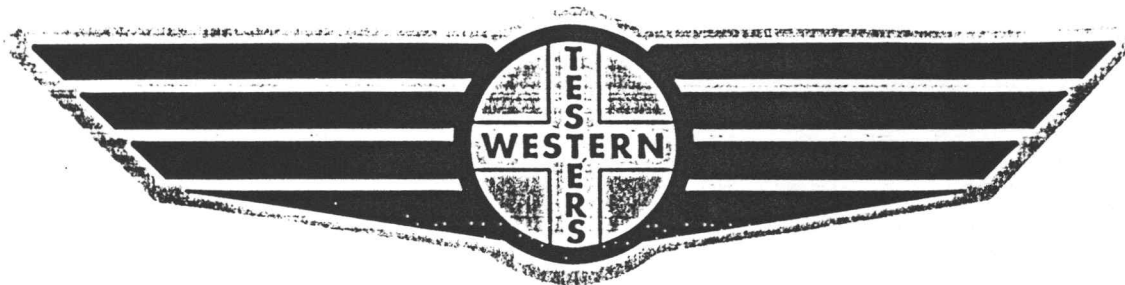


FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

COMPANY H & C OIL OPERATION & LEASE & WELL NO. SNYDER-FREEBERT 2 SEC. 11 TWP. 17S RGE. 10W TEST NO. 1 DATE 7/30/87
PENDLETON LAND & EXPLORATION

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE : 7-30-87 TICKET : 11759
CUSTOMER : H&C OIL OPER. & PENDLETON LAND & EXPLOR.
WELL : #2 TEST: 1 LEASE : SNYDER- FREEBERT
ELEVATION : NA GEOLOGIST : ??
SECTION : 11 FORMATION : LANSING
RANGE : 10W COUNTY : ELLSWORTH TOWNSHIP : 17S
GAUGE SN# : 13549 RANGE : 4100 STATE : KANSAS
CLOCK : 12

INTERVAL FROM : 2995 TO : 3010 TOTAL DEPTH : 3010

DEPTH OF SELECTIVE ZONE :

PACKER DEPTH : 2990 SIZE : 6.63
PACKER DEPTH : 2995 SIZE : 6.63
PACKER DEPTH : SIZE :
PACKER DEPTH : SIZE :

DRILLING CON. : ALLEN RIG
MUD TYPE : CHEMICAL
WEIGHT : 9.0
CHLORIDES (PPM) : 5000
JARS-MAKE : -
DID WELL FLOW ? : -

VISCOSITY : 40
WATER LOSS (CC) : 8.8
SERIAL NUMBER : -
REVERSED OUT ? : -

DRILL COLLAR LENGTH : 0 FT I.D. inch : 0.00
WEIGHT PIPE LENGTH : 0 FT I.D. inch : 0.00
DRILL PIPE LENGTH : 2975 FT I.D. inch : 3.80
TEST TOOL LENGTH : 20 FT TOOL SIZE : 5.50
ANCHOR LENGTH : 15 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 XH

BLOW COMMENT #1 : INITIAL FLOW-STRONG BLOW OFF BOTTOM IN 1 MINUTE.
BLOW COMMENT #2 : FINAL FLOW-STRONG BLOW OFF BOTTOM IN 1 MINUTE-GAS
BLOW COMMENT #3 : TO SURFACE IN 3 MINUTES. SEE ATTACHED CHART.
BLOW COMMENT #4 :

RECOVERED : 120 FT OF: FREE OIL 42 GRAVITY
RECOVERED : 255 FT OF: SLIGHTLY MUD CUT GASSY OIL
10% MUD-10% GAS-80% OIL
RECOVERED : 60 FT OF: SLIGHTLY MUD & WATER CUT GASSY OIL
10% MUD-10% WATER-20% GAS-60% OIL

CHLORIDES: 37000 PPM

Total Barrels Fluid = 6.10
Total Fluid Prod Rate = 117.15 BFPD
Indicated Oil Rate = 96.95 BOPD
Indicated Wtr Rate = 2.61 BWPD
Corrected Oil Rate = 76.26 BOPD
Corrected Wtr Rate = 2.05 BWPD

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

SET PACKER(S) : 12:25 PM
WELL TEMPERATURE : 108
INITIAL HYDROSTATIC PRESSURE (A) 1401
INITIAL FLOW PERIOD MIN: 30 (B) 66 PSI TO (C) : 104
INITIAL CLOSED IN PERIOD MIN: 60 (D) 799
FINAL FLOW PERIOD MIN: 45 (E) 118 PSI TO (F) : 166
FINAL CLOSED IN PERIOD MIN: 60 (G) 786
FINAL HYDROSTATIC PRESSURE (H) 1360
TIME STARTED OFF BOTTOM : 3:40 PM

WESTERN TESTING CO. INC.
WICHITA - KANSAS

Pressure Transient Report

COMPANY : H&C OIL OPER. & PENDLETON LAND & EXPLOR.
RIG : ELLSWORTH-KANSAS
FIELD : SNYDER- FREEBERT
WELL : #2
DATE : 7-30-87
GAUGE NO : 13549

OPERATIONAL COMMENTS

GAS FLOW REPORT

Date : 7-30-87		Ticket # : 11759
Customer : H & C & PENDLETON		Lease : SNYDER- FREEBERT
Well : #2	Test : 1	Geologist : ?
Elevation (KB) : NA	Formation : LANSING	
Section : 11	Township : 17S	
Range : 10W	County : ELLSEORTH	State : KANSAS
Gauge SN # : 13549	Range : 4100	Clock : 12

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

PRE FLOW

=====

SECOND FLOW

=====

3	MERLA	1/4"		GAS TO SURFACE
5			3	15700 CFPD
10			3.5	17100 CFPD
15			5.5	21500 CFPD
20			6	22900 CFPD
25			7.5	26100 CFPD
30			7	25000 CFPD
35			7	25000 CFPD
40			7	25000 CFPD
45			7	25000 CFPD

Gas Bottle SN # : 26
 Date Bottle Filled : 7-30-87
 Date to be Invoiced :

COMPANY : H&C OIL OPER. & PENDLETON LAND & EXPLOR.

FIELD : SNYDER- FREEBERT

WELL : #2

JOB # : 11759

GAUGE # : 13549

DEPTH : 3010

DATE : 30/ 7/87

TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P P1-P(1-1)
1	12:25: 0	0.000	66.000	108.00	0.000
2	12:29:59	0.083	66.000	108.00	0.000
3	12:35: 0	0.167	68.000	108.00	2.000
4	12:40: 0	0.250	72.000	108.00	4.000
5	12:44:59	0.333	83.000	108.00	11.000
6	12:50: 0	0.417	95.000	108.00	12.000
7	12:55: 0	0.500	104.000	108.00	9.000
8	12:58: 0	0.550	304.000	108.00	200.000
9	13: 1: 0	0.600	668.000	108.00	364.000
10	13: 4: 0	0.650	727.000	108.00	59.000
11	13: 7: 0	0.700	750.000	108.00	23.000
12	13:10: 0	0.750	762.000	108.00	12.000
13	13:13: 0	0.800	772.000	108.00	10.000
14	13:16: 0	0.850	778.000	108.00	6.000
15	13:19: 0	0.900	780.000	108.00	2.000
16	13:22: 0	0.950	782.000	108.00	2.000
17	13:25: 0	1.000	784.000	108.00	2.000
18	13:28: 0	1.050	788.000	108.00	4.000
19	13:31: 0	1.100	790.000	108.00	2.000
20	13:34: 0	1.150	793.000	108.00	3.000
21	13:37: 0	1.200	795.000	108.00	2.000
22	13:40: 0	1.250	796.000	108.00	1.000
23	13:43: 0	1.300	797.000	108.00	1.000
24	13:46: 0	1.350	798.000	108.00	1.000
25	13:49: 0	1.400	799.000	108.00	1.000
26	13:52: 0	1.450	799.000	108.00	0.000
27	13:55: 0	1.500	799.000	108.00	0.000
28	13:56: 0	1.517	118.000	108.00	-681.000
29	13:59:59	1.583	118.000	108.00	0.000
30	14: 5: 0	1.667	120.000	108.00	2.000
31	14:10: 0	1.750	126.000	108.00	6.000
32	14:14:59	1.833	131.000	108.00	5.000
33	14:20: 0	1.917	139.000	108.00	8.000
34	14:25: 0	2.000	145.000	108.00	6.000
35	14:29:59	2.083	154.000	108.00	9.000
36	14:35: 0	2.167	165.000	108.00	11.000
37	14:40: 0	2.250	166.000	108.00	1.000
38	14:43: 0	2.300	412.000	108.00	246.000
39	14:46: 0	2.350	672.000	108.00	260.000
40	14:49: 0	2.400	715.000	108.00	43.000
41	14:52: 0	2.450	735.000	108.00	20.000
42	14:55: 0	2.500	745.000	108.00	10.000
43	14:58: 0	2.550	754.000	108.00	9.000
44	15: 1: 0	2.600	760.000	108.00	6.000
45	15: 4: 0	2.650	766.000	108.00	6.000
46	15: 7: 0	2.700	768.000	108.00	2.000
47	15:10: 0	2.750	770.000	108.00	2.000
48	15:13: 0	2.800	772.000	108.00	2.000
49	15:16: 0	2.850	774.000	108.00	2.000
50	15:19: 0	2.900	776.000	108.00	2.000
51	15:22: 0	2.950	778.000	108.00	2.000
52	15:25: 0	3.000	780.000	108.00	2.000

COMPANY : H&C OIL OPER. & PENDLETON LAND & EXPLOR.

