

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY20-22-12W
COPY

DATE : 5-6-90
CUSTOMER : RED OAK ENERGY INC.
WELL : #1-20 TEST: 1
ELEVATION : 1875 K.B.
SECTION : 20
RANGE : 12W COUNTY : STAFFORD
GAUGE SN# : 10270 RANGE : 4150

TICKET : 16093
LEASE : KRANKENBERG
GEOLOGIST : SCOTT BANKS
FORMATION : LANSING
TOWNSHIP : 22S
STATE : KANSAS
CLOCK : 12

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INTERVAL FROM : 3363 TO : 3395 TOTAL DEPTH : 3395
DEPTH OF SELECTIVE ZONE :
PACKER DEPTH : 3358 SIZE : 6.63
PACKER DEPTH : 3363 SIZE : 6.63
PACKER DEPTH : SIZE :
PACKER DEPTH : SIZE :

DRILLING CON. : ALLEN RIG #3
MUD TYPE : CHEMICAL VISCOSITY : 46
WEIGHT : 9.0 WATER LOSS (CC) : 8.4
CHLORIDES (PPM) : 6600
JARS-MAKE : WTC SERIAL NUMBER : 422
DID WELL FLOW ? : GAS 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 : 3339 FT I.D. inch : 3.80
TEST TOOL LENGTH : 24 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 : 4.5XH

BLOW COMMENT #1 : INITIAL FLOW PERIOD STRONG BLOW.
BLOW COMMENT #2 : GAS TO SURFACE IN 2 MINUTES.
BLOW COMMENT #3 : FINAL FLOW PERIOD GAS TO SURFACE.
BLOW COMMENT #4 :

20-22-12W

COPY

RECOVERED : 60 FT OF: GAS-CUT MUD
RECOVERED : 180 FT OF: WATER
RECOVERED : 0 FT OF: CHLORIDES 68000 P.P.M.

Total Barrels Fluid = 3.37
Total Fluid Prod Rate = 64.63 BFPD
Indicated Wtr Rate = 50.09 BWPD

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

SET PACKER(S) : 10:45 A.M.

TIME STARTED OFF BOTTOM : 1:30 P.M.

WELL TEMPERATURE : 100

INITIAL HYDROSTATIC PRESSURE

(A) 1622

INITIAL FLOW PERIOD MIN: 15

(B) 268 PSI TO (C) : 268

INITIAL CLOSED IN PERIOD MIN: 30

(D) 1274

FINAL FLOW PERIOD MIN: 60

(E) 268 PSI TO (F) : 280

FINAL CLOSED IN PERIOD MIN: 60

(G) 1273

FINAL HYDROSTATIC PRESSURE

(H) 1616

W&I - SS - 02

COPY

WESTERN TESTING CO. INC.
WICHITA-KANSAS

Pressure Transient Report

COMP
WELL
GAUGE
DATE

DATA
No.

COMPANY : RED OAK ENERGY INC.
RIG : STAFFORD-KANSAS
FIELD : KRANKENBERG
WELL : #1-20
DATE : 5-6-90
GAUGE NO - : 10270

OPERATIONAL COMMENTS

20-22-12W

COPY

COMPANY : RED OAK ENERGY INC.
 WELL : #1-20
 GAUGE # : 10270
 DATE : 6/ 5/90

FIELD : KRANKENBERG
 JOB # : 16093
 DEPTH : 3395
 TEST :

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
INITIAL FLOW PERIOD					
2	10:45: 0	0.000	268.000	100.00	0.000
3	10:49:59	0.083	268.000	100.00	0.000
4	10:55: 0	0.167	268.000	100.00	0.000
5	11: 0: 0	0.250	268.000	100.00	0.000
INITIAL SHUT-IN PERIOD					
6	11: 3: 0	0.300	1212.000	100.00	944.000
7	11: 6: 0	0.350	1241.000	100.00	29.000
8	11: 9: 0	0.400	1254.000	100.00	13.000
9	11:12: 0	0.450	1261.000	100.00	7.000
10	11:15: 0	0.500	1267.000	100.00	6.000
11	11:18: 0	0.550	1270.000	100.00	3.000
12	11:21: 0	0.600	1271.000	100.00	1.000
13	11:24: 0	0.650	1272.000	100.00	1.000
14	11:27: 0	0.700	1273.000	100.00	1.000
15	11:30: 0	0.750	1274.000	100.00	1.000
FINAL FLOW PERIOD					
16	11:31: 0	0.767	268.000	100.00	-1006.000
17	11:34:59	0.833	268.000	100.00	0.000
18	11:40: 0	0.917	268.000	100.00	0.000
19	11:45: 0	1.000	268.000	100.00	0.000
20	11:49:59	1.083	268.000	100.00	0.000
21	11:55: 0	1.167	268.000	100.00	0.000
22	12: 0: 0	1.250	268.000	100.00	0.000
23	12: 4:59	1.333	268.000	100.00	0.000
24	12:10: 0	1.417	268.000	100.00	0.000
25	12:15: 0	1.500	270.000	100.00	2.000
26	12:19:59	1.583	274.000	100.00	4.000
27	12:25: 0	1.667	277.000	100.00	3.000
28	12:30: 0	1.750	280.000	100.00	3.000
FINAL SHUT-IN PERIOD					
29	12:33: 0	1.800	1185.000	100.00	905.000
30	12:36: 0	1.850	1212.000	100.00	27.000
31	12:39: 0	1.900	1227.000	100.00	15.000
32	12:42: 0	1.950	1237.000	100.00	10.000
33	12:45: 0	2.000	1244.000	100.00	7.000
34	12:48: 0	2.050	1250.000	100.00	6.000
35	12:51: 0	2.100	1252.000	100.00	2.000
36	12:54: 0	2.150	1254.000	100.00	2.000
37	12:57: 0	2.200	1256.000	100.00	2.000
38	13: 0: 0	2.250	1258.000	100.00	2.000
39	13: 3: 0	2.300	1260.000	100.00	2.000
40	13: 6: 0	2.350	1262.000	100.00	2.000
41	13: 9: 0	2.400	1264.000	100.00	2.000
42	13:12: 0	2.450	1266.000	100.00	2.000
43	13:15: 0	2.500	1268.000	100.00	2.000
44	13:18: 0	2.550	1269.000	100.00	1.000
45	13:21: 0	2.600	1270.000	100.00	1.000
46	13:24: 0	2.650	1271.000	100.00	1.000
47	13:27: 0	2.700	1272.000	100.00	1.000
48	13:30: 0	2.750	1273.000	100.00	1.000

W51-22-02

COF

GAS FLOW REPORT

Date : 5-6-90 Ticket # : 16093
 Customer : RED OAK ENERGY INC. Lease : KRANKENBERG
 Well : #1-20 Test : 1 Geologist : SCOTT BANKS
 Elevation (KB) : 1875 K.B. Formation : LANSING
 Section : 20 Township : 22S
 Range : 12W County : STAFFORD State : KANSAS
 Gauge SN # : 10270 Range : 4150 Clock : 12

TIME GAUGE (MIN)	TESTER TYPE	ORFICE SIZE	PRESSURE (PSI)	FLOW DESCRIPTION
			PRE FLOW =====	
2 MIN.	MERLA	1"		GAS TO SURFACE
5 MIN.	MERLA	1"	17 PSIG	652000 C.F.P.D.
15 MIN.	MERLA	1"	21 PSIG	749000 C.F.P.D.

