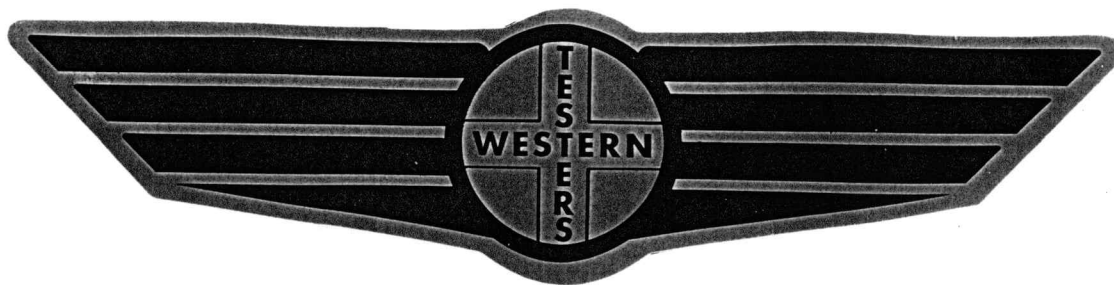


FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1-800-688-7021

DST REPORT

GENERAL INFORMATION

DATE	: 1/2/94	TICKET	: 19966
CUSTOMER	: WILLIFORD ENERGY COMPANY	LEASE	: REA TRUST
WELL	: #1	TEST:	: 1
ELEVATION	: 2870 GL	GEOLOGIST	: HUBBARD
SECTION	: 35	FORMATION	: MORROW
RANGE	: 33W	TOWNSHIP	: 22S
GAUGE SN#	: 3849	STATE	: KS
	COUNTY: FINNEY	CLOCK	: 12
	RANGE : 4200		

WELL INFORMATION

PERFORATION INTERVAL FROM:	4614.00 ft	TO:	4653.00 ft	TVD:	4653.0 ft
DEPTH OF SELECTIVE ZONE:				TEST TYPE:	OIL
DEPTH OF RECORDERS:	4636.0 ft		4639.0 ft		
TEMPERATURE:	116.0				
DRILL COLLAR LENGTH:	433.0 ft	I.D.:		2.250 in	
WEIGHT PIPE LENGTH :	0.0 ft	I.D.:		0.000 in	
DRILL PIPE LENGTH :	4149.0 ft	I.D.:		3.800 in	
TEST TOOL LENGTH :	32.0 ft	TOOL SIZE :		5.500 in	
ANCHOR LENGTH :	39.0 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:	4609.0 ft	SIZE:		6.630 in	
PACKER DEPTH:	4614.0 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. :	MURFIN RIG 2	VISCOSITY :	48.00 cp
MUD TYPE :	CHEMICAL	WATER LOSS:	8.400 cc
WEIGHT :	8.900 ppg		
CHLORIDES :	2400 ppm	SERIAL NUMBER:	402
JARS-MAKE :	WTC	REVERSED OUT?:	NO
DID WELL FLOW?:	NO		

COMMENTS

Comment

INITIAL FLOW PERIOD WEAK 1/4 INCH BLOW - BUILT TO
STRONG BLOW - BOTTOM OF BUCKET IN 26 MINUTES.
FINAL FLOW PERIOD WEAK 1 INCH TO STRONG BLOW -

DST REPORT (CONTINUED)

COMMENTS (CONTINUED)

Comment

BOTTOM OF BUCKET IN 6 MINUTES.

