

DST REPORT

GENERAL INFORMATION

DATE : 4-22-95
CUSTOMER : HUTCHINSON OIL CO
WELL : #1-21 TEST: 1
ELEVATION: 1873 KB
SECTION : 21
RANGE : 12W COUNTY: STAFFORD
GAUGE SN#: 1051 RANGE : 4250
TICKET : 21388
LEASE : SPANGENBERG
GEOLOGIST: ?
FORMATION: LANSING B.D.&F.
TOWNSHIP : 22S
STATE : KS
CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 3352.00 ft TO: 3405.00 ft TVD: 3405.0 ft
DEPTH OF SELECTIVE ZONE: TEST TYPE: GAS
DEPTH OF RECORDERS: 3356.0 ft 3359.0 ft
TEMPERATURE: 106.0
DRILL COLLAR LENGTH: 0.0 ft I.D.: 0.000 in
WEIGHT PIPE LENGTH : 0.0 ft I.D.: 0.000 in
DRILL PIPE LENGTH : 3327.0 ft I.D.: 3.800 in
TEST TOOL LENGTH : 25.0 ft TOOL SIZE : 5.500 in
ANCHOR LENGTH : 53.0 ft ANCHOR SIZE: 5.500 in
SURFACE CHOKE SIZE : 0.750 in BOTTOM CHOKE SIZE: 0.750 in
MAIN HOLE SIZE : 7.875 in TOOL JOINT SIZE : 4.5XH
PACKER DEPTH: 3347.0 ft SIZE: 6.625 in
PACKER DEPTH: 3352.0 ft SIZE: 6.625 in
PACKER DEPTH: 0.0 ft SIZE: 0.000 in
PACKER DEPTH: 0.0 ft SIZE: 0.000 in

MUD INFORMATION

DRILLING CON. : DUKE RIG #2
MUD TYPE : CHEMICAL VISCOSITY : 38.00 cp
WEIGHT : 8.800 ppg WATER LOSS: 16.000 cc
CHLORIDES : 6500 ppm
JARS-MAKE : WTC SERIAL NUMBER: 411
DID WELL FLOW?: NO REVERSED OUT?: NO

COMMENTS

Comment

INITIAL FLOW PERIOD WEAK BLOW BUILDING TO A
STRONG BLOW IN 20 MINUTES. FINAL FLOW PERIOD
STRONG BLOW IN 25 MINUTES.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
0.0	0.0	0.0	0.0	0.0	180 FT GAS ABOVE FLUID
350.0	0.0	10.0	30.0	60.0	GAS & WATER CUT MUD-
0.0	0.0	0.0	0.0	0.0	SLIGHT SHOW OF OIL
240.0	0.0	0.0	100.0	0.0	WATER
0.0	0.0	0.0	0.0	0.0	CHLORIDES 86,000 PPM

RATE INFORMATION

OIL VOLUME:	0.0000	STB	TOTAL FLOW TIME:	90.0000	min.
GAS VOLUME:	2.7565	SCF	AVERAGE OIL RATE:	0.0000	STB/D
MUD VOLUME:	2.9455	STB	AVERAGE WATER RATE:	124.5540	STB/D
WATER VOLUME:	4.8391	STB			
TOTAL FLUID :	7.7846	STB			

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1621.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	86.00	86.00
INITIAL SHUT-IN	45.00		1175.00
FINAL FLOW	60.00	139.00	215.00
FINAL SHUT-IN	45.00		1122.00

FINAL HYDROSTATIC PRESSURE: 1600.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1608.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	89.00	89.00
INITIAL SHUT-IN	45.00		1155.00
FINAL FLOW	60.00	168.00	189.00
FINAL SHUT-IN	45.00		1127.00

FINAL HYDROSTATIC PRESSURE: 1577.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE	: 4-22-95	TICKET	: 21388
CUSTOMER	: HUTCHINSON OIL CO	LEASE	: SPANGENBERG
WELL	: #1-21	TEST:	1
ELEVATION:	1873 KB	GEOLOGIST:	?
SECTION	: 21	FORMATION:	LANSING B.D.&F.
RANGE	: 12W	TOWNSHIP	: 22S
Gauge SN#:	1051	STATE	: KS
	COUNTY: STAFFORD	CLOCK	: 12
	RANGE : 4250		

INITIAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	89.00	89.00
5.00	89.00	0.00
10.00	89.00	0.00
15.00	89.00	0.00
20.00	89.00	0.00
25.00	89.00	0.00
30.00	89.00	0.00

INITIAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	89.00	89.00	0.00
6.00	520.00	431.00	0.00
9.00	995.00	475.00	0.00
12.00	1078.00	83.00	0.00
15.00	1104.00	26.00	0.00
18.00	1119.00	15.00	0.00
21.00	1128.00	9.00	0.00
24.00	1134.00	6.00	0.00
27.00	1139.00	5.00	0.00
30.00	1141.00	2.00	0.00
33.00	1143.00	2.00	0.00
36.00	1145.00	2.00	0.00
39.00	1147.00	2.00	0.00
42.00	1150.00	3.00	0.00
45.00	1155.00	5.00	0.00