			SECOND FLOW =====	
5 MIN.	MERLA	1"	17 PSIG	652000 C.F.P.D.
15 MIN.	MERLA	1"	19 PSIG	699000 C.F.P.D.
25 MIN.	MERLA	1"	19 PSIG	699000 C.F.P.D.
35 MIN.	MERLA	1"	19 PSIG	699000 C.F.P.D.
45 MIN.	MERLA	1"	18 PSIG	687000 C.F.P.D.
55 MIN.	MERLA	1"	18 PSIG	687000 C.F.P.D.
60 MIN.	MERLA	1"	18 PSIG	687000 C.F.P.D.

Gas Bottle SN # : 818
 Date Bottle Filled : 5-6-90
 Date to be Invoiced : 5-6-90

20-22-12W
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WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE	: 05-06-90	TICKET	: 16094
CUSTOMER	: RED OAK ENERGY INC	LEASE	: KRANKENBERG
WELL	: #1-20 TEST: 2	GEOLOGIST	: SCOTT BANKS
ELEVATION	: 1875 KB	FORMATION	: LANSING
SECTION	: 20	TOWNSHIP	: 22S
RANGE	: 12W	COUNTY	: STAFFORD
GAUGE SN#	: 13268	STATE	: KANSAS
		RANGE	: 4225
		CLOCK	: 12

INTERVAL FROM	: 3395	TO	: 3420	TOTAL DEPTH	: 3420
DEPTH OF SELECTIVE ZONE	:				
PACKER DEPTH	: 3390	SIZE	: 6.63		
PACKER DEPTH	: 3395	SIZE	: 6.63		
PACKER DEPTH	:	SIZE	:		
PACKER DEPTH	:	SIZE	:		

DRILLING CON.	: ALLEN RIG 3		
MUD TYPE	: CHEMICAL	VISCOSITY	: 50
WEIGHT	: 8.3	WATER LOSS (CC)	: 9.6
CHLORIDES (PPM)	: 8000		
JARS-MAKE	: WTC	SERIAL NUMBER	: 422
DID WELL FLOW ?	: GAS	REVERSED OUT ?	: YES

DRILL COLLAR LENGTH	: 0	FT	I.D. inch	: 0.00
WEIGHT PIPE LENGTH	: 0	FT	I.D. inch	: 0.00
DRILL PIPE LENGTH	: 3371	FT	I.D. inch	: 3.80
TEST TOOL LENGTH	: 24	FT	TOOL SIZE	: 5.50
ANCHOR LENGTH	: 25	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 PERIOD STRONG BLOW GAS TO SURFACE
BLOW COMMENT #2 : IN 2 MIN
BLOW COMMENT #3 : FINAL FLOW PERIOD GAS TO SURFACE
BLOW COMMENT #4 :

WLCI-SS-06

COPY

RECOVERED : 840 FT OF: GASSY OIL
RECOVERED : 0 FT OF: BOTTOM 120 FT GRINDOUT 5% MUD
RECOVERED : 0 FT OF: 60% GAS 35% OIL

G
S

Total Barrels Fluid = 11.78
Total Fluid Prod Rate = 226.22 BFPD
Indicated Oil Rate = 79.18 BOPD
Indicated Wtr Rate = 0.11 BWPD
Corrected Oil Rate = 53.18 BOPD
Corrected Wtr Rate = 0.07 BWPD

REMARK 1 : READ OUTSIDE CHART
REMARK 2 :
REMARK 3 :
REMARK 4 :

