000
33	6:52: 0	2.117	103.000	125.00	1.000
34	6:55: 0	2.167	104.000	125.00	1.000
35	6:58: 0	2.217	105.000	125.00	1.000
36	7: 1: 0	2.267	106.000	125.00	1.000
37	7: 4: 0	2.317	107.000	125.00	1.000
38	7: 7: 0	2.367	108.000	125.00	1.000
39	7:10: 0	2.417	109.000	125.00	1.000
40	7:13: 0	2.467	111.000	125.00	2.000
41	7:16: 0	2.517	112.000	125.00	1.000
42	7:19: 0	2.567	113.000	125.00	1.000
43	7:22: 0	2.617	114.000	125.00	1.000
44	7:25: 0	2.667	115.000	125.00	1.000
45	7:28: 0	2.717	116.000	125.00	1.000
46	7:31: 0	2.767	117.000	125.00	1.000
47	7:34: 0	2.817	118.000	125.00	1.000
48	7:37: 0	2.867	118.000	125.00	0.000

WESTERN TESTING CO. INC.

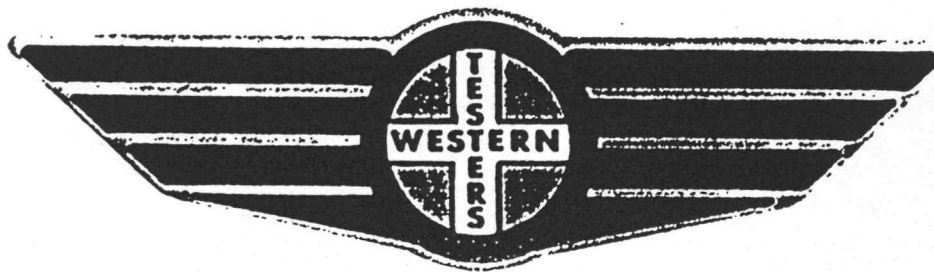


Inside Recorder



Outside Recorder

FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE	: 2-22-88	TICKET	: 12862
CUSTOMER	: KACHINA OIL CO.	LEASE	: HAGER
WELL	: #1 TEST: 2	GEOLOGIST	: M. DOUGLASS
ELEVATION	: 1893 KB	FORMATION	: VIOLA
SECTION	: 31	TOWNSHIP	: 29S
RANGE	: 12W	COUNTY	: PRAIRIE
GAUGE SN#	: 13552	RANGE	: 4050
		STATE	: KANSAS
		CLOCK	: 12

INTERVAL FROM	: 4493	TO	: 4517	TOTAL DEPTH	: 4517
DEPTH OF SELECTIVE ZONE	:				
PACKER DEPTH	: 4488	SIZE	: 6.63		
PACKER DEPTH	: 4493	SIZE	: 6.63		
PACKER DEPTH	:	SIZE	:		
PACKER DEPTH	:	SIZE	:		

DRILLING CON.	: DUKE	RIG	1		
MUD TYPE	: LSND	VISCOSITY	: 51		
WEIGHT	: 9.4	WATER LOSS (CC)	: 10.0		
CHLORIDES (PPM)	: 3000				
JARS-MAKE	: -	SERIAL NUMBER	: -		
DID WELL FLOW ?	: YES	REVERSED OUT ?	: NO		

DRILL COLLAR LENGTH	: 0	FT	I.D. inch	: 0.00
WEIGHT PIPE LENGTH	: 910	FT	I.D. inch	: 2.70
DRILL PIPE LENGTH	: 3562	FT	I.D. inch	: 3.80
TEST TOOL LENGTH	: 21	FT	TOOL SIZE	: 5.50
ANCHOR LENGTH	: 24	FT	ANCHOR SIZE	: 5.50
SURFACE CHOKE SIZE	: .75	IN	BOTTOM CHOKE SIZE	: .75
MAIN HOLE SIZE	: 7.875	IN	TOOL JOINT SIZE	: 4.5 FH

BLOW COMMENT #1 : STRONG BLOW THROUGHOUT BOTH FLOW PERIODS.
BLOW COMMENT #2 : GAS TO SURFACE IN 3 MINUTES ON THE INITIAL FLOW.
BLOW COMMENT #3 : SEE ATTACHED FLOW CHART.
BLOW COMMENT #4 :

RECOVERED : 60 FT OF: GAS CUT MUD (SCUM OF OIL)

Total Barrels Fluid = 0.42
Total Fluid Prod Rate = 7.65 BFPD
Indicated Wtr Rate = 0.76 BWPD