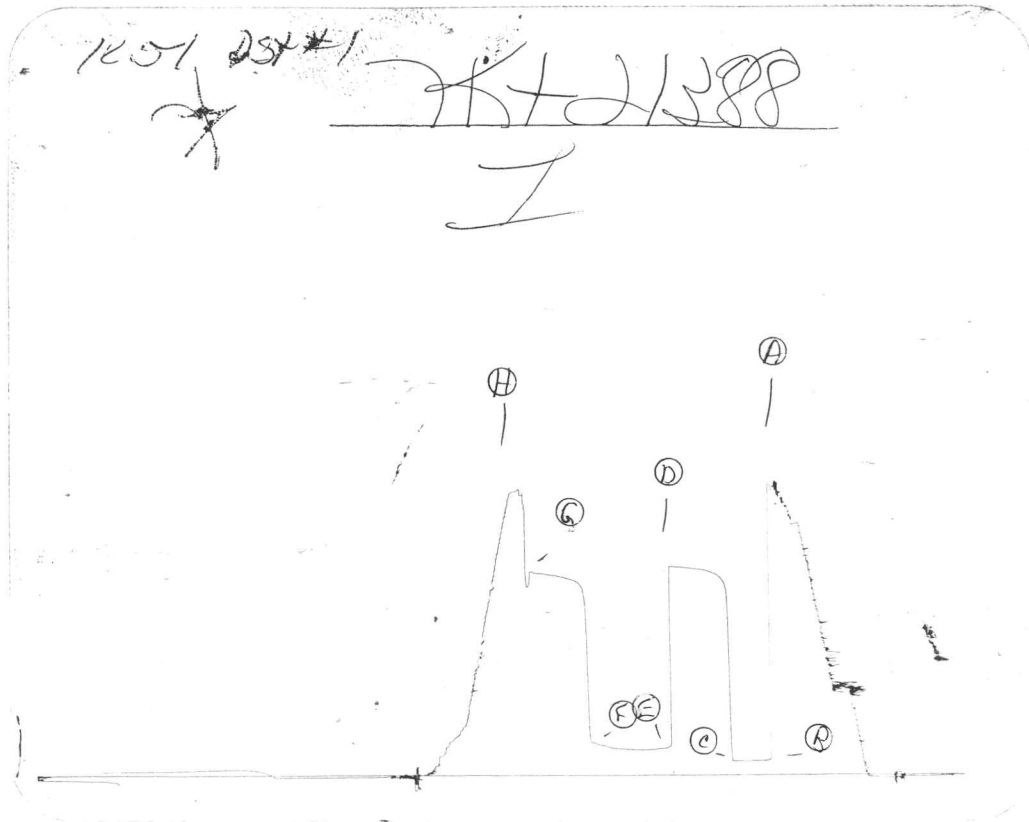
PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW

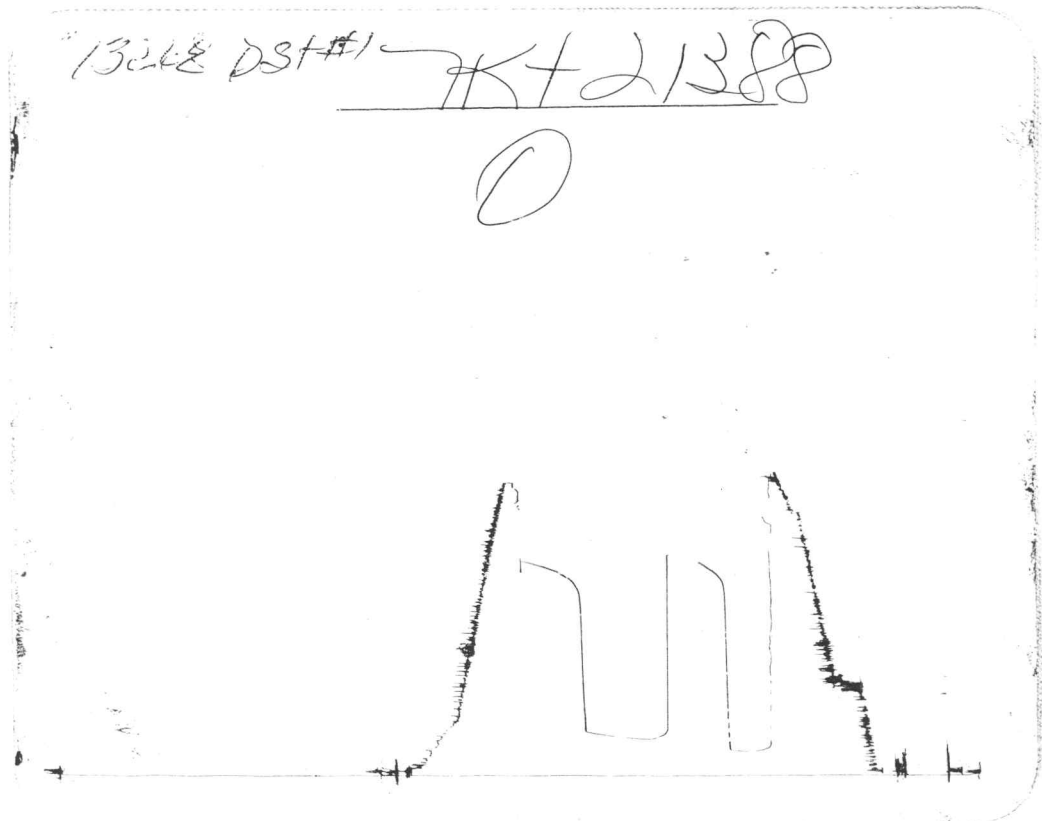
Time (min)	Pressure	Delta P
0.00	168.00	168.00
5.00	158.00	-10.00
10.00	153.00	-5.00
15.00	151.00	-2.00
20.00	149.00	-2.00
25.00	149.00	0.00
30.00	150.00	1.00
35.00	153.00	3.00
40.00	156.00	3.00
45.00	162.00	6.00
50.00	170.00	8.00
55.00	179.00	9.00
60.00	189.00	10.00

FINAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	561.00	561.00	0.00
6.00	974.00	413.00	0.00
9.00	1053.00	79.00	0.00
12.00	1077.00	24.00	0.00
15.00	1084.00	7.00	0.00
18.00	1089.00	5.00	0.00
21.00	1096.00	7.00	0.00
24.00	1101.00	5.00	0.00
27.00	1107.00	6.00	0.00
30.00	1111.00	4.00	0.00
33.00	1113.00	2.00	0.00
36.00	1115.00	2.00	0.00
39.00	1117.00	2.00	0.00
42.00	1119.00	2.00	0.00
45.00	1127.00	8.00	0.00



Inside Recorder



Outside Recorder

DST REPORT

GENERAL INFORMATION

DATE : 4-23-95	TICKET : 21389
CUSTOMER : HUTCHINSON OIL CO	LEASE : SPANGENBERG
WELL : #1-21 TEST: 2	GEOLOGIST: ?
ELEVATION: 1873 KB	FORMATION: LANSING I.J.&K.
SECTION : 21	TOWNSHIP : 22S
RANGE : 12W COUNTY: STAFFORD	STATE : KS
GAUGE SN#: 1051 RANGE : 4250	CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 3468.00 ft	TO: 3525.00 ft	TVD: 3525.0 ft
DEPTH OF SELECTIVE ZONE:		TEST TYPE: OIL
DEPTH OF RECORDERS: 3475.0 ft	3478.0 ft	
TEMPERATURE: 107.0		

DRILL COLLAR LENGTH: 0.0 ft	I.D.:	0.000 in
WEIGHT PIPE LENGTH : 0.0 ft	I.D.:	0.000 in
DRILL PIPE LENGTH : 3448.0 ft	I.D.:	3.800 in
TEST TOOL LENGTH : 20.0 ft	TOOL SIZE :	5.500 in
ANCHOR LENGTH : 57.0 ft	ANCHOR SIZE:	5.500 in
SURFACE CHOKE SIZE : 0.750 in	BOTTOM CHOKE SIZE:	0.750 in
MAIN HOLE SIZE : 7.875 in	TOOL JOINT SIZE :	4.5XH
PACKER DEPTH: 3463.0 ft	SIZE:	6.625 in
PACKER DEPTH: 3468.0 ft	SIZE:	6.625 in
PACKER DEPTH: 0.0 ft	SIZE:	0.000 in
PACKER DEPTH: 0.0 ft	SIZE:	0.000 in

MUD INFORMATION

DRILLING CON. : DUKE RIG #2	
MUD TYPE : CHEMICAL	VISCOSITY : 39.00 cp
WEIGHT : 9.000 ppg	WATER LOSS: 13.200 cc
CHLORIDES : 9000 ppm	
JARS-MAKE :	SERIAL NUMBER:
DID WELL FLOW?: NO	REVERSED OUT?: NO

COMMENTS

Comment

INITIAL FLOW PERIOD STRONG BLOW IN 5 MINUTES.
 FINIAL FLOW PERIOD STRONG BLOW. NO GAS TO SURFACE.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
0.0	0.0	0.0	0.0	0.0	540FT GAS ABOVE FLUID
35.0	45.0	0.0	0.0	55.0	HEAVY OIL CUT MUD

RATE INFORMATION

OIL VOLUME:	0.2209 STB	TOTAL FLOW TIME:	90.0000 min.
GAS VOLUME:	0.0000 SCF	AVERAGE OIL RATE:	7.8548 STB/D
MUD VOLUME:	0.2700 STB	AVERAGE WATER RATE:	0.0000 STB/D
WATER VOLUME:	0.0000 STB		
TOTAL FLUID :	0.4909 STB		

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1685.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	32.00	32.00
INITIAL SHUT-IN	45.00		107.00
FINAL FLOW	60.00	53.00	53.00
FINAL SHUT-IN	45.00		107.00

FINAL HYDROSTATIC PRESSURE: 1600.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1660.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	58.00	36.00
INITIAL SHUT-IN	48.00		108.00
FINAL FLOW	60.00	64.00	52.00
FINAL SHUT-IN	42.00		113.00

FINAL HYDROSTATIC PRESSURE: 1608.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 4-23-95	TICKET : 21389
CUSTOMER : HUTCHINSON OIL CO	LEASE : SPANGENBERG
WELL : #1-21 TEST: 2	GEOLOGIST: ?
ELEVATION: 1873 KB	FORMATION: LANSING I.J.&K.
SECTION : 21	TOWNSHIP : 22S
RANGE : 12W COUNTY: STAFFORD	STATE : KS
GAUGE SN#: 1051 RANGE : 4250	CLOCK : 12

INITIAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	58.00	58.00
5.00	58.00	0.00
10.00	46.00	-12.00
15.00	43.00	-3.00
20.00	40.00	-3.00
25.00	38.00	-2.00
30.00	36.00	-2.00

INITIAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	36.00	36.00	11.00
6.00	37.00	1.00	6.00
9.00	39.00	2.00	4.33
12.00	43.00	4.00	3.50
15.00	49.00	6.00	3.00
18.00	53.00	4.00	2.67
21.00	63.00	10.00	2.43
24.00	76.00	13.00	2.25
27.00	82.00	6.00	2.11
30.00	91.00	9.00	2.00
33.00	96.00	5.00	1.91
36.00	103.00	7.00	1.83
39.00	106.00	3.00	1.77
42.00	107.00	1.00	1.71
45.00	107.00	0.00	1.67
48.00	108.00	1.00	1.63