SET PACKER(S) : 10:35 PM

TIME STARTED OFF BOTTOM : 1:20 AM

WELL TEMPERATURE : 103

INITIAL HYDROSTATIC PRESSURE

INITIAL FLOW PERIOD MIN: 15 (A) 1632

INITIAL CLOSED IN PERIOD MIN: 36 (B) 237 PSI TO (C) : 237

FINAL FLOW PERIOD MIN: 60 (D) 984

FINAL CLOSED IN PERIOD MIN: 60 (E) 259 PSI TO (F) : 311

FINAL HYDROSTATIC PRESSURE (G) 778

(H) 1598

20-22-12W

WESTERN TESTING CO. INC.
WICHITA-KANSAS

Pressure Transient Report

COMPANY : RED OAK ENERGY INC
RIG : STAFFORD-KANSAS
FIELD : KRANKENBERG
WELL : #1-20
DATE : 05-06-90
GAUGE NO : 13268

OPERATIONAL COMMENTS

READ OUTSIDE CHART

451-25-02

COMPANY : RED OAK ENERGY INC
WELL : #1-20
GAUGE # : 13268
DATE : 6/ 5/90

FIELD : KRANKENBERG
JOB # : 16094
DEPTH : 3420
TEST : READ OUTSIDE CHART

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
INITIAL FLOW PERIOD					
2	10:35: 0	0.000	237.000	103.00	0.000
3	10:39:59	0.083	237.000	103.00	0.000
4	10:45: 0	0.167	237.000	103.00	0.000
5	10:50: 0	0.250	237.000	103.00	0.000
INITIAL SHUT-IN PERIOD					
6	10:53: 0	0.300	406.000	103.00	169.000
7	10:56: 0	0.350	591.000	103.00	185.000
8	10:59: 0	0.400	794.000	103.00	203.000
9	11: 2: 0	0.450	881.000	103.00	87.000
10	11: 5: 0	0.500	912.000	103.00	31.000
11	11: 8: 0	0.550	932.000	103.00	20.000
12	11:11: 0	0.600	944.000	103.00	12.000
13	11:14: 0	0.650	955.000	103.00	11.000
14	11:17: 0	0.700	965.000	103.00	10.000
15	11:20: 0	0.750	971.000	103.00	6.000
16	11:23: 0	0.800	978.000	103.00	7.000
17	11:26: 0	0.850	984.000	103.00	6.000
FINAL FLOW PERIOD					
18	11:27: 0	0.867	259.000	103.00	-725.000
19	11:30:59	0.933	259.000	103.00	0.000
20	11:36: 0	1.017	259.000	103.00	0.000
21	11:41: 0	1.100	259.000	103.00	0.000
22	11:45:59	1.183	259.000	103.00	0.000
23	11:51: 0	1.267	263.000	103.00	4.000
24	11:56: 0	1.350	266.000	103.00	3.000
25	12: 0:59	1.433	273.000	103.00	7.000
26	12: 6: 0	1.517	279.000	103.00	6.000
27	12:11: 0	1.600	287.000	103.00	8.000
28	12:15:59	1.683	295.000	103.00	8.000
29	12:21: 0	1.767	303.000	103.00	8.000
30	12:26: 0	1.850	311.000	103.00	8.000
FINAL SHUT-IN PERIOD					
31	12:29: 0	1.900	522.000	103.00	211.000
32	12:32: 0	1.950	677.000	103.00	155.000
33	12:35: 0	2.000	747.000	103.00	70.000
34	12:38: 0	2.050	776.000	103.00	29.000
35	12:41: 0	2.100	778.000	103.00	2.000
36	12:44: 0	2.150	778.000	103.00	0.000
37	12:47: 0	2.200	778.000	103.00	0.000
38	12:50: 0	2.250	778.000	103.00	0.000
39	12:53: 0	2.300	778.000	103.00	0.000
40	12:56: 0	2.350	778.000	103.00	0.000
41	12:59: 0	2.400	778.000	103.00	0.000
42	13: 2: 0	2.450	778.000	103.00	0.000
43	13: 5: 0	2.500	778.000	103.00	0.000
44	13: 8: 0	2.550	778.000	103.00	0.000
45	13:11: 0	2.600	778.000	103.00	0.000
46	13:14: 0	2.650	778.000	103.00	0.000
47	13:17: 0	2.700	778.000	103.00	0.000
48	13:20: 0	2.750	778.000	103.00	0.000

COMPANY : RED OAK ENERGY INC
WELL : #1-20
GAUGE # : 13268
DATE : 6/ 5/90

FIELD : KRANKENBERG
JOB # : 16094
DEPTH : 3420
TEST : READ OUTSIDE CHART

20-22-12W
COPY

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
49	13:23: 0	2.800	778.000	103.00	0.000
50	13:26: 0	2.850	778.000	103.00	0.000

WESTERN TESTING CO. INC.

Date :
Customer:
Well :
Elevation:
Section:
Range:
Gauge SI

TIME GAU
(MIN)

5 MIN
15 MI

10 MI
20 MI
30 MI
40 MI
50 MI
60 MI

Gas Bott
Date Bot
Date to

20-22-12W
COPY

GAS FLOW REPORT

Date : 5-6-90 Ticket # : 16094
Customer : RED OAK ENERGY INC. Lease : KRANKENBERG
Well : #1-20 Test : 2 Geologist : SCOTT BANKS
Elevation (KB) : 1875 KB Formation : LANSING
Section : 20 Township : 22S
Range : 12W County : STAFFORD State : KANSAS
Gauge SN # : 13268 Range : 4225 Clock : 12

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

=====

5 MIN.	MERLA	1"	6 PSIG	353000 C.F.P.D.
15 MIN.	MERLA	1"	6 PSIG	353000 C.F.P.D.

SECOND FLOW

=====

10 MIN.	MERLA	3/4"	12 PSIG	288000 C.F.P.D.
20 MIN.	MERLA	3/4"	11 PSIG	274000 C.F.P.D.
30 MIN.	MERLA	3/4"	10 PSIG	259000 C.F.P.D.
40 MIN.	MERLA	3/4"	10 PSIG	259000 C.F.P.D.
50 MIN.	MERLA	3/4"	9 PSIG	245000 C.F.P.D.
60 MIN.	MERLA	3/4"	9 PSIG	245000 C.F.P.D.

Gas Bottle SN # : 41
Date Bottle Filled : 5-6-90
Date to be Invoiced : 5-6-90

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

20-22-12W
COPY

DATE : 5-07-90 TICKET : 18095
CUSTOMER : RED OAK ENERGY INC. LEASE : KRANKENBERG
WELL : #1-20 TEST: 3 GEOLOGIST : K. DAVIS
ELEVATION : 1875 K.B. FORMATION : LANSING
SECTION : 20 TOWNSHIP : 22S
RANGE : 12W COUNTY : STAFFORD STATE : KS
GAUGE SN# : 10270 RANGE : 4150 CLOCK : 12

INTERVAL FROM : 3410 TO : 3420 TOTAL DEPTH : 3420

DEPTH OF SELECTIVE ZONE :

PACKER DEPTH : 3405 SIZE : 6.63
PACKER DEPTH : 3410 SIZE : 6.63
PACKER DEPTH : SIZE :
PACKER DEPTH : SIZE :

DRILLING CON. : ALLEN DRLG. #3

MUD TYPE : CHEMICAL VISCOSITY : 50
WEIGHT : 8.3 WATER LOSS (CC) : 9.6
CHLORIDES (PPM) : 8000
JARS-MAKE : WTC SERIAL NUMBER : 422
DID WELL FLOW ? : GAS REVERSED OUT ? : NO

DRILL COLLAR LENGTH : 0 FT I.D. inch : 0.00
WEIGHT PIPE LENGTH : 0 FT I.D. inch : 0.00
DRILL PIPE LENGTH : 3386 FT I.D. inch : 3.80
TEST TOOL LENGTH : 24 FT TOOL SIZE : 5.50
ANCHOR LENGTH : 10 FT ANCHOR SIZE : 5.50
SURFACE CHOKE SIZE : .75 IN BOTTOM CHOKE SIZE : .75
MAIN HOLE SIZE : 7.875 IN TOOL JOINT SIZE : 4.5XH

BLOW COMMENT #1 : STRONG BLOW AND GAS TO SURFACE IN 2 MINUTES
BLOW COMMENT #2 : ON INITIAL FLOW PERIOD.
BLOW COMMENT #3 : GAS TO SURFACE ON FINAL FLOW PERIOD.
BLOW COMMENT #4 :

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SET
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INJ
INJ
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FIN
FIN