REMARK 1 :
REMARK 2 :
REMARK 3 :
REMARK 4 :

SET PACKER(S) : 12:30 AM
WELL TEMPERATURE : 126

TIME STARTED OFF BOTTOM : 3:30 AM

INITIAL HYDROSTATIC PRESSURE

(A) 2238

INITIAL FLOW PERIOD MIN: 25

(B) 254 PSI TO (C) : 228

INITIAL CLOSED IN PERIOD MIN: 30

(D) 1549

FINAL FLOW PERIOD MIN: 55

(E) 223 PSI TO (F) : 200

FINAL CLOSED IN PERIOD MIN: 60

(G) 1507

FINAL HYDROSTATIC PRESSURE

(H) 2226

GAS FLOW REPORT

Date : 2-22-88	Ticket # : 12862
Customer : KACHINA OIL COMPANY INC.	Lease : HAGER
Well : #1 Test : 2	Geologist : M. DOUGLASS
Elevation (KB) : 1893 Formation : VIOLA	
Section : 31 Township : 29S	
Range : 12W County : PRATT	State : KANSAS
Gauge SN # : 13552 Range : 4050	Clock : 12

TIME GAUGE (MIN)	TESTER TYPE	ORFICE SIZE	PRESSURE (PSI)	FLOW DESCRIPTION
			PRE FLOW =====	
3	MERLA	1/12"		GAS TO SURFACE
5			4	764000 CFPD
10			5	863000 CFPD
20			5	863000 CFPD
30			5	863000 CFPD
			SECOND FLOW =====	
5	MERLA	1 1/2"	3	654000 CFPD
10			4	764000 CFPD
20			5	863000 CFPD
30			5	863000 CFPD
40			5	863000 CFPD
50			5	863000 CFPD
60			5	863000 CFPD

Gas Bottle SN # : 22P
Date Bottle Filled : 2-22-88
Date to be Invoiced :

WESTERN TESTING CO. INC.
WICHITA-KANSAS

Pressure Transient Report

COMPANY : KACHINA OIL CO.
RIG : PRATT-KANSAS
FIELD : HAGER
WELL : #1
DATE : 2-22-88
GAUGE NO : 13552

OPERATIONAL COMMENTS

COMPANY : KACHINA OIL CO.