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW

Time (min)	Pressure	Delta P
0.00	64.00	64.00
5.00	64.00	0.00
10.00	64.00	0.00
15.00	62.00	-2.00
20.00	60.00	-2.00
25.00	60.00	0.00
30.00	59.00	-1.00
35.00	57.00	-2.00
40.00	54.00	-3.00
45.00	52.00	-2.00
50.00	52.00	0.00
55.00	52.00	0.00
60.00	52.00	0.00

FINAL SHUT IN

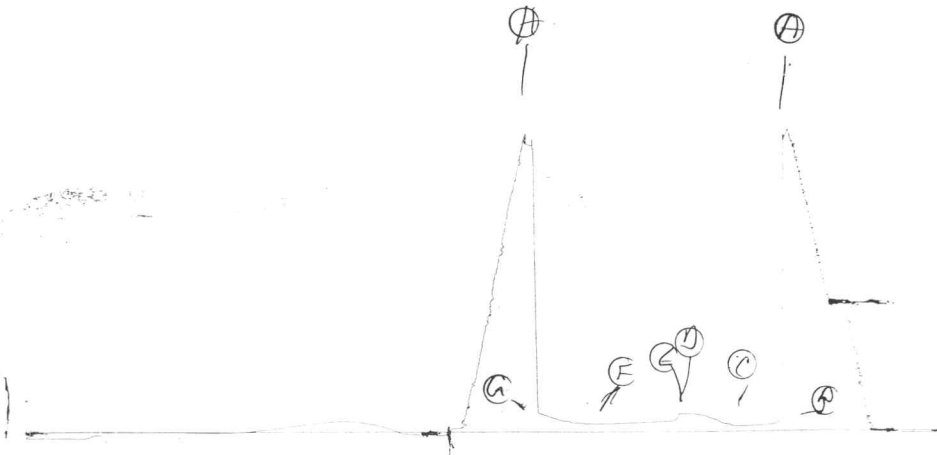
Time (min)	Pressure	Delta P	Horner T
3.00	52.00	52.00	21.00
6.00	52.00	0.00	11.00
9.00	57.00	5.00	7.67
12.00	59.00	2.00	6.00
15.00	59.00	0.00	5.00
18.00	61.00	2.00	4.33
21.00	66.00	5.00	3.86
24.00	70.00	4.00	3.50
27.00	76.00	6.00	3.22
30.00	82.00	6.00	3.00
33.00	89.00	7.00	2.82
36.00	98.00	9.00	2.67
39.00	107.00	9.00	2.54
42.00	113.00	6.00	2.43

1057 DST#2

*

KT 21389

I

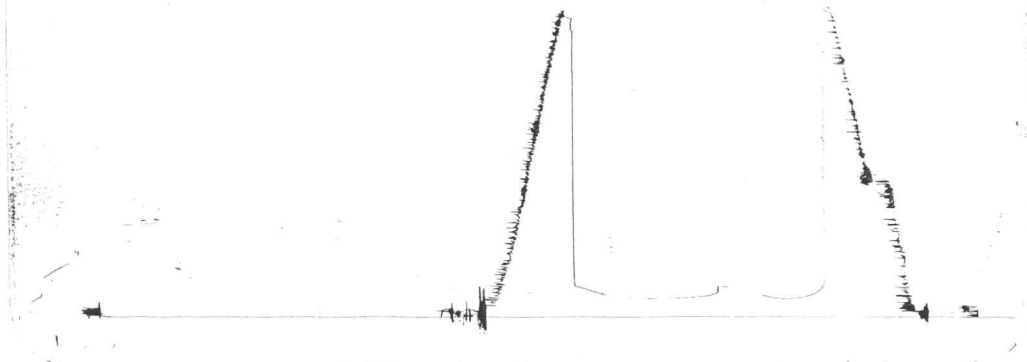


Inside Recorder

13286 DST#2

KT 21389

O



Outside Recorder

DST REPORT

GENERAL INFORMATION

DATE : 4-24-95	TICKET : 21390
CUSTOMER : HUTCHINSON OIL CO	LEASE : SPANGENBERG
WELL : #1-21 TEST: 3	GEOLOGIST: ?
ELEVATION: 1873 KB	FORMATION: VIOLA
SECTION : 21	TOWNSHIP : 22S
RANGE : 12W COUNTY: STAFFORD	STATE : KS
GAUGE SN#: 1051 RANGE : 4250	CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 3584.00 ft	TO: 3630.00 ft	TVD: 3630.0 ft
DEPTH OF SELECTIVE ZONE:		TEST TYPE: OIL
DEPTH OF RECORDERS: 3587.0 ft	3590.0 ft	
TEMPERATURE: 110.0		
DRILL COLLAR LENGTH: 0.0 ft	I.D.:	0.000 in
WEIGHT PIPE LENGTH : 0.0 ft	I.D.:	0.000 in
DRILL PIPE LENGTH : 3564.0 ft	I.D.:	3.800 in
TEST TOOL LENGTH : 20.0 ft	TOOL SIZE :	5.500 in
ANCHOR LENGTH : 46.0 ft	ANCHOR SIZE:	5.500 in
SURFACE CHOKE SIZE : 0.750 in	BOTTOM CHOKE SIZE:	0.750 in
MAIN HOLE SIZE : 7.875 in	TOOL JOINT SIZE :	4.5XH
PACKER DEPTH: 3579.0 ft	SIZE:	6.630 in
PACKER DEPTH: 3584.0 ft	SIZE:	6.630 in
PACKER DEPTH: 0.0 ft	SIZE:	0.000 in
PACKER DEPTH: 0.0 ft	SIZE:	0.000 in