20-22-12W

COF

RECOVERED : 840 FT OF: GASSY OIL
RECOVERED : 0 FT OF: BOTTOM 120 FT GRINDOUT 5% MUD
RECOVERED : 0 FT OF: 60% GAS 35% OIL

RG
KS

Total Barrels Fluid = 11.78
Total Fluid Prod Rate = 226.22 BFPD
Indicated Oil Rate = 79.18 BOPD
Indicated Wtr Rate = 0.11 BOPD
Corrected Oil Rate = 53.18 BOPD
Corrected Wtr Rate = 0.07 BOPD

REMARK 1 : READ OUTSIDE CHART
REMARK 2 :
REMARK 3 :
REMARK 4 :

SET PACKER(S) : 10:35 PM

WELL TEMPERATURE : 103

TIME STARTED OFF BOTTOM : 1:20 AM

INITIAL HYDROSTATIC PRESSURE

INITIAL FLOW PERIOD MIN: 15 (A) 1632

INITIAL CLOSED IN PERIOD MIN: 36 (B) 237 PSI TO (C) : 237

FINAL FLOW PERIOD MIN: 60 (D) 984

FINAL CLOSED IN PERIOD MIN: 60 (E) 259 PSI TO (F) : 311

FINAL HYDROSTATIC PRESSURE (G) 778

(H) 1598

WCT-LS-05

WESTERN TESTING CO. INC.
WICHITA-KANSAS

COPY

Pressure Transient Report

COMPANY : RED OAK ENERGY INC
RIG : STAFFORD-KANSAS
FIELD : KRANKENBERG
WELL : #1-20
DATE : 05-06-90
GAUGE_NO : 13268

OPERATIONAL COMMENTS

READ OUTSIDE CHART

COMPANY : RED OAK ENERGY INC
WELL : #1-20
GAUGE # : 13268
DATE : 6/ 5/90

FIELD : KRANKENBERG
JOB # : 16094
DEPTH : 3420
TEST : READ OUTSIDE CHART

COP

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P P1-P(i-1)
INITIAL FLOW PERIOD					
2	10:35: 0	0.000	237.000	103.00	0.000
3	10:39:59	0.083	237.000	103.00	0.000
4	10:45: 0	0.167	237.000	103.00	0.000
5	10:50: 0	0.250	237.000	103.00	0.000
INITIAL SHUT-IN PERIOD					
6	10:53: 0	0.300	406.000	103.00	169.000
7	10:56: 0	0.350	591.000	103.00	185.000
8	10:59: 0	0.400	794.000	103.00	203.000
9	11: 2: 0	0.450	881.000	103.00	87.000
10	11: 5: 0	0.500	912.000	103.00	31.000
11	11: 8: 0	0.550	932.000	103.00	20.000
12	11:11: 0	0.600	944.000	103.00	12.000
13	11:14: 0	0.650	955.000	103.00	11.000
14	11:17: 0	0.700	965.000	103.00	10.000
15	11:20: 0	0.750	971.000	103.00	6.000
16	11:23: 0	0.800	978.000	103.00	7.000
17	11:26: 0	0.850	984.000	103.00	6.000
FINAL FLOW PERIOD					
18	11:27: 0	0.867	259.000	103.00	-725.000
19	11:30:59	0.933	259.000	103.00	0.000
20	11:36: 0	1.017	259.000	103.00	0.000
21	11:41: 0	1.100	259.000	103.00	0.000
22	11:45:59	1.183	259.000	103.00	0.000
23	11:51: 0	1.267	263.000	103.00	4.000
24	11:56: 0	1.350	266.000	103.00	3.000
25	12: 0:59	1.433	273.000	103.00	7.000
26	12: 6: 0	1.517	279.000	103.00	6.000
27	12:11: 0	1.600	287.000	103.00	8.000
28	12:15:59	1.683	295.000	103.00	8.000
29	12:21: 0	1.767	303.000	103.00	8.000
30	12:26: 0	1.850	311.000	103.00	8.000
FINAL SHUT-IN PERIOD					
31	12:29: 0	1.900	522.000	103.00	211.000
32	12:32: 0	1.950	677.000	103.00	155.000
33	12:35: 0	2.000	747.000	103.00	70.000
34	12:38: 0	2.050	776.000	103.00	29.000
35	12:41: 0	2.100	778.000	103.00	2.000
36	12:44: 0	2.150	778.000	103.00	0.000
37	12:47: 0	2.200	778.000	103.00	0.000
38	12:50: 0	2.250	778.000	103.00	0.000
39	12:53: 0	2.300	778.000	103.00	0.000
40	12:56: 0	2.350	778.000	103.00	0.000
41	12:59: 0	2.400	778.000	103.00	0.000
42	13: 2: 0	2.450	778.000	103.00	0.000
43	13: 5: 0	2.500	778.000	103.00	0.000
44	13: 8: 0	2.550	778.000	103.00	0.000
45	13:11: 0	2.600	778.000	103.00	0.000
46	13:14: 0	2.650	778.000	103.00	0.000
47	13:17: 0	2.700	778.000	103.00	0.000
48	13:20: 0	2.750	778.000	103.00	0.000

COP

COMPANY : RED OAK ENERGY INC
WELL : #1-20
GAUGE # : 13268
DATE : 6/ 5/90

FIELD : KRANKENBERG
JOB # : 16094
DEPTH : 3420
TEST : READ OUTSIDE CHART

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
49	13:23: 0	2.800	778.000	103.00	0.000
50	13:26: 0	2.850	778.000	103.00	0.000

WESTERN TESTING CO. INC.

Date
Time
Well
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5
15

10
20
30
40
50
60

Gas P
Date
Date

COF

GAS FLOW REPORT

Date : 5-6-90 Ticket # : 16094
 Customer : RED OAK ENERGY INC. Lease : KRANKENBERG
 Well : #1-20 Test : 2 Geologist : SCOTT BANKS
 Elevation (KB) : 1875 KB Formation : LANSING
 Section : 20 Township : 22S
 Range : 12W County : STAFFORD State : KANSAS
 Gauge SN # : 13268 Range : 4225 Clock : 12

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

PRE FLOW

=====

5 MIN.	MERLA	1"	6 PSIG	353000 C.F.P.D.
15 MIN.	MERLA	1"	6 PSIG	353000 C.F.P.D.

SECOND FLOW

=====

10 MIN.	MERLA	3/4"	12 PSIG	288000 C.F.P.D.
20 MIN.	MERLA	3/4"	11 PSIG	274000 C.F.P.D.
30 MIN.	MERLA	3/4"	10 PSIG	259000 C.F.P.D.
40 MIN.	MERLA	3/4"	10 PSIG	259000 C.F.P.D.
50 MIN.	MERLA	3/4"	9 PSIG	245000 C.F.P.D.
60 MIN.	MERLA	3/4"	9 PSIG	245000 C.F.P.D.