FIELD : SNYDER-FREEBERT

WELL : #2

JOB # : 11759

GAUGE # : 13549

DEPTH : 3010

DATE : 30/ 7/87

TEST :

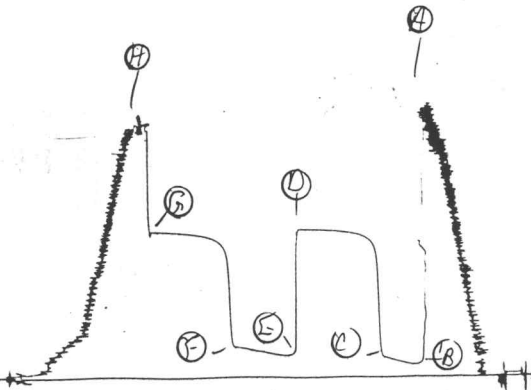
DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P P1-P(1-1)
53	15:28: 0	3.050	782.000	108.00	2.000
54	15:31: 0	3.100	783.000	108.00	1.000
55	15:34: 0	3.150	784.000	108.00	1.000
56	15:37: 0	3.200	785.000	108.00	1.000
57	15:40: 0	3.250	786.000	108.00	1.000

WESTERN TESTING CO. INC.

TK4 11759

13549
03149

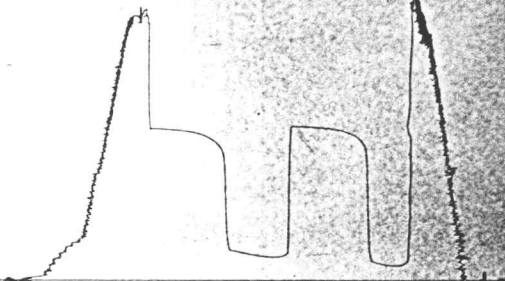
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TK4 11759

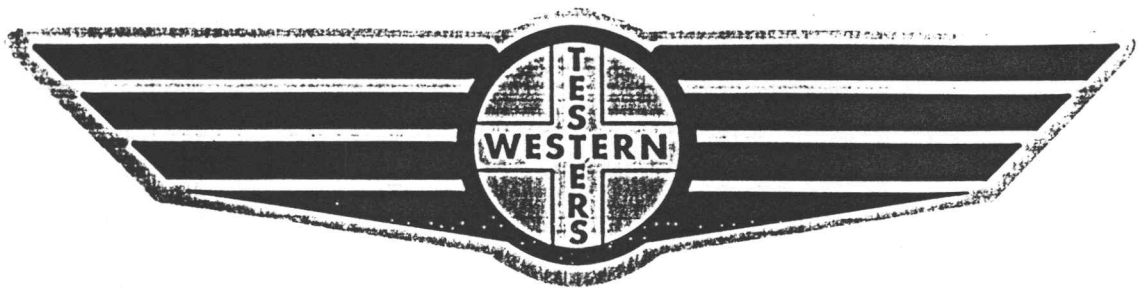
1332
AS72

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COMPANY H & C OIL OPERATION & LEASE & WELL NO. SNYDER-FREEBERT 2 SEC. 11 TWP. 17S RGE. 10W TEST NO. 2 DATE 7/31/87
PENDLETON LAND & EXPLORATION

FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE : 7-31-87 TICKET : 11760
CUSTOMER : H&C OIL OPER & PENDLETON LAND & EXPLOR.
WELL : #2 TEST: 2 LEASE : SNYDER-FREEBERT
ELEVATION : NA GEOLOGIST : R. SMITH
SECTION : 11 FORMATION : LANSING J
RANGE : 10W COUNTY : ELLSWORTH TOWNSHIP : 17S
GAUGE SN# : 13549 RANGE : 4100 STATE : KANSAS
CLOCK : 12

INTERVAL FROM : 3078 TO : 3110 TOTAL DEPTH : 3110

DEPTH OF SELECTIVE ZONE :

PACKER DEPTH : 3073 SIZE : 6.63
PACKER DEPTH : 3078 SIZE : 6.63
PACKER DEPTH : SIZE :
PACKER DEPTH : SIZE :

DRILLING CON. : ALLEN RIG #1

MUD TYPE : CHEMICAL

VISCOSITY : 40

WEIGHT : 9.0

WATER LOSS (CC) : 8.8

CHLORIDES (PPM) : 5000

JARS-MAKE : -

SERIAL NUMBER : -

DID WELL FLOW ? : -

REVERSED OUT ? : -

DRILL COLLAR LENGTH : 0 FT I.D. inch : 0.00
WEIGHT PIPE LENGTH : 0 FT I.D. inch : 0.00
DRILL PIPE LENGTH : 3058 FT I.D. inch : 3.80
TEST TOOL LENGTH : 20 FT TOOL SIZE : 5.50
ANCHOR LENGTH : 32 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 XH

BLOW COMMENT #1 : INITIAL FLOW-WEAK BLOW-BUILDING TO 2".

BLOW COMMENT #2 : FINAL FLOW-WEAK BLOW-BUILDING TO 2".

BLOW COMMENT #3 :

BLOW COMMENT #4 :

RECOVERED : 50 FT OF: SLIGHTLY OIL & WATER CUT MUD
5% OIL-15% WATER-80% MUD

CHLORIDES: 13000 PPM

Total Barrels Fluid = 0.70
Total Fluid Prod Rate = 11.22 BFPD
Indicated Oil Rate = 0.56 BOPD
Indicated Wtr Rate = 1.80 BWPD

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

SET PACKER(S) : 3:15 AM

TIME STARTED OFF BOTTOM : 7:15 AM

WELL TEMPERATURE : 108

INITIAL HYDROSTATIC PRESSURE

(A) 1491

INITIAL FLOW PERIOD MIN: 30

(B) 28 PSI TO (C) : 28

INITIAL CLOSED IN PERIOD MIN: 66

(D) 1000

FINAL FLOW PERIOD MIN: 60

(E) 37 PSI TO (F) : 37

FINAL CLOSED IN PERIOD MIN: 96

(G) 991

FINAL HYDROSTATIC PRESSURE

(H) 1434

WESTERN TESTING CO. INC.
WICHITA - KANSAS

Pressure Transient Report

COMPANY : H&C OIL OPER & PENDLETON LAND & EXPLOR.
RIG : ELLSWORTH-KANSAS
FIELD : SNYDER-FREEBERT
WELL : #2
DATE : 7-31-87
GAUGE NO : 13549

OPERATIONAL COMMENTS

COMPANY : H&C OIL OPER & PENDLETON LAND & EXPLOR.

FIELD : SNYDER- FREEBERT

WELL : #2

JOB # : 11760

GAUGE # : 13549

DEPTH : 3110

DATE : 31/ 7/87

TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
1	3:15: 0	0.000	28.000	108.00	0.000
2	3:19:59	0.083	28.000	108.00	0.000
3	3:25: 0	0.167	28.000	108.00	0.000
4	3:30: 0	0.250	28.000	108.00	0.000
5	3:34:59	0.333	28.000	108.00	0.000
6	3:40: 0	0.417	28.000	108.00	0.000
7	3:45: 0	0.500	28.000	108.00	0.000
8	3:48: 0	0.550	28.000	108.00	0.000
9	3:51: 0	0.600	33.000	108.00	5.000
10	3:54: 0	0.650	60.000	108.00	27.000
11	3:57: 0	0.700	133.000	108.00	73.000
12	4: 0: 0	0.750	284.000	108.00	151.000
13	4: 3: 0	0.800	509.000	108.00	225.000
14	4: 6: 0	0.850	739.000	108.00	230.000
15	4: 9: 0	0.900	833.000	108.00	94.000
16	4:12: 0	0.950	870.000	108.00	37.000
17	4:15: 0	1.000	894.000	108.00	24.000
18	4:18: 0	1.050	914.000	108.00	20.000
19	4:21: 0	1.100	928.000	108.00	14.000
20	4:24: 0	1.150	941.000	108.00	13.000
21	4:27: 0	1.200	952.000	108.00	11.000
22	4:30: 0	1.250	961.000	108.00	9.000
23	4:33: 0	1.300	970.000	108.00	9.000
24	4:36: 0	1.350	976.000	108.00	6.000
25	4:39: 0	1.400	981.000	108.00	5.000
26	4:42: 0	1.450	990.000	108.00	9.000
27	4:45: 0	1.500	993.000	108.00	3.000
28	4:48: 0	1.550	997.000	108.00	4.000
29	4:51: 0	1.600	1000.000	108.00	3.000
30	4:52: 0	1.617	37.000	108.00	-963.000
31	4:55:59	1.683	37.000	108.00	0.000
32	5: 1: 0	1.767	37.000	108.00	0.000
33	5: 6: 0	1.850	37.000	108.00	0.000
34	5:10:59	1.933	37.000	108.00	0.000
35	5:16: 0	2.017	37.000	108.00	0.000
36	5:21: 0	2.100	37.000	108.00	0.000
37	5:25:59	2.183	37.000	108.00	0.000
38	5:31: 0	2.267	37.000	108.00	0.000
39	5:36: 0	2.350	37.000	108.00	0.000
40	5:40:59	2.433	37.000	108.00	0.000
41	5:46: 0	2.517	37.000	108.00	0.000
42	5:51: 0	2.600	37.000	108.00	0.000
43	5:53:59	2.650	42.000	108.00	5.000
44	5:56:59	2.700	53.000	108.00	11.000
45	6: 0: 0	2.750	87.000	108.00	34.000
46	6: 3: 0	2.800	144.000	108.00	57.000
47	6: 6: 0	2.850	256.000	108.00	112.000
48	6: 8:59	2.900	441.000	108.00	185.000
49	6:11:59	2.950	630.000	108.00	189.000
50	6:15: 0	3.000	746.000	108.00	116.000
51	6:18: 0	3.050	806.000	108.00	60.000
52	6:21: 0	3.100	839.000	108.00	33.000

COMPANY : H&C OIL OPER & PENDLETON LAND & EXPLOR.
 FIELD : SNYDER- FREEBERT
 WELL : #2
 JOB # : 11760
 GAUGE # : 13549
 DEPTH : 3110
 DATE : 31/ 7/87
 TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
53	6:23:59	3.150	862.000	108.00	23.000
54	6:26:59	3.200	877.000	108.00	15.000
55	6:30: 0	3.250	890.000	108.00	13.000
56	6:33: 0	3.300	903.000	108.00	13.000
57	6:36: 0	3.350	914.000	108.00	11.000
58	6:38:59	3.400	922.000	108.00	8.000
59	6:41:59	3.450	930.000	108.00	8.000
60	6:45: 0	3.500	938.000	108.00	8.000
61	6:48: 0	3.550	944.000	108.00	6.000
62	6:51: 0	3.600	949.000	108.00	5.000
63	6:53:59	3.650	954.000	108.00	5.000
64	6:56:59	3.700	959.000	108.00	5.000
65	7: 0: 0	3.750	963.000	108.00	4.000
66	7: 3: 0	3.800	966.000	108.00	3.000
67	7: 6: 0	3.850	972.000	108.00	6.000
68	7: 8:59	3.900	975.000	108.00	3.000
69	7:11:59	3.950	979.000	108.00	4.000
70	7:15: 0	4.000	982.000	108.00	3.000
71	7:18: 0	4.050	984.000	108.00	2.000
72	7:21: 0	4.100	986.000	108.00	2.000
73	7:23:59	4.150	989.000	108.00	3.000
74	7:27: 0	4.200	991.000	108.00	2.000

WESTERN TESTING CO. INC.