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
0.0	0.0	0.0	0.0	0.0	470 FT GAS ABOVE FLUID
50.0	100.0	0.0	0.0	0.0	CLEAN OIL
0.0	0.0	0.0	0.0	0.0	30 GRAVITY @ 60 DEGREES F
220.0	50.0	20.0	0.0	30.0	GASSY MUD CUT OIL

RATE INFORMATION

OIL VOLUME:	0.7868 STB	
GAS VOLUME:	1.2149 SCF	
MUD VOLUME:	0.3246 STB	
WATER VOLUME:	0.0000 STB	
TOTAL FLUID :	1.1114 STB	
		TOTAL FLOW TIME: 90.0000 min.
		AVERAGE OIL RATE: 17.7816 STB/D
		AVERAGE WATER RATE: 0.0000 STB/D

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2343.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	38.00	68.00
INITIAL SHUT-IN	60.00		1221.00
FINAL FLOW	60.00	87.00	138.00
FINAL SHUT-IN	120.00		1232.00

FINAL HYDROSTATIC PRESSURE: 2283.00

DST REPORT (CONTINUED)

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2366.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	52.00	78.00
INITIAL SHUT-IN	60.00		1227.00
FINAL FLOW	60.00	105.00	146.00
FINAL SHUT-IN	120.00		1236.00

FINAL HYDROSTATIC PRESSURE: 2279.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 1/2/94	TICKET : 19966
CUSTOMER : WILLIFORD ENERGY COMPANY	LEASE : REA TRUST
WELL : #1	GEOLOGIST: HUBBARD
ELEVATION: 2870 GL	FORMATION: MORROW
SECTION : 35	TOWNSHIP : 22S
RANGE : 33W	STATE : KS
GAUGE SN#: 3849	CLOCK : 12
COUNTY: FINNEY	
RANGE : 4200	

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	52.00	52.00
5.00	52.00	0.00
10.00	56.00	4.00
15.00	65.00	9.00
20.00	70.00	5.00
25.00	74.00	4.00
30.00	78.00	4.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	91.00	91.00	11.00
6.00	139.00	48.00	6.00
9.00	212.00	73.00	4.33
12.00	311.00	99.00	3.50
15.00	512.00	201.00	3.00
18.00	782.00	270.00	2.67
21.00	973.00	191.00	2.43
24.00	1073.00	100.00	2.25
27.00	1129.00	56.00	2.11
30.00	1152.00	23.00	2.00
33.00	1171.00	19.00	1.91
36.00	1183.00	12.00	1.83
39.00	1192.00	9.00	1.77
42.00	1198.00	6.00	1.71
45.00	1207.00	9.00	1.67
48.00	1211.00	4.00	1.63
51.00	1217.00	6.00	1.59
54.00	1222.00	5.00	1.56
57.00	1225.00	3.00	1.53

PRESSURE TRANSIENT REPORT (CONTINUED)

INITIAL SHUT IN (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
60.00	1227.00	2.00	1.50

FINAL FLOW

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>
0.00	105.00	105.00
5.00	105.00	0.00
10.00	110.00	5.00
15.00	114.00	4.00
20.00	117.00	3.00
25.00	121.00	4.00
30.00	125.00	4.00
35.00	129.00	4.00
40.00	131.00	2.00
45.00	134.00	3.00
50.00	138.00	4.00
55.00	143.00	5.00
60.00	146.00	3.00

FINAL SHUT IN

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
3.00	199.00	199.00	21.00
6.00	326.00	127.00	11.00
9.00	542.00	216.00	7.67
12.00	756.00	214.00	6.00
15.00	958.00	202.00	5.00
18.00	1031.00	73.00	4.33
21.00	1072.00	41.00	3.86
24.00	1108.00	36.00	3.50
27.00	1128.00	20.00	3.22
30.00	1145.00	17.00	3.00
33.00	1157.00	12.00	2.82
36.00	1165.00	8.00	2.67
39.00	1175.00	10.00	2.54
42.00	1181.00	6.00	2.43
45.00	1186.00	5.00	2.33
48.00	1192.00	6.00	2.25

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL SHUT IN (CONTINUED)