Gas Bottle SN # : 41
 Gas Bottle Filled : 5-6-90
 Date to be Invoiced : 5-6-90

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

COF

DATE	:	5-07-90	TICKET	:	18095
CUSTOMER	:	RED OAK ENERGY INC.	LEASE	:	KRANKENBERG
WELL	:	#1-20 TEST: 3	GEOLOGIST	:	K. DAVIS
ELEVATION	:	1875 K.B.	FORMATION	:	LANSING
SECTION	:	20	TOWNSHIP	:	22S
RANGE	:	12W	STATE	:	KS
Gauge SN#	:	10270	CLOCK	:	12
COUNTY	:	STAFFORD			
RANGE	:	4150			

INTERVAL FROM	:	3410	TO	:	3420	TOTAL DEPTH	:	3420
DEPTH OF SELECTIVE ZONE	:							
PACKER DEPTH	:	3405	SIZE	:	6.63			
PACKER DEPTH	:	3410	SIZE	:	6.63			
PACKER DEPTH	:		SIZE	:				
PACKER DEPTH	:		SIZE	:				

DRILLING CON.	:	ALLEN DRLG. #3			
MUD TYPE	:	CHEMICAL	VISCOSITY	:	50
WEIGHT	:	8.3	WATER LOSS (CC)	:	9.6
CHLORIDES (PPM)	:	8000			
JARS-MAKE	:	WTC	SERIAL NUMBER	:	422
DID WELL FLOW ?	:	GAS	REVERSED OUT ?	:	NO

DRILL COLLAR LENGTH	:	0	FT	I.D. inch	:	0.00
WEIGHT PIPE LENGTH	:	0	FT	I.D. inch	:	0.00
DRILL PIPE LENGTH	:	3386	FT	I.D. inch	:	3.80
TEST TOOL LENGTH	:	24	FT	TOOL SIZE	:	5.50
ANCHOR LENGTH	:	10	FT	ANCHOR SIZE	:	5.50
SURFACE CHOKE SIZE	:	.75	IN	BOTTOM CHOKE SIZE	:	.75
MAIN HOLE SIZE	:	7.875	IN	TOOL JOINT SIZE	:	4.5XH

BLOW COMMENT #1	:	STRONG BLOW AND GAS TO SURFACE IN 2 MINUTES
BLOW COMMENT #2	:	ON INITIAL FLOW PERIOD.
BLOW COMMENT #3	:	GAS TO SURFACE ON FINAL FLOW PERIOD.
BLOW COMMENT #4	:	

COPY

RECOVERED : 420 FT OF: CLEAN GASSY OIL GRAVITY 28
RECOVERED : 120 FT OF: SLI. MUDDY GASSY OIL
RECOVERED : 0 FT OF: 3%MUD 32%GAS 65%OIL

Total Barrels Fluid = 7.57
Total Fluid Prod Rate = 145.43 BFPD
Indicated Oil Rate = 134.11 BOPD
Indicated Wtr Rate = 0.08 BWPB
Corrected Oil Rate = 60.99 BOPD
Corrected Wtr Rate = 0.04 BWPB

REMARK 1 :
REMARK 2 : SEE ATTACHED SHEET FOR GAS MEASUREMENTS.
REMARK 3 :
REMARK 4 :

SET PACKER(S) : 7:45AM TIME STARTED OFF BOTTOM : 10:30 AM
WELL TEMPERATURE : 103
INITIAL HYDROSTATIC PRESSURE (A) 1686
INITIAL FLOW PERIOD MIN: 15 (B) 78 PSI TO (C) : 78
INITIAL CLOSED IN PERIOD MIN: 30 (D) 577
FINAL FLOW PERIOD MIN: 60 (E) 87 PSI TO (F) : 165
FINAL CLOSED IN PERIOD MIN: 60 (G) 576
FINAL HYDROSTATIC PRESSURE (H) 1655

WESTERN TESTING CO. INC.
WICHITA-KANSAS

Pressure Transient Report

COMPANY : RED OAK ENERGY INC.
RIG : STAFFORD-KS
FIELD : KRANKENBERG
WELL : #1-20
DATE : 5-07-90
GAUGE NO : 10270

OPERATIONAL COMMENTS

SEE ATTACHED SHEET FOR GAS MEASUREMENTS.

COMPANY : RED OAK ENERGY INC.
WELL : #1-20
GAUGE # : 10270
DATE : 7/ 5/90

FIELD : KRANKENBERG
JOB # : 16095
DEPTH : 3420
TEST :

COF

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
INITIAL FLOW PERIOD					
2	7:49:59	0.083	78.000	103.00	0.000
3	7:49:59	0.083	78.000	103.00	0.000
4	7:55: 0	0.167	78.000	103.00	0.000
5	8: 0: 0	0.250	78.000	103.00	0.000
INITIAL SHUT-IN PERIOD					
6	8: 3: 0	0.300	547.000	103.00	469.000
7	8: 6: 0	0.350	563.000	103.00	16.000
8	8: 9: 0	0.400	570.000	103.00	7.000
9	8:12: 0	0.450	572.000	103.00	2.000
10	8:15: 0	0.500	575.000	103.00	3.000
11	8:18: 0	0.550	576.000	103.00	1.000
12	8:21: 0	0.600	577.000	103.00	1.000
13	8:24: 0	0.650	577.000	103.00	0.000
14	8:27: 0	0.700	577.000	103.00	0.000
15	8:30: 0	0.750	577.000	103.00	0.000
FINAL FLOW PERIOD					
16	8:31: 0	0.767	87.000	103.00	-490.000
17	8:34:59	0.833	87.000	103.00	0.000
18	8:40: 0	0.917	87.000	103.00	0.000
19	8:45: 0	1.000	91.000	103.00	4.000
20	8:49:59	1.083	96.000	103.00	5.000
21	8:55: 0	1.167	102.000	103.00	6.000
22	9: 0: 0	1.250	114.000	103.00	12.000
23	9: 4:59	1.333	125.000	103.00	11.000
24	9:10: 0	1.417	131.000	103.00	6.000
25	9:15: 0	1.500	141.000	103.00	10.000
26	9:19:59	1.583	151.000	103.00	10.000
27	9:25: 0	1.667	162.000	103.00	11.000
28	9:30: 0	1.750	165.000	103.00	3.000
FINAL SHUT-IN PERIOD					
29	9:33: 0	1.800	539.000	103.00	374.000
30	9:36: 0	1.850	559.000	103.00	20.000
31	9:39: 0	1.900	562.000	103.00	3.000
32	9:42: 0	1.950	564.000	103.00	2.000
33	9:45: 0	2.000	568.000	103.00	4.000
34	9:48: 0	2.050	571.000	103.00	3.000
35	9:51: 0	2.100	573.000	103.00	2.000
36	9:54: 0	2.150	573.000	103.00	0.000
37	9:57: 0	2.200	573.000	103.00	0.000
38	10: 0: 0	2.250	573.000	103.00	0.000
39	10: 3: 0	2.300	574.000	103.00	1.000
40	10: 6: 0	2.350	574.000	103.00	0.000
41	10: 9: 0	2.400	575.000	103.00	1.000
42	10:12: 0	2.450	575.000	103.00	0.000
43	10:15: 0	2.500	576.000	103.00	1.000
44	10:18: 0	2.550	576.000	103.00	0.000
45	10:21: 0	2.600	576.000	103.00	0.000
46	10:24: 0	2.650	576.000	103.00	0.000
47	10:27: 0	2.700	576.000	103.00	0.000
48	10:30: 0	2.750	576.000	103.00	0.000