WESTERN TESTING CO. INC.
WICHITA - KANSAS

WELL TEST ANALYSIS REPORT
HORNER METHOD
SHUTIN No. 2

Test #2

COMPANY. H&C OIL OPER & PENDLETON LAND & EXPLOR.
DATE 7-31-87
FIELD. SNYDER-FREEBERT
WELL #2
AREA ELLSWORTH-KANSAS
JOB NUMBER 11760
GAUGE NUMBER . . . 13549
GAUGE DEPTH. . . . 3110
ZONE TESTED. . . . 3078-3110

PHASE : OIL FUNCTION : PRESSURE

=====I=N=P=U=T====D=A=T=A====S=U=M=M=A=R=Y=====

THICKNESS.	H	5.0000E+00	Feet
POROSITY	POR	1.0000E-01	Frac
VISCOSITY.	U	2.4000E+00	Cp
FORMATION VOLUME FACTOR.	B	1.0052E+00	Rb/stb
TOTAL COMPRESSIBILITY.	Ct	1.2500E-06	Psi ⁻¹
WELLBORE RADIUS.	Rw	5.2000E-01	Feet
DRAINAGE RADIUS.	Re	1.5000E+03	Feet
RESERVOIR TEMPERATURE.	T	1.0800E+02	Deg F
GRAVITY OF FLUID	G	4.2000E+01	
PVT EVALUATION PRESSURE.	P	0.0000E+00	Psig
PRESSURE AT SHUT-IN.	Pwf	3.7000E+01	Psig
FINAL RECORDED PRESSURE.	Ps	9.9100E+02	Psig
PRODUCTION RATE.	Q	1.1220E+01	Bbl/day
TOTAL FLOW TIME.	T	1.0000E+00	Hours

=====R=E=G=R=E=S=S=I=O=N====R=E=S=U=L=T=S=====

LEAST SQUARE RESULTS OVER THE INTERVAL :
FROM 1.75 TO 1

SLOPE OF THE LINE. 3.9672E+02 psi/cycle
FALSE PRESSURE, PSTAR. 1.0745E+03 psi
PRESSURE AT 1 HOUR 9.5510E+02 psi

=====A=N=A=L=Y=S=I=S====R=E=S=U=L=T=S=====

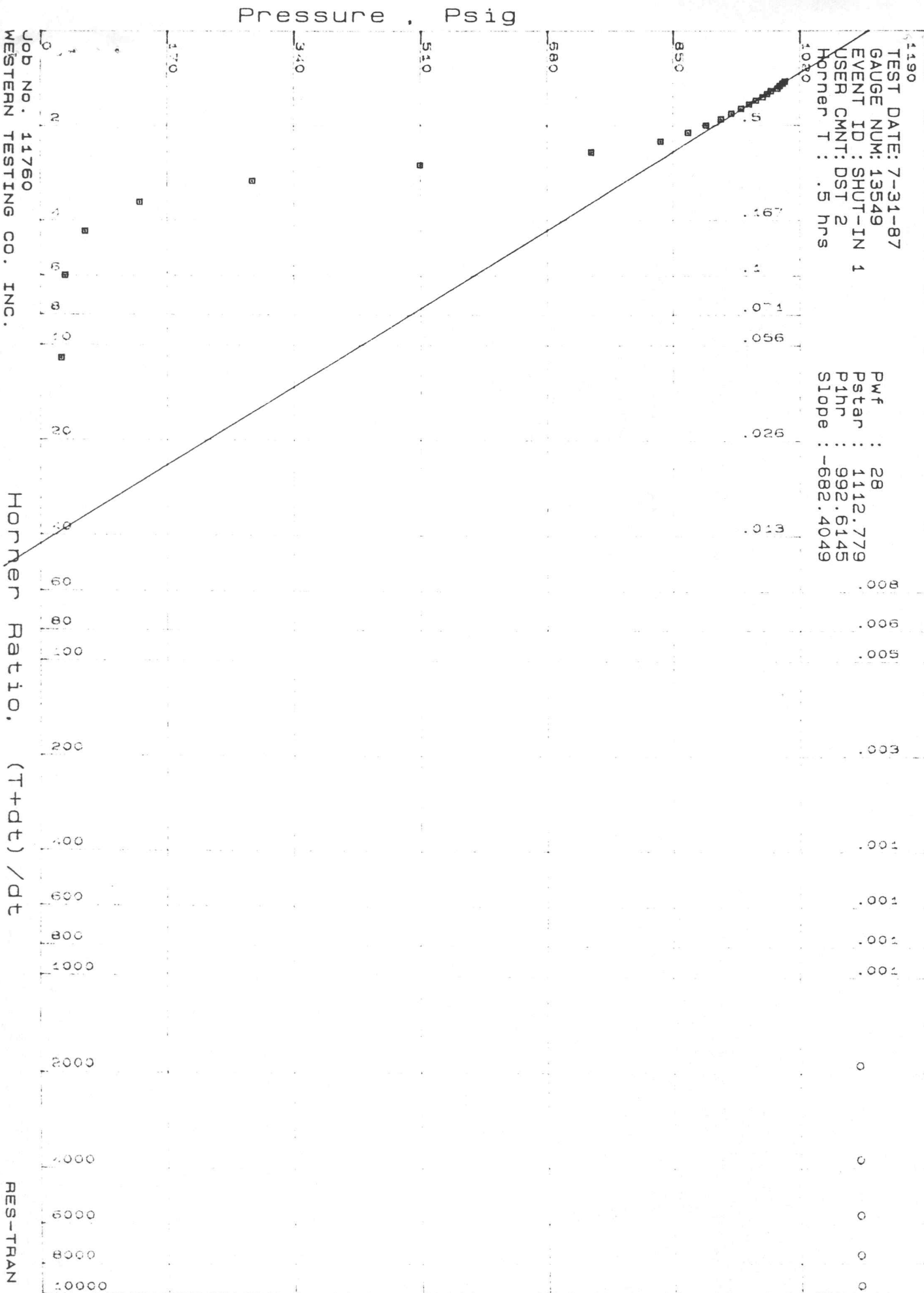
TRANSMISSIBILITY.	Kh/u	4.6225E+00	md-ft/cp
FLOW CAPACITY.	Kh	1.1094E+01	md-ft
PERMEABILITY to PHASE.	K	2.2188E+00	md
DAMAGE RATIO	Dr	6.2168E-01	
RADIUS OF INVESTIGATION.	Rinv	8.8328E+01	ft
SKIN FACTOR.	S	-1.8325E+00	
AVERAGE PRESSURE	Pbar	1.0739E+03	psig
DIMENSIONLESS TIME	Tda	2.7623E-04	
MATTHEWS-BRONS-HAZEBROEK	PDmbh	3.4712E-03	