MUD INFORMATION

DRILLING CON. : DUKE RIG #2	
MUD TYPE : CHEMICAL	VISCOSITY : 43.00 cp
WEIGHT : 9.000 ppg	WATER LOSS: 10.400 cc
CHLORIDES : 5100 ppm	
JARS-MAKE : NO	SERIAL NUMBER:
DID WELL FLOW?: NO	REVERSED OUT?: NO

COMMENTS

Comment

INITIAL FLOW PERIOD VERY WEAK BLOW FOR 20 MINUTES
AND DIED. FINAL FLOW PERIOD VERY WEAK BLOW FOR
10 MINUTES AND DIED.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
40.0	5.0	0.0	5.0	90.0	SLIGHTLY OIL CUT MUD

RATE INFORMATION

OIL VOLUME:	0.0281 STB		TOTAL FLOW TIME:	60.0000 min.
GAS VOLUME:	0.0000 SCF		AVERAGE OIL RATE:	6.7327 STB/D
MUD VOLUME:	0.5049 STB		AVERAGE WATER RATE:	6.7327 STB/D
WATER VOLUME:	0.0281 STB			
TOTAL FLUID :	0.5611 STB			

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1706.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	53.00	53.00
INITIAL SHUT-IN	30.00		53.00
FINAL FLOW	30.00	53.00	53.00
FINAL SHUT-IN	30.00		53.00

FINAL HYDROSTATIC PRESSURE: 1685.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1726.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	87.00	61.00
INITIAL SHUT-IN	30.00		56.00
FINAL FLOW	30.00	49.00	49.00
FINAL SHUT-IN	33.00		46.00

FINAL HYDROSTATIC PRESSURE: 1679.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 4-24-95	TICKET : 21390
CUSTOMER : HUTCHINSON OIL CO	LEASE : SPANGENBERG
WELL : #1-21 TEST: 3	GEOLOGIST: ?
ELEVATION: 1873 KB	FORMATION: VIOLA
SECTION : 21	TOWNSHIP : 22S
RANGE : 12W COUNTY: STAFFORD	STATE : KS
GAUGE SN#: 1051 RANGE : 4250	CLOCK : 12

INITIAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	87.00	87.00
5.00	66.00	-21.00
10.00	62.00	-4.00
15.00	61.00	-1.00
20.00	61.00	0.00
25.00	61.00	0.00
30.00	61.00	0.00

INITIAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	61.00	61.00	11.00
6.00	61.00	0.00	6.00
9.00	60.00	-1.00	4.33
12.00	60.00	0.00	3.50
15.00	60.00	0.00	3.00
18.00	59.00	-1.00	2.67
21.00	58.00	-1.00	2.43
24.00	57.00	-1.00	2.25
27.00	57.00	0.00	2.11
30.00	56.00	-1.00	2.00

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	49.00	49.00

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW (CONTINUED)

Time (min)	Pressure	Delta P
5.00	49.00	0.00
10.00	49.00	0.00
15.00	49.00	0.00
20.00	49.00	0.00
25.00	49.00	0.00
30.00	49.00	0.00

FINAL SHUT IN

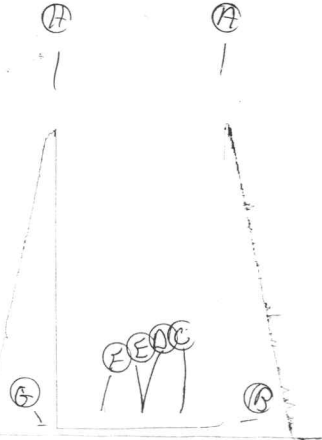
Time (min)	Pressure	Delta P	Horner T
3.00	49.00	49.00	11.00
6.00	49.00	0.00	6.00
9.00	48.00	-1.00	4.33
12.00	48.00	0.00	3.50
15.00	48.00	0.00	3.00
18.00	47.00	-1.00	2.67
21.00	47.00	0.00	2.43
24.00	46.00	-1.00	2.25
27.00	46.00	0.00	2.11
30.00	46.00	0.00	2.00
33.00	46.00	0.00	1.91

1051 DST #3

*

KT 21390

F



Inside Recorder

13268 DST #3

KT 21390

O

Outside Recorder

DST REPORT

GENERAL INFORMATION

DATE : 4-24-95 TICKET : 21391
CUSTOMER : HUTCHINSON OIL CO LEASE : SPANGENBERG
WELL : #1-21 TEST: 4 GEOLOGIST: ?
ELEVATION: 1873 KB FORMATION: ARBUCKLE
SECTION : 21 TOWNSHIP : 22S
RANGE : 12W COUNTY: STAFFORD STATE : KS
GAUGE SN#: 1051 RANGE : 4250 CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 3645.00 ft TO: 3712.00 ft TVD: 3712.0 ft
DEPTH OF SELECTIVE ZONE: TEST TYPE: OIL
DEPTH OF RECORDERS: 3650.0 ft 3653.0 ft
TEMPERATURE: 116.0

DRILL COLLAR LENGTH: 0.0 ft I.D.: 0.000 in
WEIGHT PIPE LENGTH : 0.0 ft I.D.: 0.000 in
DRILL PIPE LENGTH : 3625.0 ft I.D.: 3.800 in
TEST TOOL LENGTH : 20.0 ft TOOL SIZE : 5.500 in
ANCHOR LENGTH : 67.0 ft ANCHOR SIZE: 5.500 in
SURFACE CHOKE SIZE : 0.750 in BOTTOM CHOKE SIZE: 0.750 in
MAIN HOLE SIZE : 7.875 in TOOL JOINT SIZE : 4.5XH
PACKER DEPTH: 3640.0 ft SIZE: 6.630 in
PACKER DEPTH: 3645.0 ft SIZE: 6.630 in
PACKER DEPTH: 0.0 ft SIZE: 0.000 in
PACKER DEPTH: 0.0 ft SIZE: 0.000 in