COPY

GAS FLOW REPORT

Date : 05-07-90 Ticket # : 16095
 Customer : RED OAK ENERGY INC. Lease : KRANKENBERG
 Well : #1-20 Test : 3 Geologist : K. DAVIS
 Elevation (KB) : 1875 KB Formation : LANSING
 Section : 20 Township : 22S
 Range : 12W County : STAFFORD State : KANSAS
 Gauge SN # : 10270 Range : 4150 Clock : 12

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

=====

5 MIN	MERLA	3/4"	3.5 PSIG	144000 CFPD
15 MIN	MERLA	3/4"	3 PSIG	133000 CFPD

SECOND FLOW

=====

5 MIN	MERLA	1/2"	3 PSIG	59200 CFPD
15 MIN	MERLA	1/2"	6 PSIG	86300 CFPD
25 MIN	MERLA	1/2"	6 PSIG	86300 CFPD
35 MIN	MERLA	1/2"	5.5 PSIG	81300 CFPD
45 MIN	MERLA	1/2"	5 PSIG	78100 CFPD
55 MIN	MERLA	1/2"	5 PSIG	78100 CFPD

Gas Bottle SN # :
 Date Bottle Filled :
 Date to be Invoiced : 5-7-90

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

DATE	:	5-7-90	TICKET	:	16096
CUSTOMER	:	RED OAK ENERGY INC.	LEASE	:	KRANKENBERG
WELL	:	#1-20	TEST:	:	4
ELEVATION	:	1875 KB	GEOLOGIST	:	SCOTT BANKS
SECTION	:	20	FORMATION	:	LANSING
RANGE	:	12W	COUNTY :	:	STAFFORD
GAUGE SN#	:	10270	RANGE :	:	4150
			STATE	:	KANSAS
			CLOCK	:	12

INTERVAL FROM	:	3468	TO	:	3504	TOTAL DEPTH	:	3504
DEPTH OF SELECTIVE ZONE	:							
PACKER DEPTH	:	3463	SIZE	:	6.63			
PACKER DEPTH	:	3468	SIZE	:	6.63			
PACKER DEPTH	:		SIZE	:				
PACKER DEPTH	:		SIZE	:				

DRILLING CON.	:	ALLEN RIG #3			
MUD TYPE	:	CHEMICAL	VISCOSITY	:	47
EIGHT	:	8.7	WATER LOSS (CC)	:	9.8
CHLORIDES (PPM)	:	11500			
JARS-MAKE	:	WTC	SERIAL NUMBER	:	422
DID WELL FLOW ?	:	GAS	REVERSED OUT ?	:	YES

DRILL COLLAR LENGTH	:	0	FT	I.D. inch	:	0.00
WEIGHT PIPE LENGTH	:	0	FT	I.D. inch	:	0.00
DRILL PIPE LENGTH	:	3444	FT	I.D. inch	:	3.80
TEST TOOL LENGTH	:	24	FT	TOOL SIZE	:	5.50
ANCHOR LENGTH	:	36	FT	ANCHOR SIZE	:	5.50
SURFACE CHOKE SIZE	:	.75	IN	BOTTOM CHOKE SIZE	:	.75
MAIN HOLE SIZE	:	7.875	IN	TOOL JOINT SIZE	:	4.5XH

BLOW COMMENT #1 : INITIAL FLOW PERIOD STRONG BLOW.
BLOW COMMENT #2 : GAS TO SURFACE IN 7 MINUTES.
BLOW COMMENT #3 : FINAL FLOW PERIOD GAS TO SURFACE.
BLOW COMMENT #4 :

RECOVERED : 2400 FT OF: GASSY OIL

COPY

Total Barrels Fluid = 33.66
Total Fluid Prod Rate = 538.61 BFPD
Indicated Oil Rate = 538.61 BOPD
Corrected Oil Rate = 140.14 BOPD

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

SET PACKER(S) : 12:30 A.M.

TIME STARTED OFF BOTTOM : 3:45 A.M.

WELL TEMPERATURE : 105

INITIAL HYDROSTATIC PRESSURE

(A) 1670

INITIAL FLOW PERIOD MIN: 30

(B) 168 PSI TO (C) : 223

INITIAL CLOSED IN PERIOD MIN: 45

(D) 848

FINAL FLOW PERIOD MIN: 60

(E) 287 PSI TO (F) : 402

FINAL CLOSED IN PERIOD MIN: 60

(G) 840

FINAL HYDROSTATIC PRESSURE

(H) 1670

WESTERN TESTING CO. INC.
WICHITA-KANSAS

Pressure Transient Report

COMPANY : RED OAK ENERGY INC.
RIG : STAFFORD-KANSAS
FIELD : KRANKENBERG
WELL : #1-20
DATE : 5-7-90
GAUGE NO : 10270

OPERATIONAL COMMENTS

COMPANY : RED OAK ENERGY INC.
WELL : #1-20
GAUGE # : 10270
DATE : 7/ 5/90

FIELD : KRANKENBERG
JOB # : 16096
DEPTH : 3504
TEST :