COMPANY: H&C OIL OPER. & PENDLETON LAND & EXPLORELL #2
 FIELD: SNYDER-FREEBERRY LOCATION: ELLSWORTH-KANSAS

PROCESSED: 08-07-1987
 ENGINEER: LARRY KING

TEST DATE: 7-31-87
 GAUGE NUM: 13549
 EVENT ID: SHUT-IN 1
 USER CMNT: DST 2
 Horner T: .5 hrs

Pwf : 28
 Pstar : 1112.779
 P1hr : 992.6145
 Slope : -682.4049



COMPANY: H&C OIL OPER & PENDLETON LAND & EXPLORE
FIELD: SNYDER-FREEBERT LOCATION: #2 ELLSWORTH-KANSAS

PROCESSED: 08-07-1987
ENGINEER: LARRY KING

TEST DATE: 7-31-87

GAUGE NUM: 13549

EVENT ID: SHUT-IN 2

USER CMNT: DST 2
Horner T: 1 hrs

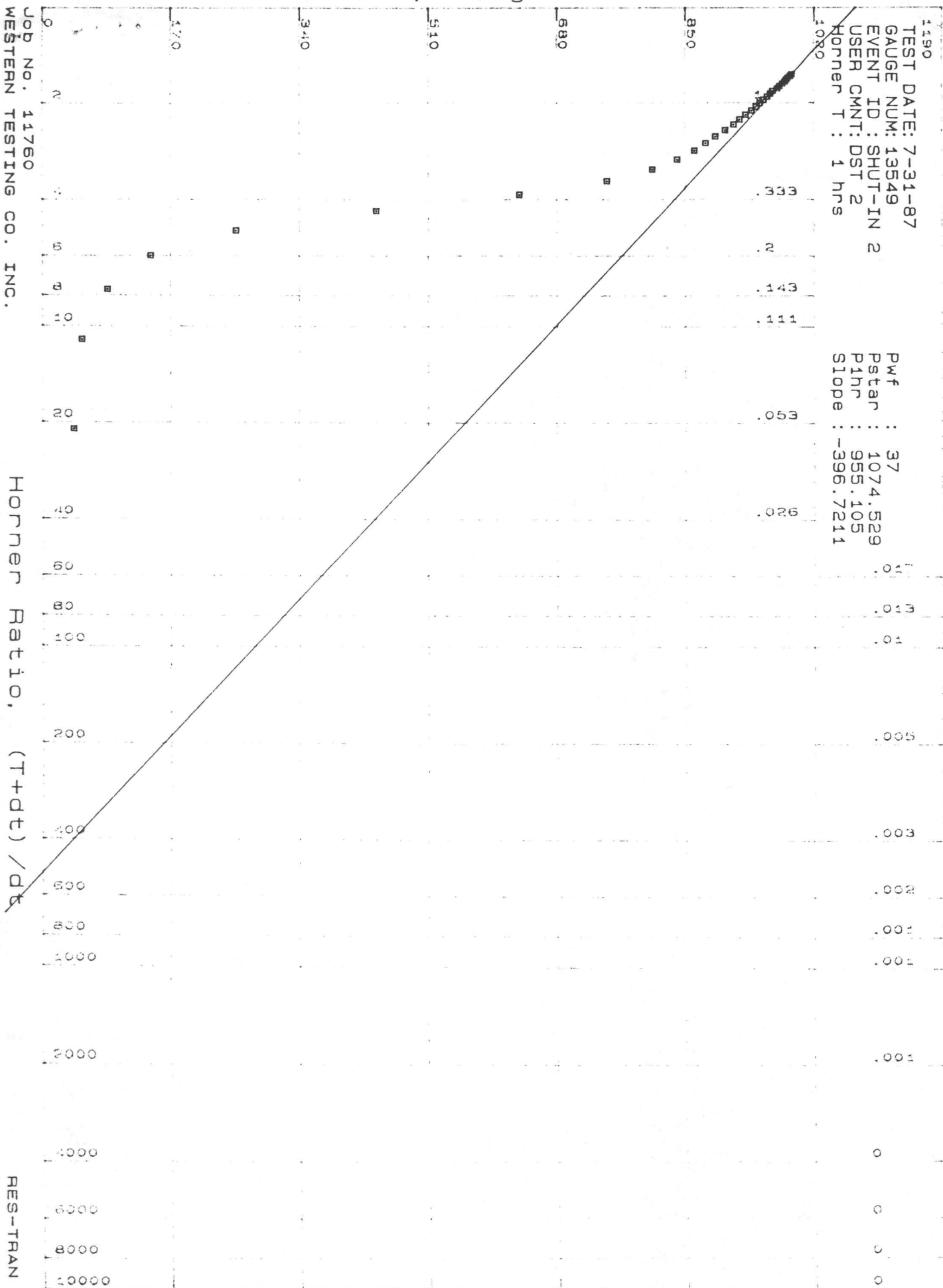
Pwf : 37

Pstar : 1074.529

P1hr : 955.105
Slope : -396.7211

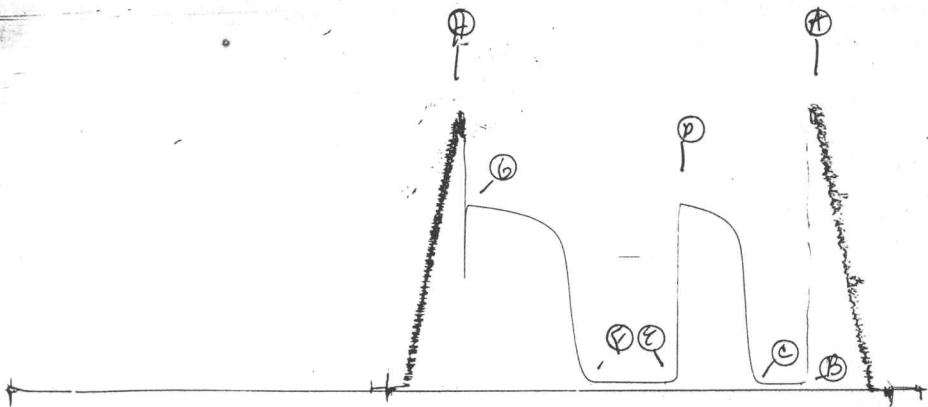
Pressure, Psig

Job No. 11760
WESTERN TESTING CO. INC.
Horner Ratio, (T+dt)/dt
RES-TRAN



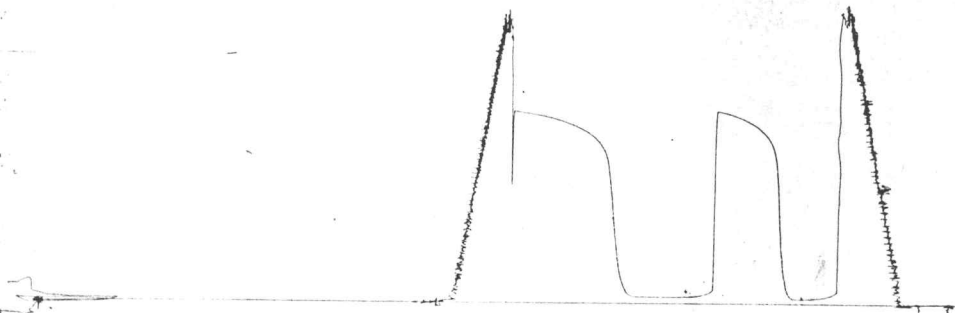
13549
ASTH

KT # 11760
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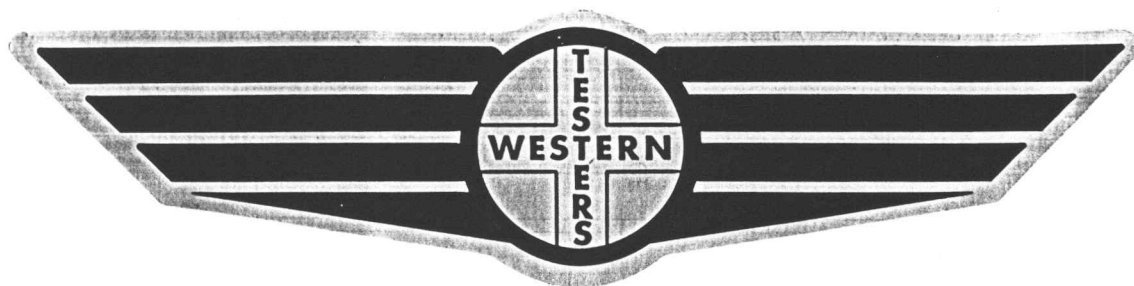
13553
DST#

AK # 11760
O



COMPANY H & C OIL OPERATION & LEASE & WELL NO. SNYDER-FREBERT 2 SEC. 11 TWP. 17S RGE. 10W TEST NO. 3 DATE 7/31/87
PENDLETON LAND & EXPLORATION

FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE : 7-31-87 TICKET : 11762
CUSTOMER : H&C OIL OPER. & PENDLETON LAND & EXPLOR.
WELL : #2 TEST: 3 LEASE : SNYDER- FREEBERT
ELEVATION : NA GEOLOGIST : R. SMITH
SECTION : 11 FORMATION : ARBUCKLE
RANGE : 10W COUNTY : ELLSWORTH TOWNSHIP : 17S
GAUGE SN# : 13549 RANGE : 4100 STATE : KANSAS
CLOCK : 12

INTERVAL FROM : 3249 TO : 3255 TOTAL DEPTH : 3255
DEPTH OF SELECTIVE ZONE :
PACKER DEPTH : 3244 SIZE : 6.63
PACKER DEPTH : 3249 SIZE : 6.63
PACKER DEPTH : SIZE :
PACKER DEPTH : SIZE :

DRILLING CON. : ALLEN RIG #1
MUD TYPE : CHEMICAL VISCOSITY : 47
WEIGHT : 9.1 WATER LOSS (CC) : 8.
CHLORIDES (PPM) : 7000
JARS-MAKE : - SERIAL NUMBER : -
DID WELL FLOW ? : NO REVERSED OUT ? : -

DRILL COLLAR LENGTH : 0 FT I.D. inch : 0.00
WEIGHT PIPE LENGTH : 0 FT I.D. inch : 0.00
DRILL PIPE LENGTH : 3223 FT I.D. inch : 3.80
TEST TOOL LENGTH : 26 FT TOOL SIZE : 5.50
ANCHOR LENGTH : 6 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 XH

BLOW COMMENT #1 : INITIAL FLOW-WEAK BLOW INCREASED TO 1" AT END OF FLOW.
BLOW COMMENT #2 : FINAL FLOW-WEAK BLOW INCREASED TO 1".
BLOW COMMENT #3 :
BLOW COMMENT #4 :

RECOVERED : 20 FT OF: CLEAN GASSY OIL
10% GAS-90% OIL
42 GRAVITY NO CORRECTION
RECOVERED : 15 FT OF: OIL CUT MUD
10% OIL-90% MUD

Total Barrels Fluid = 0.49
Total Fluid Prod Rate = 7.85 BFPD
Indicated Oil Rate = 4.83 BOPD
Indicated Wtr Rate = 0.31 BWPD
Corrected Oil Rate = 3.81 BOPD
Corrected Wtr Rate = 0.25 BWPD

REMARK 1 :
REMARK 2 : RECOVERED 180 FEET OF GAS ABOVE FLUID.
REMARK 3 :
REMARK 4 :

SET PACKER(S) : 9:35 PM
WELL TEMPERATURE : 0
INITIAL HYDROSTATIC PRESSURE (A) 1571
INITIAL FLOW PERIOD MIN: 30 (B) 26 PSI TO (C) : 26
INITIAL CLOSED IN PERIOD MIN: 66 (D) 967
FINAL FLOW PERIOD MIN: 60 (E) 32 PSI TO (F) : 32
FINAL CLOSED IN PERIOD MIN: 93 (G) 964
FINAL HYDROSTATIC PRESSURE (H) 1571

WESTERN TESTING CO. INC.
WICHITA - KANSAS

Pressure Transient Report

COMPANY : H&C OIL OPER. & PENDLETON LAND & EXPLOR.
RIG : ELLSWORTH-KANSAS
FIELD : SNYDER- FREEBERT
WELL : #2
DATE : 7-31-87
GAUGE NO : 13549

OPERATIONAL COMMENTS

RECOVERED 180 FEET OF GAS ABOVE FLUID.