MUD INFORMATION

DRILLING CON. : DUKE DRILLING RIG #5
MUD TYPE : CHEMICAL VISCOSITY : 45.00 cp
WEIGHT : 9.000 ppg WATER LOSS: 10.800 cc
CHLORIDES : 5100 ppm
JARS-MAKE : SERIAL NUMBER:
DID WELL FLOW?: NO REVERSED OUT?: NO

COMMENTS

Comment

INITIAL FLOW PERIOD-VERY WEAK BLOW BUILDING TO A
4 INCH BLOW. FINAL FLOW PERIOD-WEAK BLOW BUILDING
TO A 5 TO 6 INCH BLOW.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
130.0	20.0	0.0	0.0	80.0	OIL CUT MUD

RATE INFORMATION

OIL VOLUME: 0.3647 STB	TOTAL FLOW TIME: 90.0000 min.
GAS VOLUME: 0.0000 SCF	AVERAGE OIL RATE: 29.1748 STB/D
MUD VOLUME: 1.4587 STB	AVERAGE WATER RATE: 0.0000 STB/D
WATER VOLUME: 0.0000 STB	
TOTAL FLUID : 1.8234 STB	

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1760.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	86.00	86.00
INITIAL SHUT-IN	45.00		1069.00
FINAL FLOW	60.00	86.00	86.00
FINAL SHUT-IN	45.00		1016.00

FINAL HYDROSTATIC PRESSURE: 1706.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1752.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	77.00	77.00
INITIAL SHUT-IN	48.00		1061.00
FINAL FLOW	60.00	95.00	80.00
FINAL SHUT-IN	48.00		998.00

FINAL HYDROSTATIC PRESSURE: 1703.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 4-24-95	TICKET : 21391
CUSTOMER : HUTCHINSON OIL CO	LEASE : SPANGENBERG
WELL : #1-21 TEST: 4	GEOLOGIST: ?
ELEVATION: 1873 KB	FORMATION: ARBUCKLE
SECTION : 21	TOWNSHIP : 22S
RANGE : 12W COUNTY: STAFFORD	STATE : KS
GAUGE SN#: 1051 RANGE : 4250	CLOCK : 12

INITIAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	77.00	77.00
5.00	77.00	0.00
10.00	77.00	0.00
15.00	77.00	0.00
20.00	77.00	0.00
25.00	77.00	0.00
30.00	77.00	0.00

INITIAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	93.00	93.00	11.00
6.00	316.00	223.00	6.00
9.00	620.00	304.00	4.33
12.00	776.00	156.00	3.50
15.00	832.00	56.00	3.00
18.00	877.00	45.00	2.67
21.00	913.00	36.00	2.43
24.00	945.00	32.00	2.25
27.00	968.00	23.00	2.11
30.00	986.00	18.00	2.00
33.00	1006.00	20.00	1.91
36.00	1021.00	15.00	1.83
39.00	1032.00	11.00	1.77
42.00	1042.00	10.00	1.71
45.00	1053.00	11.00	1.67
48.00	1061.00	8.00	1.63

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW

Time (min)	Pressure	Delta P
0.00	95.00	95.00
5.00	95.00	0.00
10.00	90.00	-5.00
15.00	86.00	-4.00
20.00	84.00	-2.00
25.00	82.00	-2.00
30.00	82.00	0.00
35.00	81.00	-1.00
40.00	81.00	0.00
45.00	80.00	-1.00
50.00	80.00	0.00
55.00	80.00	0.00
60.00	80.00	0.00

FINAL SHUT IN

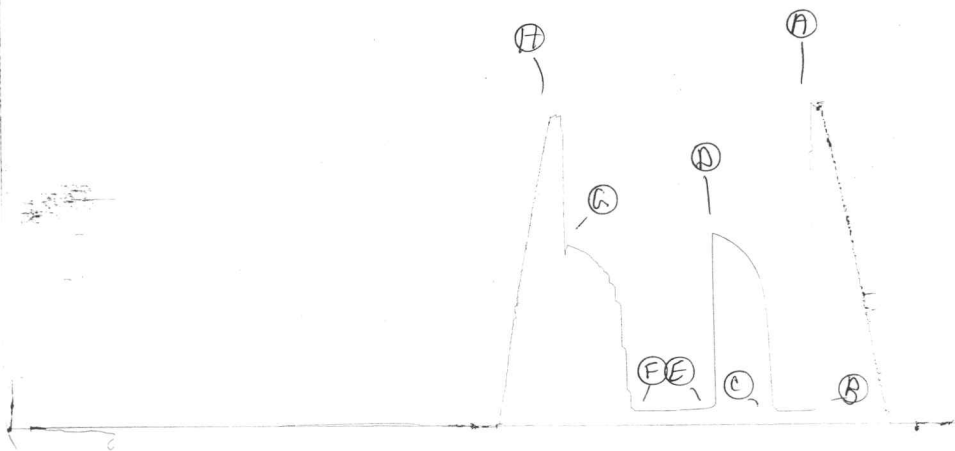
Time (min)	Pressure	Delta P	Horner T
3.00	161.00	161.00	21.00
6.00	370.00	209.00	11.00
9.00	442.00	72.00	7.67
12.00	681.00	239.00	6.00
15.00	770.00	89.00	5.00
18.00	787.00	17.00	4.33
21.00	845.00	58.00	3.86
24.00	872.00	27.00	3.50
27.00	899.00	27.00	3.22
30.00	913.00	14.00	3.00
33.00	938.00	25.00	2.82
36.00	955.00	17.00	2.67
39.00	964.00	9.00	2.54
42.00	977.00	13.00	2.43
45.00	987.00	10.00	2.33
48.00	998.00	11.00	2.25