COF

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
INITIAL FLOW PERIOD					
2	12:30: 0	0.000	168.000	105.00	0.000
3	12:34:59	0.083	168.000	105.00	0.000
4	12:40: 0	0.167	168.000	105.00	0.000
5	12:45: 0	0.250	174.000	105.00	6.000
6	12:49:59	0.333	189.000	105.00	15.000
7	12:55: 0	0.417	209.000	105.00	20.000
8	13: 0: 0	0.500	223.000	105.00	14.000
INITIAL SHUT-IN PERIOD					
9	13: 3: 0	0.550	471.000	105.00	248.000
10	13: 6: 0	0.600	618.000	105.00	147.000
11	13: 9: 0	0.650	693.000	105.00	75.000
12	13:12: 0	0.700	734.000	105.00	41.000
13	13:15: 0	0.750	761.000	105.00	27.000
14	13:18: 0	0.800	784.000	105.00	23.000
15	13:21: 0	0.850	799.000	105.00	15.000
16	13:24: 0	0.900	813.000	105.00	14.000
17	13:27: 0	0.950	820.000	105.00	7.000
18	13:30: 0	1.000	829.000	105.00	9.000
19	13:33: 0	1.050	834.000	105.00	5.000
20	13:36: 0	1.100	837.000	105.00	3.000
21	13:39: 0	1.150	841.000	105.00	4.000
22	13:42: 0	1.200	845.000	105.00	4.000
23	13:45: 0	1.250	848.000	105.00	3.000
FINAL FLOW PERIOD					
24	13:46: 0	1.267	287.000	105.00	-561.000
25	13:49:59	1.333	287.000	105.00	0.000
26	13:55: 0	1.417	290.000	105.00	3.000
27	14: 0: 0	1.500	298.000	105.00	8.000
28	14: 4:59	1.583	309.000	105.00	11.000
29	14:10: 0	1.667	326.000	105.00	17.000
30	14:15: 0	1.750	339.000	105.00	13.000
31	14:19:59	1.833	351.000	105.00	12.000
32	14:25: 0	1.917	363.000	105.00	12.000
33	14:30: 0	2.000	375.000	105.00	12.000
34	14:34:59	2.083	388.000	105.00	13.000
35	14:40: 0	2.167	397.000	105.00	9.000
36	14:45: 0	2.250	402.000	105.00	5.000
FINAL SHUT-IN PERIOD					
37	14:48: 0	2.300	583.000	105.00	181.000
38	14:51: 0	2.350	676.000	105.00	93.000
39	14:54: 0	2.400	719.000	105.00	43.000
40	14:57: 0	2.450	748.000	105.00	29.000
41	15: 0: 0	2.500	767.000	105.00	19.000
42	15: 3: 0	2.550	782.000	105.00	15.000
43	15: 6: 0	2.600	792.000	105.00	10.000
44	15: 9: 0	2.650	800.000	105.00	8.000
45	15:12: 0	2.700	805.000	105.00	5.000
46	15:15: 0	2.750	811.000	105.00	6.000
47	15:18: 0	2.800	817.000	105.00	6.000
48	15:21: 0	2.850	821.000	105.00	4.000

COMPANY : RED OAK ENERGY INC.
WELL : #1-20
GAUGE # : 10270
DATE : 7/ 5/90

FIELD : KRANKENBERG
JOB # : 16096
DEPTH : 3504
TEST :

COPY

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P Pi-P(i-1)
49	15:24: 0	2.900	827.000	105.00	6.000
50	15:27: 0	2.950	830.000	105.00	3.000
51	15:30: 0	3.000	832.000	105.00	2.000
52	15:33: 0	3.050	834.000	105.00	2.000
53	15:36: 0	3.100	836.000	105.00	2.000
54	15:39: 0	3.150	838.000	105.00	2.000
55	15:42: 0	3.200	839.000	105.00	1.000
56	15:45: 0	3.250	840.000	105.00	1.000

WESTERN TESTING CO. INC.

COPY

GAS FLOW REPORT

Date : 5-7-90 Ticket # : 16096
 Customer : RED OAK ENERGY INC. Lease : KRANKENBERG
 Well : #1-20 Test : 4 Geologist : SCOTT BANKS
 Location (KB) : 1875 KB Formation : LANSING
 Section : 20 Township : 22S
 Range : 12W County : STAFFORD State : KANSAS
 Well SN # : 10270 Range : 4150 Clock : 12

TIME GAUGE (MIN)	TESTER TYPE	ORFICE SIZE	PRESSURE (PSI)	FLOW DESCRIPTION
PRE FLOW				
=====				
10 MIN.	MERLA	1/4"	5 PSIG	20700 C.F.P.D.
10 MIN.	MERLA	1/4"	17 PSIG	42400 C.F.P.D.
10 MIN.	MERLA	1/4"	18 PSIG	43900 C.F.P.D.

SECOND FLOW				
=====				
10 MIN.	MERLA	1/4"	10 PSIG	30800 C.F.P.D.
10 MIN.	MERLA	1/4"	7 PSIG	25000 C.F.P.D.
10 MIN.	MERLA	1/4"	4 PSIG	18500 C.F.P.D.
10 MIN.	MERLA	1/4"	2 PSIG	12700 C.F.P.D.
10 MIN.	MERLA	1/4"	2 PSIG	12700 C.F.P.D.
10 MIN.	MERLA	1/4"	2 PSIG	12700 C.F.P.D.

Well SN # : 86
 Bottle Filled : 5-7-90
 To be Invoiced : 5-7-90

WESTERN TESTING CO. INC.
SUBSURFACE PRESSURE SURVEY

30F

DATE	: 5-9-90	TICKET	: 16097
CUSTOMER	: RED OAK ENERGY INC.	LEASE	: KRANKENBERG
WELL	: #1-20 TEST: 5	GEOLOGIST	: S. BANK
ELEVATION	: 1875 K.B.	FORMATION	: ARBUCKLE
SECTION	: 20	TOWNSHIP	: 22S
RANGE	: 12W	COUNTY	: STAFFORD
GAUGE SN#	: 10270	STATE	: KS
		RANGE	: 4150
		CLOCK	: 12

INTERVAL FROM : 3716 TO : 3745 TOTAL DEPTH : 3745
DEPTH OF SELECTIVE-ZONE :

PACKER DEPTH	:	SIZE	:
PACKER DEPTH	: 3711	SIZE	: 6.63
PACKER DEPTH	: 3716	SIZE	: 6.63
PACKER DEPTH	:	SIZE	:

DRILLING CON.	: ALLEN DRLG. #3		
MUD TYPE	: CHEMICAL	VISCOSITY	: 50
WEIGHT	: 8.9	WATER LOSS (CC)	: 10.4
CHLORIDES (PPM)	: 15000		
JARS-MAKE	: WTC	SERIAL NUMBER	: 422
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	:	3692 FT	I.D. inch	:	3.80
TEST TOOL LENGTH	:	24 FT	TOOL SIZE	:	5.50
ANCHOR LENGTH	:	29 FT	ANCHOR SIZE	:	5.50
SURFACE CHOKE SIZE	:	.75 IN	BOTTOM CHOKE SIZE	:	.75
MAIN HOLE SIZE	:	7.875 IN	TOOL JOINT SIZE	:	4.5XH

BLOW COMMENT #1 : WEAK BLOW BUILDING TO A STRONG BLOW IN
BLOW COMMENT #2 : 9 MINUTES ON INITIAL FLOW PERIOD.
BLOW COMMENT #3 : WEAK BLOW BUILDING TO A STRONG BLOW IN
BLOW COMMENT #4 : 35 MINUTES ON FINAL FLOW PERIOD.