COMPANY : H&C OIL OPER. & PENDLETON LAND & EXPLOR.

FIELD : SNYDER-FREEBORT

WELL : #2

JOB # : 11762

GAUGE # : 13549

DEPTH : 3255

DATE : 31/ 7/87

TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
1	9:35: 0	0.000	26.000	0.00	0.000
2	9:39:59	0.083	26.000	0.00	0.000
3	9:45: 0	0.167	26.000	0.00	0.000
4	9:50: 0	0.250	26.000	0.00	0.000
5	9:54:59	0.333	26.000	0.00	0.000
6	10: 0: 0	0.417	26.000	0.00	0.000
7	10: 5: 0	0.500	26.000	0.00	0.000
8	10: 8: 0	0.550	26.000	0.00	0.000
9	10:11: 0	0.600	45.000	0.00	19.000
10	10:14: 0	0.650	255.000	0.00	210.000
11	10:17: 0	0.700	610.000	0.00	355.000
12	10:20: 0	0.750	721.000	0.00	111.000
13	10:23: 0	0.800	777.000	0.00	56.000
14	10:26: 0	0.850	814.000	0.00	37.000
15	10:29: 0	0.900	840.000	0.00	26.000
16	10:32: 0	0.950	863.000	0.00	23.000
17	10:35: 0	1.000	878.000	0.00	15.000
18	10:38: 0	1.050	892.000	0.00	14.000
19	10:41: 0	1.100	908.000	0.00	16.000
20	10:44: 0	1.150	916.000	0.00	8.000
21	10:47: 0	1.200	925.000	0.00	9.000
22	10:50: 0	1.250	932.000	0.00	7.000
23	10:53: 0	1.300	941.000	0.00	9.000
24	10:56: 0	1.350	947.000	0.00	6.000
25	10:59: 0	1.400	952.000	0.00	5.000
26	11: 2: 0	1.450	956.000	0.00	4.000
27	11: 5: 0	1.500	959.000	0.00	3.000
28	11: 8: 0	1.550	961.000	0.00	2.000
29	11:11: 0	1.600	967.000	0.00	6.000
30	11:12: 0	1.617	32.000	0.00	-935.000
31	11:15:59	1.683	32.000	0.00	0.000
32	11:21: 0	1.767	32.000	0.00	0.000
33	11:26: 0	1.850	32.000	0.00	0.000
34	11:30:59	1.933	32.000	0.00	0.000
35	11:36: 0	2.017	32.000	0.00	0.000
36	11:41: 0	2.100	32.000	0.00	0.000
37	11:45:59	2.183	32.000	0.00	0.000
38	11:51: 0	2.267	32.000	0.00	0.000
39	11:56: 0	2.350	32.000	0.00	0.000
40	12: 0:59	2.433	32.000	0.00	0.000
41	12: 6: 0	2.517	32.000	0.00	0.000
42	12:11: 0	2.600	32.000	0.00	0.000
43	12:13:59	2.650	60.000	0.00	28.000
44	12:16:59	2.700	333.000	0.00	273.000
45	12:20: 0	2.750	582.000	0.00	249.000
46	12:23: 0	2.800	679.000	0.00	97.000
47	12:26: 0	2.850	731.000	0.00	52.000
48	12:28:59	2.900	770.000	0.00	39.000
49	12:31:59	2.950	801.000	0.00	31.000
50	12:35: 0	3.000	820.000	0.00	19.000
51	12:38: 0	3.050	838.000	0.00	18.000
52	12:41: 0	3.100	854.000	0.00	16.000

COMPANY : H&C OIL OPER. & PENDLETON LAND & EXPLOR.

FIELD : SNYDER- FREEBERT

WELL : #2

JOB # : 11762

GAUGE # : 13549

DEPTH : 3255

DATE : 31/ 7/87

TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P P _i -P _(i-1)
53	12:43:59	3.150	865.000	0.00	11.000
54	12:46:59	3.200	879.000	0.00	14.000
55	12:50: 0	3.250	887.000	0.00	8.000
56	12:53: 0	3.300	898.000	0.00	11.000
57	12:56: 0	3.350	905.000	0.00	7.000
58	12:58:59	3.400	911.000	0.00	6.000
59	13: 1:59	3.450	917.000	0.00	6.000
60	13: 5: 0	3.500	923.000	0.00	6.000
61	13: 8: 0	3.550	928.000	0.00	5.000
62	13:11: 0	3.600	933.000	0.00	5.000
63	13:13:59	3.650	936.000	0.00	3.000
64	13:17: 0	3.700	941.000	0.00	5.000
65	13:20: 0	3.750	944.000	0.00	3.000
66	13:23: 0	3.800	947.000	0.00	3.000
67	13:26: 0	3.850	951.000	0.00	4.000
68	13:29: 0	3.900	953.000	0.00	2.000
69	13:32: 0	3.950	956.000	0.00	3.000
70	13:35: 0	4.000	958.000	0.00	2.000
71	13:38: 0	4.050	960.000	0.00	2.000
72	13:41: 0	4.100	962.000	0.00	2.000
73	13:43:59	4.150	964.000	0.00	2.000

WESTERN TESTING CO. INC.

WESTERN TESTING CO. INC.
WICHITA - KANSAS

WELL TEST ANALYSIS REPORT
HORNER METHOD
SHUTIN No. 2

Test # 3

COMPANY. H&C OIL OPER. & PENDLETON LAND & EXPLOR.
DATE 7-31-87
FIELD. SNYDER-FREEBERT
WELL #2
AREA ELLSWORTH-KANSAS
JOB NUMBER 11762
GAUGE NUMBER . . . 13549
GAUGE DEPTH. . . . 3255
ZONE TESTED. . . . 3249-3255

PHASE : OIL FUNCTION : PRESSURE

=====I=N=P=U=T====D=A=T=A====S=U=M=M=A=R=Y=====

THICKNESS.	H	3.0000E+00	Feet
POROSITY	POR	1.2000E-01	Frac
VISCOSITY.	U	2.4000E+00	Cp
FORMATION VOLUME FACTOR.	B	1.0052E+00	Rb/stb
TOTAL COMPRESSIBILITY.	Ct	1.5250E-05	Psi ⁻¹
WELLBORE RADIUS.	Rw	5.2000E-01	Feet
DRAINAGE RADIUS.	Re	1.5000E+03	Feet
RESERVOIR TEMPERATURE.	T	1.1000E+02	Deg F
GRAVITY OF FLUID	G	4.2000E+01	
PVT EVALUATION PRESSURE.	P	0.0000E+00	Psig
PRESSURE AT SHUT-IN.	Pwf	3.2000E+01	Psig
FINAL RECORDED PRESSURE.	Ps	9.6400E+02	Psig
PRODUCTION RATE.	Q	7.8500E+00	Bbl/day
TOTAL FLOW TIME.	T	1.0000E+00	Hours

=====R=E=G=R=E=S=S=I=O=N====R=E=S=U=L=T=S=====

LEAST SQUARE RESULTS OVER THE INTERVAL :
FROM 2 TO 1.6

SLOPE OF THE LINE. 3.7033E+02 psi/cycle
FALSE PRESSURE, PSTAR. 1.0446E+03 psi
PRESSURE AT 1 HOUR 9.3310E+02 psi

=====A=N=A=L=Y=S=I=S====R=E=S=U=L=T=S=====

TRANSMISSIBILITY.	Kh/u	3.4646E+00	md-ft/cp
FLOW CAPACITY.	Kh	8.3151E+00	md-ft
PERMEABILITY to PHASE.	K	2.7717E+00	md
DAMAGE RATIO	Dr	8.7140E-01	
RADIUS OF INVESTIGATION.	Rinv	2.5801E+01	ft
SKIN FACTOR.	S	-4.6486E-01	
AVERAGE PRESSURE	Pbar	1.0445E+03	psig
DIMENSIONLESS TIME	Tda	2.3570E-05	
MATTHEWS-BRONS-HAZEBROEK	PDmbh	2.9619E-04	