WELL : #1

GAUGE # : 13552

DATE : 22/ 2/88

FIELD : HAGER

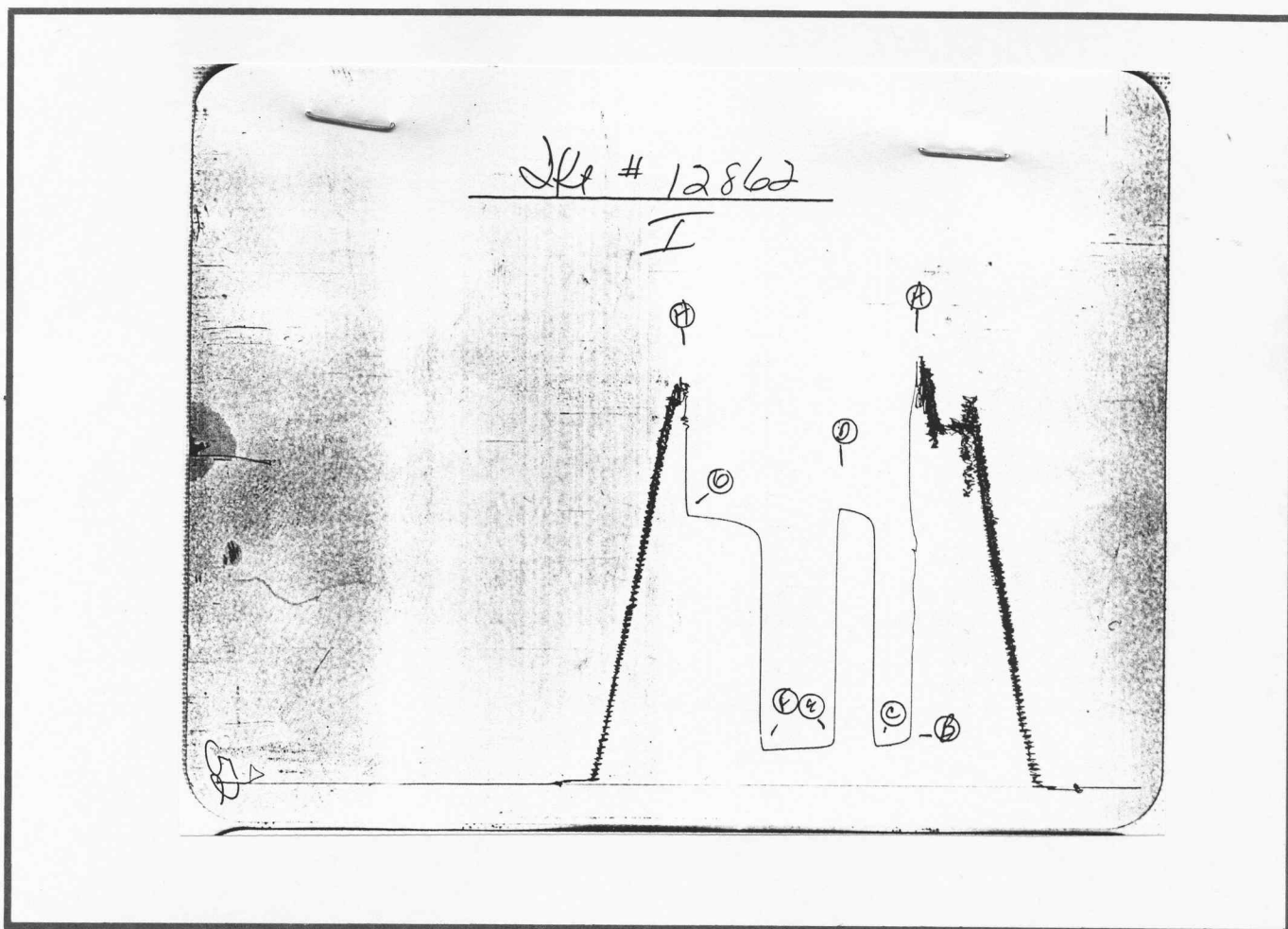
JOB # : 12862

DEPTH : 4517

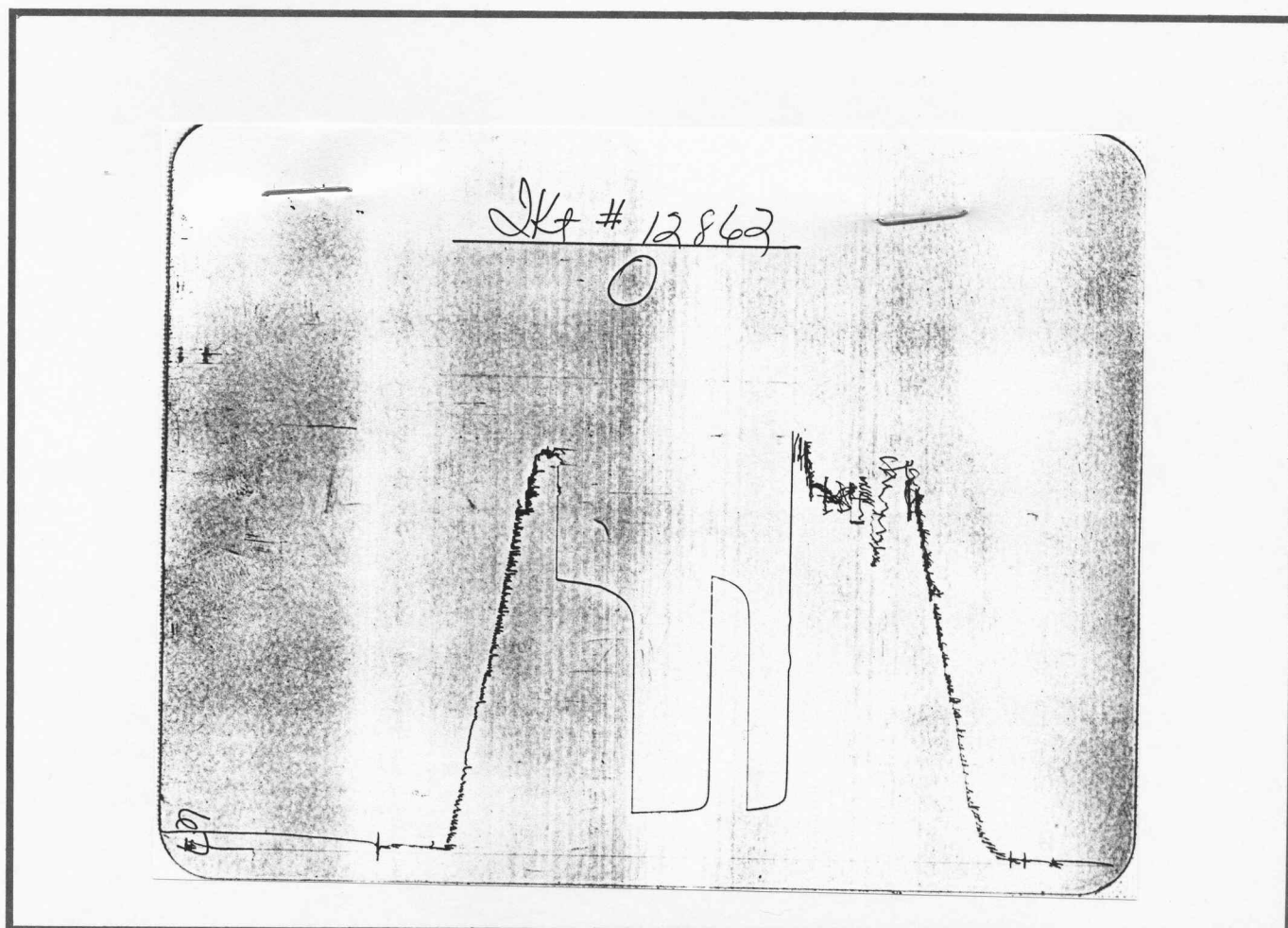
TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
1	12:30: 0	0.000	254.000	126.00	0.000
2	12:34:59	0.083	254.000	126.00	0.000
3	12:40: 0	0.167	241.000	126.00	-13.000
4	12:45: 0	0.250	235.000	126.00	-6.000
5	12:49:59	0.333	230.000	126.00	-5.000
6	12:55: 0	0.417	228.000	126.00	-2.000
7	12:58: 0	0.467	441.000	126.00	213.000
8	13: 1: 0	0.517	1465.000	126.00	1024.000
9	13: 4: 0	0.567	1495.000	126.00	30.000
10	13: 7: 0	0.617	1512.000	126.00	17.000
11	13:10: 0	0.667	1523.000	126.00	11.000
12	13:13: 0	0.717	1528.000	126.00	5.000
13	13:16: 0	0.767	1536.000	126.00	8.000
14	13:19: 0	0.817	1542.000	126.00	6.000
15	13:22: 0	0.867	1546.000	126.00	4.000
16	13:25: 0	0.917	1549.000	126.00	3.000
17	13:26: 0	0.933	223.000	126.00	-1326.000
18	13:30: 0	1.000	223.000	126.00	0.000
19	13:35: 0	1.083	217.000	126.00	-6.000
20	13:40: 0	1.167	215.000	126.00	-2.000
21	13:45: 0	1.250	213.000	126.00	-2.000
22	13:50: 0	1.333	211.000	126.00	-2.000