1057 DST #4



KT 2159A

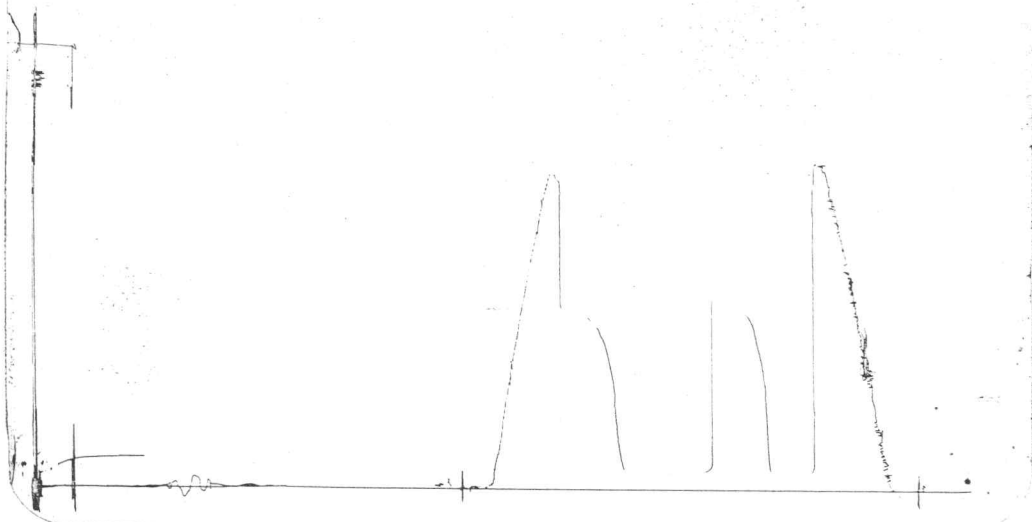
7



Inside Recorder

1566 DST #A

KT 2159A



Outside Recorder

DST REPORT

GENERAL INFORMATION

DATE : 4-25-95
CUSTOMER : HUTCHINSON OIL CO
WELL : #1-21 TEST: 5
ELEVATION: 1875 KB
SECTION : 21
RANGE : 12W COUNTY: STAFFORD
GAUGE SN#: 1051 RANGE : 4250
TICKET : 21392
LEASE : SPANGENBERG
GEOLOGIST: ?
FORMATION: ARBUCKLE
TOWNSHIP : 22S
STATE : KS
CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 3712.00 ft TO: 3718.00 ft TVD: 3718.0 ft
DEPTH OF SELECTIVE ZONE: TEST TYPE: OIL
DEPTH OF RECORDERS: 3712.0 ft 3715.0 ft
TEMPERATURE: 118.0
DRILL COLLAR LENGTH: 0.0 ft I.D.: 0.000 in
WEIGHT PIPE LENGTH : 0.0 ft I.D.: 0.000 in
DRILL PIPE LENGTH : 3692.0 ft I.D.: 3.800 in
TEST TOOL LENGTH : 20.0 ft TOOL SIZE : 5.500 in
ANCHOR LENGTH : 6.0 ft ANCHOR SIZE: 5.500 in
SURFACE CHOKE SIZE : 0.750 in BOTTOM CHOKE SIZE: 0.750 in
MAIN HOLE SIZE : 7.875 in TOOL JOINT SIZE : 4.5XH
PACKER DEPTH: 3706.0 ft SIZE: 6.630 in
PACKER DEPTH: 3712.0 ft SIZE: 6.630 in
PACKER DEPTH: 0.0 ft SIZE: 0.000 in
PACKER DEPTH: 0.0 ft SIZE: 0.000 in

MUD INFORMATION

DRILLING CON. : DUKE DRILLING RIG #2
MUD TYPE : CHEMICAL
WEIGHT : 9.000 ppg
CHLORIDES : 14000 ppm
JARS-MAKE :
DID WELL FLOW?: NO
VISCOSITY : 44.00 cp
WATER LOSS: 13.200 cc
SERIAL NUMBER:
REVERSED OUT?: NO

COMMENTS

Comment

INITIAL FLOW PERIOD-STRONG BLOW IN 15 MINUTES.
FINAL FLOW PERIOD-STRONG BLOW IN 10 MINUTES.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
0.0	0.0	0.0	0.0	0.0	60 FT GAS ABOVE FLUID
10.0	100.0	0.0	0.0	0.0	FREE OIL
180.0	10.0	5.0	60.0	25.0	GAS & OIL CUT MUDDY WATER
720.0	0.0	0.0	100.0	0.0	WATER
0.0	0.0	0.0	0.0	0.0	CHLORIDES 32,000 PPM

RATE INFORMATION

OIL VOLUME:	0.3927 STB	
GAS VOLUME:	0.7088 SCF	TOTAL FLOW TIME: 90.0000 min.
MUD VOLUME:	0.6312 STB	AVERAGE OIL RATE: 7.7265 STB/D
WATER VOLUME:	11.6138 STB	AVERAGE WATER RATE: 194.4774 STB/D
TOTAL FLUID :	12.6377 STB	

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1813.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	75.00	161.00
INITIAL SHUT-IN	45.00		1260.00
FINAL FLOW	60.00	215.00	398.00
FINAL SHUT-IN	45.00		1207.00