COMPANY: H&C OIL OPER. & PENDLETON LAND & EXPLORATION
 FIELD: SNYDER-FREEBERT LOCATION: #2 ELLSWORTH-KANSAS

PROCESSED: 08-07-1987
 ENGINEER: LARRY KING

TEST DATE: 7-31-87
 GAUGE NUM: 13549
 EVENT ID: SHUT-IN 1
 USER CMNT: DST 3
 Horner T: .5 hrs

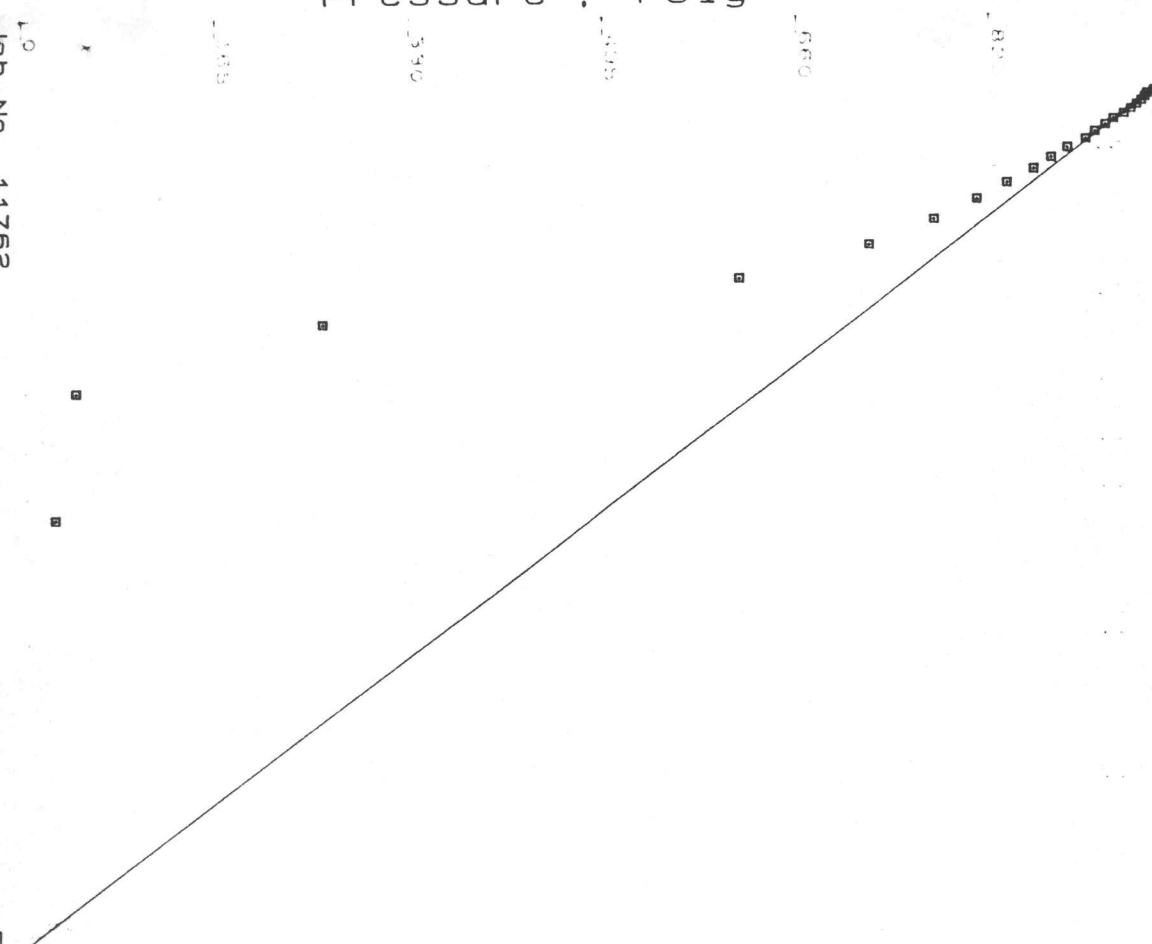
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 Pstar : 1056.172
 P1hr : 959.3257
 Slope : -549.9827

Pressure, Psig

Job No. 11762
 WESTERN TESTING CO. INC.

Horner Ratio, (T+dt) / dt

RES-TRAN



COMPANY: H&C OIL OPER. & PENDLETON LAND & EXPLORATION
FIELD: SNYDER-FREEBET LOCATION: #2 ELLSWORTH-KANSAS

TEST DATE: 7-31-87
GAUGE NUM: 13549
EVENT ID: SHUT-IN 2
USER CMNT: DST 3
Horner T: 1 hrs

Pwf : 32
Pstar : 1044.576
P1hr : 933.0969
Slope : -370.3276

PROCESSED: 08-07-1987
ENGINEER: LARRY KING

Pressure, Psig

Job No. 11762
WESTERN TESTING CO. INC.

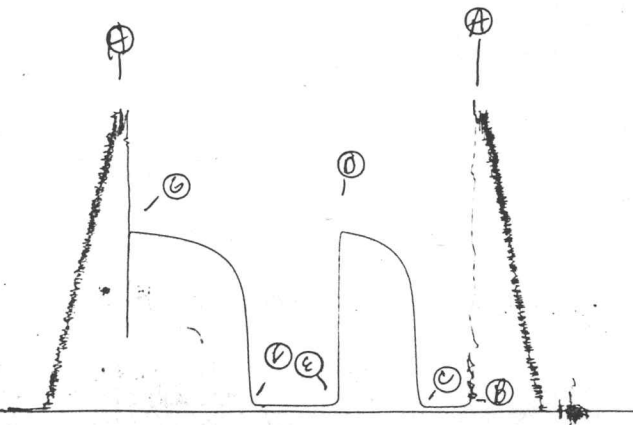
Horner Ratio, $(T+dt)/dt$

RES-TRAN

13549
OST #

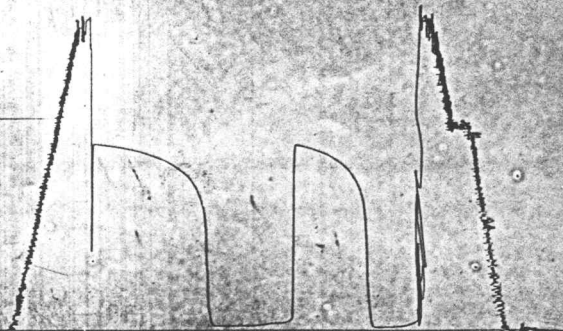
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JK # 11762

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FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

COMPANY H & C OIL OPERATION & LEASE & WELL NO. SNYDER-FREBERT 2 SEC. 11 TWP. 17S RGE. 10W TEST NO. 4 DATE 8/1/87
PENDLETON LAND & EXPLORATION

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE : 8-1-87 TICKET : 11763
CUSTOMER : H&C OIL OPER. & PENDLETON LAND & EXPLOR.
WELL : #2 TEST: 4 LEASE : SNYDER-FREEBERT
ELEVATION : NA GEOLOGIST : R. SMITH
SECTION : 11 FORMATION : ARBUCKLE
RANGE : 10W COUNTY : ELLSWORTH TOWNSHIP : 17S
GAUGE SN# : 13549 RANGE : 4100 STATE : KANSAS
CLOCK : 12

INTERVAL FROM : 3255 TO : 3260 TOTAL DEPTH : 3260
DEPTH OF SELECTIVE ZONE :
PACKER DEPTH : 3250 SIZE : 6.63
PACKER DEPTH : 3255 SIZE : 6.63
PACKER DEPTH : SIZE :
PACKER DEPTH : SIZE :

DRILLING CON. : ALLEN RIG #1
MUD TYPE : CHEMICAL VISCOSITY : 47
WEIGHT : 9.1 WATER LOSS (CC) : 8.
CHLORIDES (PPM) : 7000
JARS-MAKE : - SERIAL NUMBER : -
DID WELL FLOW ? : - REVERSED OUT ? : -

DRILL COLLAR LENGTH : 0 FT I.D. inch : 0.00
WEIGHT PIPE LENGTH : 0 FT I.D. inch : 0.00
DRILL PIPE LENGTH : 3229 FT I.D. inch : 3.80
TEST TOOL LENGTH : 26 FT TOOL SIZE : 5.50
ANCHOR LENGTH : 5 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 XH

BLOW COMMENT #1 : INITIAL FLOW-VERY WEAK BLOW FOR 20 MINUTES & DIED.
BLOW COMMENT #2 : FINAL FLOW-NO BLOW.
BLOW COMMENT #3 :
BLOW COMMENT #4 :

RECOVERED : 5 FT OF: DRILLING MUD / WITH SCUM OF OIL

Total Barrels Fluid = 0.07

Total Fluid Prod Rate = 0.00 BFPD

REMARK 1 : MISRUN: ANCHOR PLUGGED

REMARK 2 : SLID TOOL 4 FEET OT BOTTOM.

REMARK 3 :

REMARK 4 :

SET PACKER(S) : 9:00 AM

TIME STARTED OFF BOTTOM : 11:00 AM

WELL TEMPERATURE : 0

INITIAL HYDROSTATIC PRESSURE

(A) 1582

INITIAL FLOW PERIOD MIN: 0

(B) 0 PSI TO (C) : 0

INITIAL CLOSED IN PERIOD MIN: 0

(D) 0

FINAL FLOW PERIOD MIN: 0

(E) 0 PSI TO (F) : 0

FINAL CLOSED IN PERIOD MIN: 0

(G) 0

FINAL HYDROSTATIC PRESSURE

(H) 1524

JKT # 11762
I

549 44

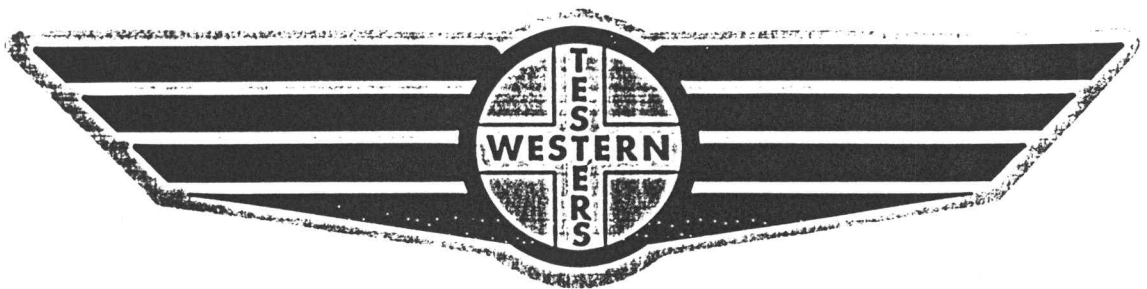


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77-22-1



FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone (316) 262-5861

COMPANY H & C OIL OPERATION & LEASE & WELL NO. SNYDER-FREEBERT 2 SEC. 11 TWP. 17S RGE. 10W TEST NO. 5 DATE 8/1/87
PENDLETON LAND & EXPLORATION

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE : 8-1-87 TICKET : 11764
CUSTOMER : H&C OIL OPER & PENDLETON LAND & EXPLOR.
WELL : #2 TEST: 5 LEASE : SNYDER-FREEBERT
ELEVATION : NA GEOLOGIST : R. SMITH
SECTION : 11 FORMATION : ARBUCKLE
RANGE : 10W COUNTY : ELLSWORTH TOWNSHIP : 17S
GAUGE SN# : 13549 RANGE : 4100 STATE : KANSAS
CLOCK : 12