23	13:55: 0	1.417	209.000	126.00	-2.000
24	14: 0: 0	1.500	207.000	126.00	-2.000
25	14: 5: 0	1.583	205.000	126.00	-2.000
26	14:10: 0	1.667	204.000	126.00	-1.000
27	14:15: 0	1.750	202.000	126.00	-2.000
28	14:20: 0	1.833	200.000	126.00	-2.000
29	14:23: 0	1.883	811.000	126.00	611.000
30	14:26: 0	1.933	1390.000	126.00	579.000
31	14:29: 0	1.983	1417.000	126.00	27.000
32	14:32: 0	2.033	1433.000	126.00	16.000
33	14:35: 0	2.083	1445.000	126.00	12.000
34	14:38: 0	2.133	1455.000	126.00	10.000
35	14:41: 0	2.183	1463.000	126.00	8.000
36	14:44: 0	2.233	1470.000	126.00	7.000
37	14:47: 0	2.283	1475.000	126.00	5.000
38	14:50: 0	2.333	1479.000	126.00	4.000
39	14:53: 0	2.383	1483.000	126.00	4.000
40	14:56: 0	2.433	1487.000	126.00	4.000
41	14:59: 0	2.483	1490.000	126.00	3.000
42	15: 2: 0	2.533	1493.000	126.00	3.000
43	15: 5: 0	2.583	1495.000	126.00	2.000
44	15: 8: 0	2.633	1498.000	126.00	3.000
45	15:11: 0	2.683	1500.000	126.00	2.000
46	15:14: 0	2.733	1503.000	126.00	3.000
47	15:17: 0	2.783	1505.000	126.00	2.000
48	15:20: 0	2.833	1507.000	126.00	2.000

WESTERN TESTING CO. INC.



Inside Recorder



Outside Recorder