FINAL HYDROSTATIC PRESSURE: 1792.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1807.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	75.00	159.00
INITIAL SHUT-IN	48.00		1241.00
FINAL FLOW	60.00	258.00	390.00
FINAL SHUT-IN	51.00		1205.00

FINAL HYDROSTATIC PRESSURE: 1790.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 4-25-95	TICKET : 21392
CUSTOMER : HUTCHINSON OIL CO	LEASE : SPANGENBERG
WELL : #1-21 TEST: 5	GEOLOGIST: ?
ELEVATION: 1875 KB	FORMATION: ARBUCKLE
SECTION : 21	TOWNSHIP : 22S
RANGE : 12W COUNTY: STAFFORD	STATE : KS
GAUGE SN#: 1051 RANGE : 4250	CLOCK : 12

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	75.00	75.00
5.00	77.00	2.00
10.00	90.00	13.00
15.00	103.00	13.00
20.00	120.00	17.00
25.00	140.00	20.00
30.00	159.00	19.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	710.00	710.00	11.00
6.00	986.00	276.00	6.00
9.00	1087.00	101.00	4.33
12.00	1146.00	59.00	3.50
15.00	1169.00	23.00	3.00
18.00	1184.00	15.00	2.67
21.00	1195.00	11.00	2.43
24.00	1205.00	10.00	2.25
27.00	1214.00	9.00	2.11
30.00	1218.00	4.00	2.00
33.00	1224.00	6.00	1.91
36.00	1229.00	5.00	1.83
39.00	1231.00	2.00	1.77
42.00	1233.00	2.00	1.71
45.00	1235.00	2.00	1.67
48.00	1241.00	6.00	1.63

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW

Time (min)	Pressure	Delta P
0.00	258.00	258.00
5.00	232.00	-26.00
10.00	232.00	0.00
15.00	243.00	11.00
20.00	254.00	11.00
25.00	273.00	19.00
30.00	290.00	17.00
35.00	301.00	11.00
40.00	327.00	26.00
45.00	344.00	17.00
50.00	364.00	20.00
55.00	377.00	13.00
60.00	390.00	13.00

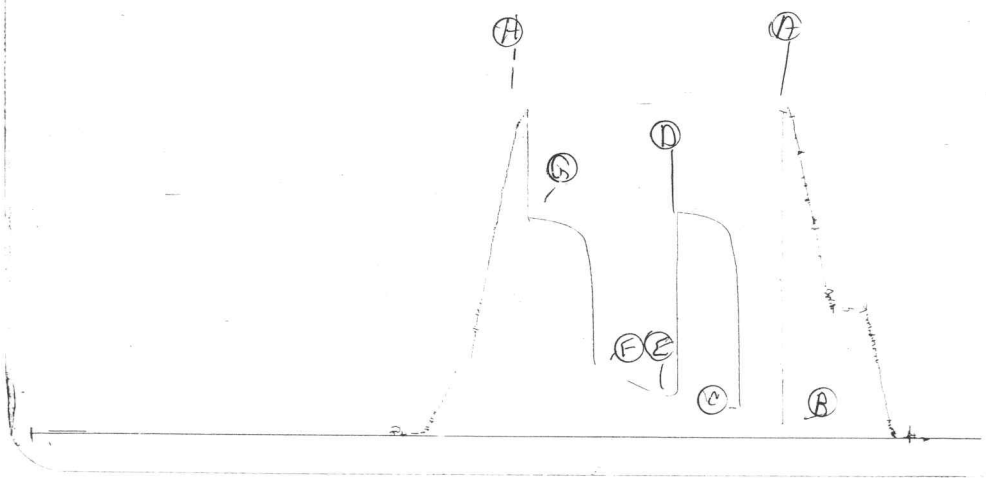
FINAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	780.00	780.00	21.00
6.00	974.00	194.00	11.00
9.00	1074.00	100.00	7.67
12.00	1116.00	42.00	6.00
15.00	1135.00	19.00	5.00
18.00	1148.00	13.00	4.33
21.00	1161.00	13.00	3.86
24.00	1171.00	10.00	3.50
27.00	1176.00	5.00	3.22
30.00	1182.00	6.00	3.00
33.00	1186.00	4.00	2.82
36.00	1191.00	5.00	2.67
39.00	1195.00	4.00	2.54
42.00	1198.00	3.00	2.43
45.00	1201.00	3.00	2.33
48.00	1203.00	2.00	2.25
51.00	1205.00	2.00	2.18

1057 DST #5

KT 2139

1

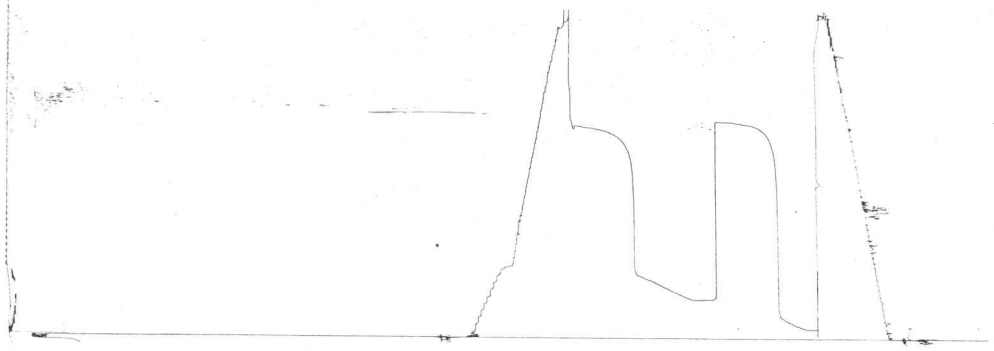


Inside Recorder

1566 DST #5

KT 2139

0



Outside Recorder