INTERVAL FROM : 3257 TO : 3270 TOTAL DEPTH : 3270
DEPTH OF SELECTIVE ZONE :
PACKER DEPTH : 3252 SIZE : 6.63
PACKER DEPTH : 3257 SIZE : 6.63
PACKER DEPTH : SIZE :
PACKER DEPTH : SIZE :

DRILLING CON. : ALLEN RIG #1
MUD TYPE : CHEMICAL VISCOSITY : 48
WEIGHT : 9.1 WATER LOSS (CC) : 8.
CHLORIDES (PPM) : 7000
JARS-MAKE : - SERIAL NUMBER : -
DID WELL FLOW ? : - REVERSED OUT ? : -

DRILL COLLAR LENGTH : 0 FT I.D. inch : 0.00
WEIGHT PIPE LENGTH : 0 FT I.D. inch : 0.00
DRILL PIPE LENGTH : 3231 FT I.D. inch : 3.80
TEST TOOL LENGTH : 26 FT TOOL SIZE : 5.50
ANCHOR LENGTH : 13 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 XH

BLOW COMMENT #1 : INITIAL FLOW-WEAK BLOW INCREASED TO 1".
BLOW COMMENT #2 : FINAL LFOW-WEAK BLOW INCREASED TO 1".
BLOW COMMENT #3 :
BLOW COMMENT #4 :

RECOVERED : 90 FT OF: WATER / WITH SCUM OF OIL

CHLORIDES: 28000 PPM

Total Barrels Fluid = 1.26
Total Fluid Prod Rate = 20.20 BFPD
Indicated Wtr Rate = 20.20 BWPD

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

SET PACKER(S) : 7:00 PM

TIME STARTED OFF BOTTOM : 11:00 PM

WELL TEMPERATURE : 115

INITIAL HYDROSTATIC PRESSURE

INITIAL FLOW PERIOD MIN: 30

(A) 1568

(B) 43 PSI TO (C) : 47

INITIAL CLOSED IN PERIOD MIN: 63

(D) 974

FINAL FLOW PERIOD MIN: 60

(E) 60 PSI TO (F) : 76

FINAL CLOSED IN PERIOD MIN: 93

(G) 948

FINAL HYDROSTATIC PRESSURE

(H) 1562

WESTERN TESTING CO. INC.
WICHITA - KANSAS

Pressure Transient Report

COMPANY : H&C OIL OPER & PENDLETON LAND & EXPLOR.
RIG : ELLSWORTH-KANSAS
FIELD : SNYDER-FREEBERT
WELL : #2
DATE : 8-1-87
GAUGE NO : 13549

OPERATIONAL COMMENTS

COMPANY : H&C OIL OPER & PENDLETON LAND & EXPLOR.
 FIELD : SNYDER-FREEBERT
 WELL : #2
 GAUGE # : 13549
 DATE : 1/ 8/87
 JOB # : 11764
 DEPTH : 3270
 TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
1	7: 0: 0	0.000	43.000	115.00	0.000
2	7: 4: 59	0.083	43.000	115.00	0.000
3	7:10: 0	0.167	43.000	115.00	0.000
4	7:15: 0	0.250	43.000	115.00	0.000
5	7:19:59	0.333	44.000	115.00	1.000
6	7:25: 0	0.417	45.000	115.00	1.000
7	7:30: 0	0.500	47.000	115.00	2.000
8	7:33: 0	0.550	368.000	115.00	321.000
9	7:36: 0	0.600	662.000	115.00	294.000
10	7:39: 0	0.650	735.000	115.00	73.000
11	7:42: 0	0.700	779.000	115.00	44.000
12	7:45: 0	0.750	811.000	115.00	32.000
13	7:48: 0	0.800	839.000	115.00	28.000
14	7:51: 0	0.850	860.000	115.00	21.000
15	7:54: 0	0.900	878.000	115.00	18.000
16	7:57: 0	0.950	894.000	115.00	16.000
17	8: 0: 0	1.000	908.000	115.00	14.000
18	8: 2: 59	1.050	918.000	115.00	10.000
19	8: 6: 0	1.100	927.000	115.00	9.000
20	8: 9: 0	1.150	934.000	115.00	7.000
21	8:12: 0	1.200	942.000	115.00	8.000
22	8:15: 0	1.250	949.000	115.00	7.000
23	8:18: 0	1.300	955.000	115.00	6.000
24	8:21: 0	1.350	960.000	115.00	5.000
25	8:24: 0	1.400	964.000	115.00	4.000
26	8:27: 0	1.450	969.000	115.00	5.000
27	8:30: 0	1.500	971.000	115.00	2.000
28	8:33: 0	1.550	974.000	115.00	3.000
29	8:34: 0	1.567	60.000	115.00	-914.000
30	8:37:59	1.633	60.000	115.00	0.000
31	8:43: 0	1.717	60.000	115.00	0.000
32	8:48: 0	1.800	60.000	115.00	0.000
33	8:52:59	1.883	63.000	115.00	3.000
34	8:58: 0	1.967	65.000	115.00	2.000
35	9: 3: 0	2.050	67.000	115.00	2.000
36	9: 7: 59	2.133	69.000	115.00	2.000
37	9:13: 0	2.217	71.000	115.00	2.000
38	9:18: 0	2.300	73.000	115.00	2.000
39	9:22:59	2.383	74.000	115.00	1.000
40	9:28: 0	2.467	75.000	115.00	1.000
41	9:33: 0	2.550	76.000	115.00	1.000
42	9:36: 0	2.600	424.000	115.00	348.000
43	9:38:59	2.650	595.000	115.00	171.000
44	9:42: 0	2.700	656.000	115.00	61.000
45	9:45: 0	2.750	702.000	115.00	46.000
46	9:48: 0	2.800	733.000	115.00	31.000
47	9:51: 0	2.850	761.000	115.00	28.000
48	9:53:59	2.900	783.000	115.00	22.000
49	9:57: 0	2.950	803.000	115.00	20.000
50	10: 0: 0	3.000	822.000	115.00	19.000
51	10: 3: 0	3.050	837.000	115.00	15.000
52	10: 6: 0	3.100	848.000	115.00	11.000

COMPANY : H&C OIL OPER & PENDLETON LAND & EXPLOR.

FIELD : SNYDER-FREEBERT

WELL : #2

JOB # : 11764

GAUGE # : 13549

DEPTH : 3270

DATE : 1/ 8/87

TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
53	10: 9: 0	3.150	858.000	115.00	10.000
54	10:11:59	3.200	865.000	115.00	7.000
55	10:15: 0	3.250	874.000	115.00	9.000
56	10:18: 0	3.300	883.000	115.00	9.000
57	10:21: 0	3.350	890.000	115.00	7.000
58	10:24: 0	3.400	899.000	115.00	9.000
59	10:26:59	3.450	904.000	115.00	5.000
60	10:30: 0	3.500	910.000	115.00	6.000
61	10:33: 0	3.550	914.000	115.00	4.000
62	10:36: 0	3.600	919.000	115.00	5.000
63	10:39: 0	3.650	923.000	115.00	4.000
64	10:41:59	3.700	926.000	115.00	3.000
65	10:45: 0	3.750	929.000	115.00	3.000
66	10:48: 0	3.800	932.000	115.00	3.000
67	10:51: 0	3.850	936.000	115.00	4.000
68	10:54: 0	3.900	939.000	115.00	3.000
69	10:56:59	3.950	943.000	115.00	4.000
70	11: 0: 0	4.000	945.000	115.00	2.000
71	11: 3: 0	4.050	947.000	115.00	2.000
72	11: 6: 0	4.100	948.000	115.00	1.000

WESTERN TESTING CO. INC.

WESTERN TESTING CO. INC.
WICHITA - KANSAS

WELL TEST ANALYSIS REPORT
HORNER METHOD
SHUTIN No. 2

Test #5

COMPANY. H&C OIL OPER & PENDLETON LAND & EXPLOR.
DATE 8-1-87
FIELD. SNYDER-FREEBET
WELL #2
AREA ELLSWORTH-KANSAS
JOB NUMBER . . . 11764
GAUGE NUMBER . . 13549
GAUGE DEPTH. . . 3270
ZONE TESTED. . . 3257-3270

PHASE : OIL FUNCTION : PRESSURE

=====I=N=P=U=T====D=A=T=A====S=U=M=M=A=R=Y=====

THICKNESS.	H	5.0000E+00	Feet
POROSITY	POR	1.2000E-01	Frac
VISCOSITY.	U	2.4000E+00	Cp
FORMATION VOLUME FACTOR.	B	1.0052E+00	Rb/stb
TOTAL COMPRESSIBILITY.	Ct	2.5000E-07	Psi ⁻¹
WELLBORE RADIUS.	Rw	5.2000E-01	Feet
DRAINAGE RADIUS.	Re	1.5000E+03	Feet
RESERVOIR TEMPERATURE.	T	1.1500E+02	Deg F
GRAVITY OF FLUID	G	4.2000E+01	
PVT EVALUATION PRESSURE.	P	0.0000E+00	Psig
PRESSURE AT SHUT-IN.	Pwf	7.6000E+01	Psig
FINAL RECORDED PRESSURE.	Ps	9.4800E+02	Psig
PRODUCTION RATE.	Q	2.0200E+01	Bbl/day
TOTAL FLOW TIME.	T	1.0000E+00	Hours

=====R=E=G=R=E=S=S=I=O=N====R=E=S=U=L=T=S=====

LEAST SQUARE RESULTS OVER THE INTERVAL :
FROM 2 TO 1

SLOPE OF THE LINE. 4.1123E+02 psi/cycle
FALSE PRESSURE, PSTAR. 1.0380E+03 psi
PRESSURE AT 1 HOUR 9.1418E+02 psi