COF

RECOVERED : 600 FT OF: CLEAN OIL-GRAVITY 32
RECOVERED : 60 FT OF: MUDDY GASSY OIL
RECOVERED : 0 FT OF: 10%MUD 48%GAS 42%OIL

Total Barrels Fluid = 9.26
Total Fluid Prod Rate = 148.12 BFPD
Indicated Oil Rate = 140.26 BOPD
Indicated Wtr Rate = 0.13 BWPD
Corrected Oil Rate = 103.61 BOPD
Corrected Wtr Rate = 0.10 BWPD

REMARK 1 :
REMARK 2 : RECOVERED 480FT. OF GAS ABOVE FLUID.
REMARK 3 :
REMARK 4 :

SET PACKER(S) : 3:35AM TIME STARTED OFF BOTTOM : 6:50AM
WELL TEMPERATURE : 117
INITIAL HYDROSTATIC PRESSURE (A) 1885
INITIAL FLOW PERIOD MIN: 30 (B) 75 PSI TO (C) : 151
INITIAL CLOSED IN PERIOD MIN: 45 (D) 1274
FINAL FLOW PERIOD MIN: 60 (E) 140 PSI TO (F) : 248
FINAL CLOSED IN PERIOD MIN: 60 (G) 1268
FINAL HYDROSTATIC PRESSURE (H) 1851

WESTERN TESTING CO. INC.
WICHITA-KANSAS

COPY

Pressure Transient Report

COMPANY : RED OAK ENERGY INC.
RIG : STAFFORD-KS
FIELD : KRANKENBERG
WELL : #1-20
DATE : 5-9-90
GAUGE NO : 10270

OPERATIONAL COMMENTS

RECOVERED 480FT. OF GAS ABOVE FLUID.

COMPANY : RED OAK ENERGY INC.
 WELL : #1-20
 GUAGE # : 10270
 DATE : 9/ 5/90

FIELD : KRANKENBERG
 JOB # : 16097
 DEPTH : 3745
 TEST :

COF

DATA No.	REAL TIME HR:MN:SS	ELAPSE TIME DELTA HOURS	PRESSURE PSIG	TEMP DEG F	DELTA P P1-P(i-1)
INITIAL FLOW PERIOD					
2	3:35: 0	0.000	75.000	117.00	0.000
3	3:39:59	0.083	154.000	117.00	79.000
4	3:45: 0	0.167	142.000	117.00	-12.000
5	3:50: 0	0.250	139.000	117.00	-3.000
6	3:54:59	0.333	140.000	117.00	1.000
7	4: 0: 0	0.417	146.000	117.00	6.000
8	4: 5: 0	0.500	151.000	117.00	5.000
INITIAL SHUT IN PERIOD					
9	4: 8: 0	0.550	1188.000	117.00	1037.000
10	4:11: 0	0.600	1214.000	117.00	26.000
11	4:14: 0	0.650	1230.000	117.00	16.000
12	4:17: 0	0.700	1242.000	117.00	12.000
13	4:20: 0	0.750	1250.000	117.00	8.000
14	4:23: 0	0.800	1254.000	117.00	4.000
15	4:26: 0	0.850	1258.000	117.00	4.000
16	4:29: 0	0.900	1260.000	117.00	2.000
17	4:32: 0	0.950	1262.000	117.00	2.000
18	4:35: 0	1.000	1264.000	117.00	2.000
19	4:38: 0	1.050	1266.000	117.00	2.000
20	4:41: 0	1.100	1268.000	117.00	2.000
21	4:44: 0	1.150	1270.000	117.00	2.000
22	4:47: 0	1.200	1272.000	117.00	2.000
23	4:50: 0	1.250	1274.000	117.00	2.000
FINAL FLOW PERIOD					
24	4:51: 0	1.267	140.000	117.00	-1134.000
25	4:54:59	1.333	140.000	117.00	0.000
26	5: 0: 0	1.417	140.000	117.00	0.000
27	5: 5: 0	1.500	146.000	117.00	6.000
28	5: 9:59	1.583	156.000	117.00	10.000
29	5:15: 0	1.667	167.000	117.00	11.000
30	5:20: 0	1.750	179.000	117.00	12.000
31	5:24:59	1.833	191.000	117.00	12.000
32	5:30: 0	1.917	202.000	117.00	11.000
33	5:35: 0	2.000	217.000	117.00	15.000
34	5:39:59	2.083	231.000	117.00	14.000
35	5:45: 0	2.167	242.000	117.00	11.000
36	5:50: 0	2.250	248.000	117.00	6.000
FINAL SHUT IN PERIOD					
37	5:53: 0	2.300	1178.000	117.00	930.000
38	5:56: 0	2.350	1205.000	117.00	27.000
39	5:59: 0	2.400	1218.000	117.00	13.000
40	6: 2: 0	2.450	1225.000	117.00	7.000
41	6: 5: 0	2.500	1232.000	117.00	7.000
42	6: 8: 0	2.550	1237.000	117.00	5.000
43	6:11: 0	2.600	1239.000	117.00	2.000
44	6:14: 0	2.650	1244.000	117.00	5.000
45	6:17: 0	2.700	1248.000	117.00	4.000
46	6:20: 0	2.750	1252.000	117.00	4.000
47	6:23: 0	2.800	1254.000	117.00	2.000
48	6:26: 0	2.850	1257.000	117.00	3.000

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49	6:29: 0	2.900	1260.000	117.00	3.000
50	6:32: 0	2.950	1263.000	117.00	3.000
51	6:35: 0	3.000	1266.000	117.00	3.000
52	6:38: 0	3.050	1268.000	117.00	2.000
53	6:41: 0	3.100	1268.000	117.00	0.000
54	6:44: 0	3.150	1268.000	117.00	0.000
55	6:47: 0	3.200	1268.000	117.00	0.000
56	6:50: 0	3.250	1268.000	117.00	0.000

WESTERN TESTING CO. INC.

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