=====A=N=A=L=Y=S=I=S====R=E=S=U=L=T=S=====

TRANSMISSIBILITY.	Kh/u	8.0285E+00	md-ft/cp
FLOW CAPACITY.	Kh	1.9268E+01	md-ft
PERMEABILITY to PHASE.	K	3.8537E+00	md
DAMAGE RATIO	Dr	4.6071E-01	
RADIUS OF INVESTIGATION.	Rinv	2.3761E+02	ft
SKIN FACTOR.	S	-3.1399E+00	
AVERAGE PRESSURE	Pbar	1.0335E+03	psig
DIMENSIONLESS TIME	Tda	1.9990E-03	
MATTHEWS-BRONS-HAZEBROEK	PDmbh	2.5120E-02	

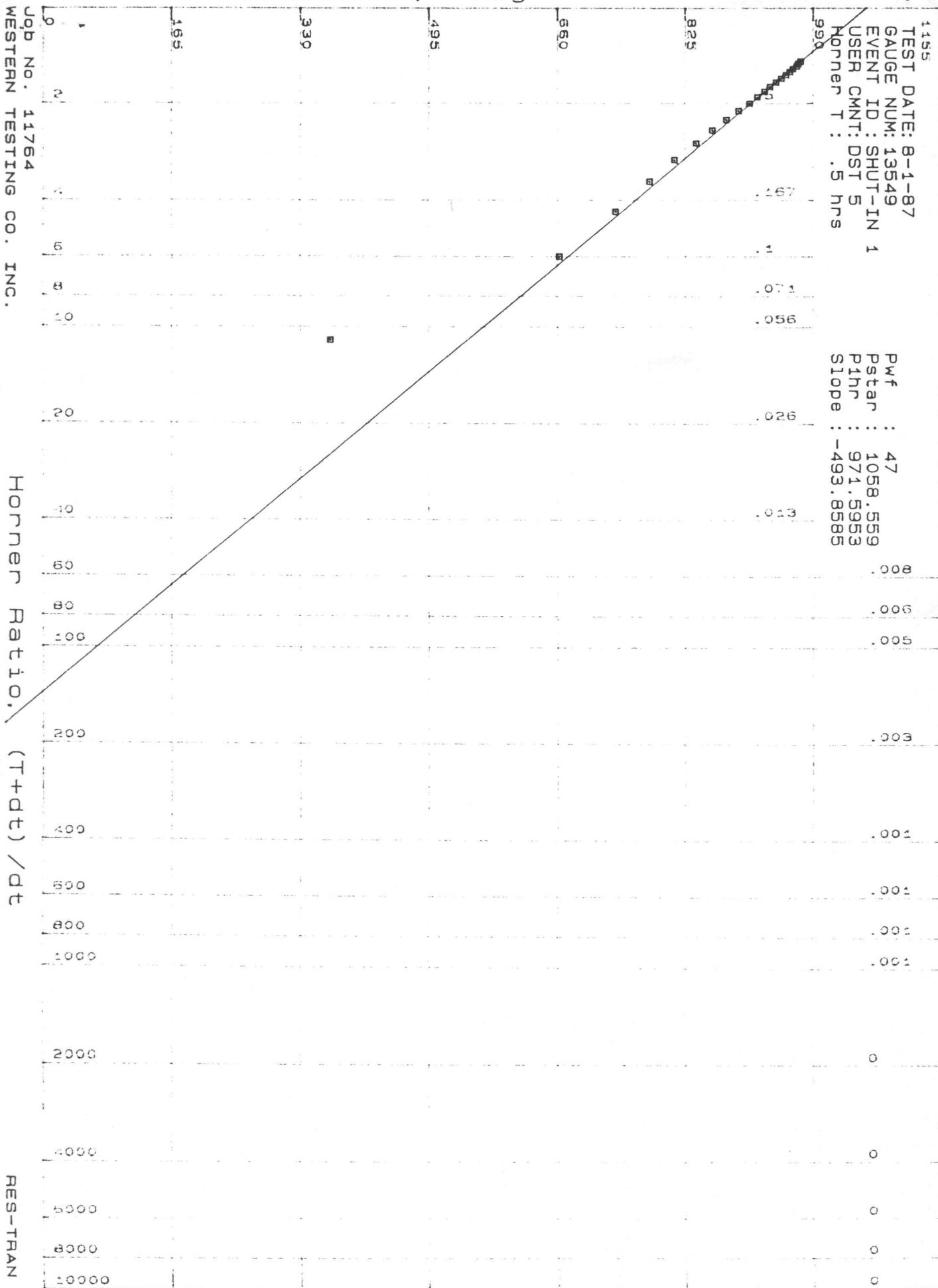
COMPANY: H&C OIL OPER & PENDLETON LAND & EXPLORELL #2
FIELD: SNYDER-FREEBERT LOCATION: ELLSWORTH-KANSAS

TEST DATE: 8-1-87
GAUGE NUM: 13549
EVENT ID: SHUT-IN 1
USER CMNT: DST 5
Horner T: .5 hrs

Pwf : 47
Pstar : 1058.559
P1hr : 971.5953
Slope : -493.8585

PROCESSED: 08-07-1987
ENGINEER: LARRY KING

Pressure, Psig

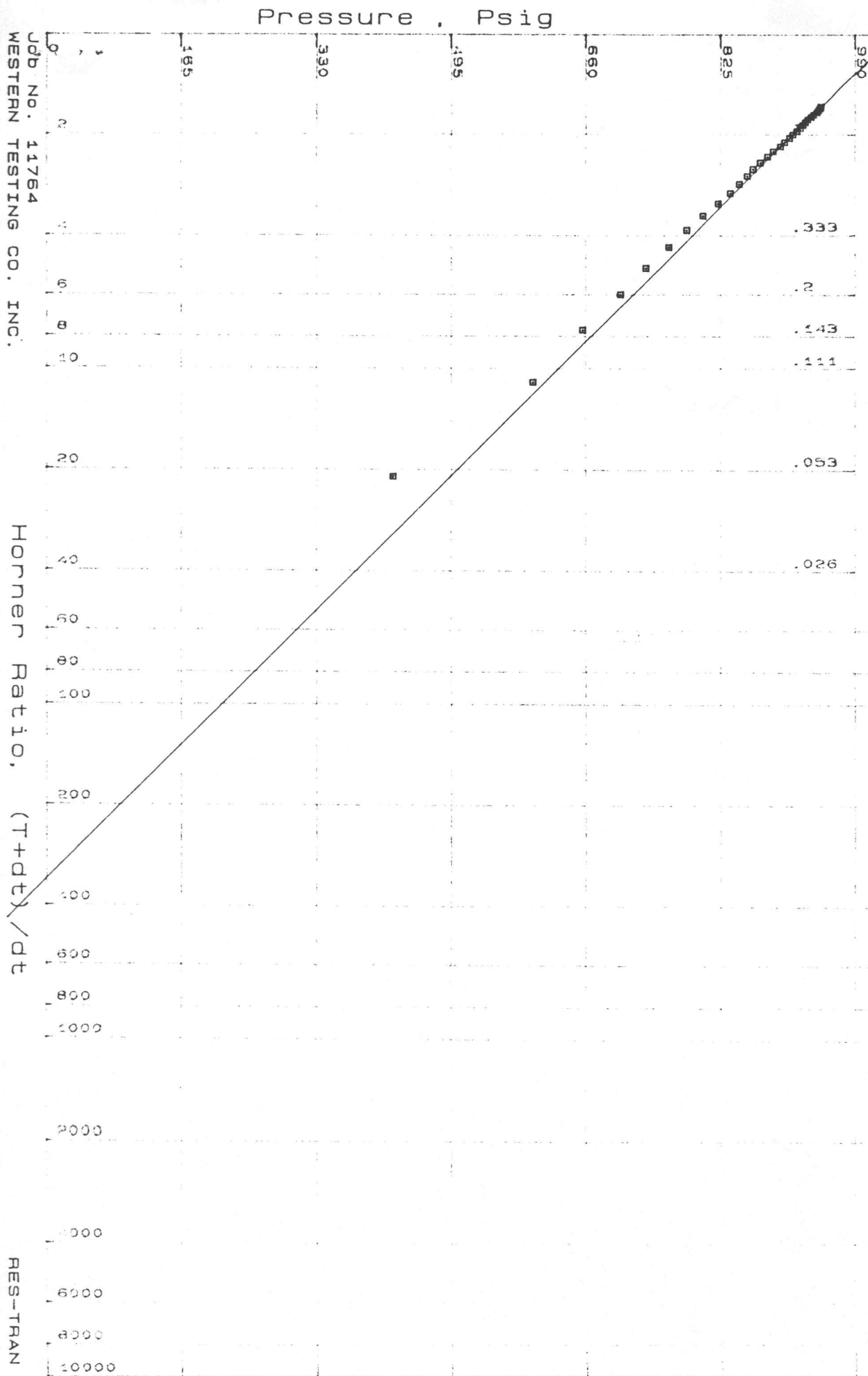


COMPANY: H&C OIL OPER & PENDLETON LAND & EXPLORELL #2
FIELD: SNYDER-FREEBERT LOCATION: ELLSWORTH-KANSAS

PROCESSED: 08-07-1987
ENGINEER: LARRY KING

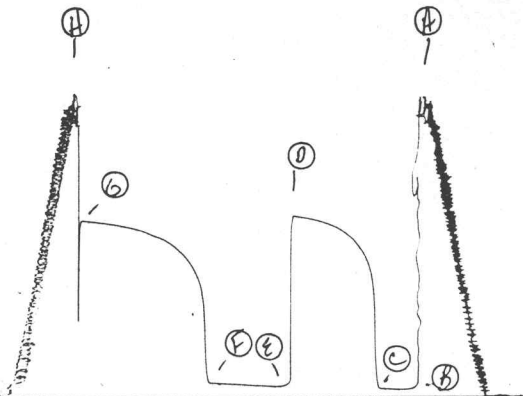
TEST DATE: 8-1-87
GAUGE NUM: 13549
EVENT ID: SHUT-IN 2
USER CMNT: DST 5
Horner T: 1 hrs

Pwf : 76
Pstar : 1037.977
Plhr : 914.1838
Slope : -411.2345



Job No. 11764
WESTERN TESTING CO. INC.

Kit # 11764
I



Kit # 11764
0

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