Time (min)	Pressure	Delta P	Horner T
51.00	1196.00	4.00	2.18
54.00	1200.00	4.00	2.11
57.00	1204.00	4.00	2.05
60.00	1207.00	3.00	2.00
63.00	1210.00	3.00	1.95
66.00	1213.00	3.00	1.91
69.00	1215.00	2.00	1.87
72.00	1217.00	2.00	1.83
75.00	1219.00	2.00	1.80
78.00	1221.00	2.00	1.77
81.00	1223.00	2.00	1.74
84.00	1224.00	1.00	1.71
87.00	1225.00	1.00	1.69
90.00	1226.00	1.00	1.67
93.00	1227.00	1.00	1.65
96.00	1228.00	1.00	1.63
99.00	1229.00	1.00	1.61
102.00	1230.00	1.00	1.59
105.00	1231.00	1.00	1.57
108.00	1232.00	1.00	1.56
111.00	1233.00	1.00	1.54
114.00	1234.00	1.00	1.53
117.00	1235.00	1.00	1.51
120.00	1236.00	1.00	1.50

FLUID SAMPLE REPORT

GENERAL INFORMATION

DATE	: 1/2/94	TICKET	: 19966
CUSTOMER	: WILLIFORD ENERGY COMPANY	LEASE	: REA TRUST
WELL	: #1	TEST: 1	GEOLOGIST: HUBBARD
ELEVATION	: 2870 GL	FORMATION	: MORROW
SECTION	: 35	TOWNSHIP	: 22S
RANGE	: 33W	COUNTY: FINNEY	STATE : KS
GAUGE SN#	: 3849	RANGE : 4200	CLOCK : 12

SAMPLE INFORMATION

PRESSURE IN SAMPLER:	110.00 PSIG	BHT:	116.0 DEG F
TOTAL VOLUME OF SAMPLER:	3150.00 cc		
TOTAL VOLUME OF SAMPLE:	2800.00 cc		
OIL:	1680.00 cc		
WATER:	0.00 cc		
MUD:	1120.00 cc		
GAS:	1.05 cc		
OTHER:	0.00 cc		

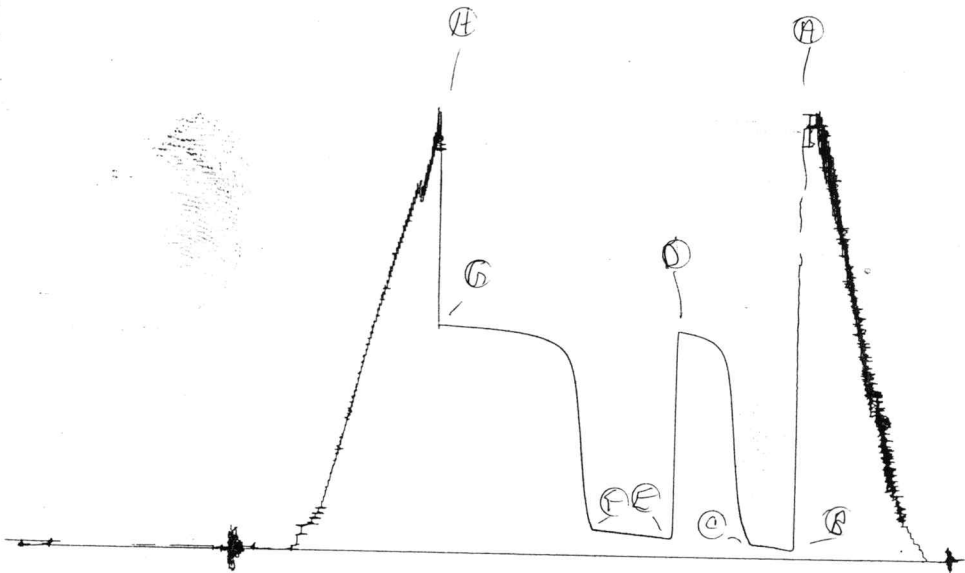
RESISTIVITY

DRILLING MUD:	CHLORIDE CONTENT:	0.00 ppm
MUD PIT SAMPLE: 1.6 @ 65 DEGREES F	CHLORIDE CONTENT:	4000.00 ppm
GAS/OIL RATIO:	GRAVITY:	30 @ 60 DEGREES F
WHERE WAS SAMPLE DRAINED: ON LOCATION		
REMARKS:		

KT 19966

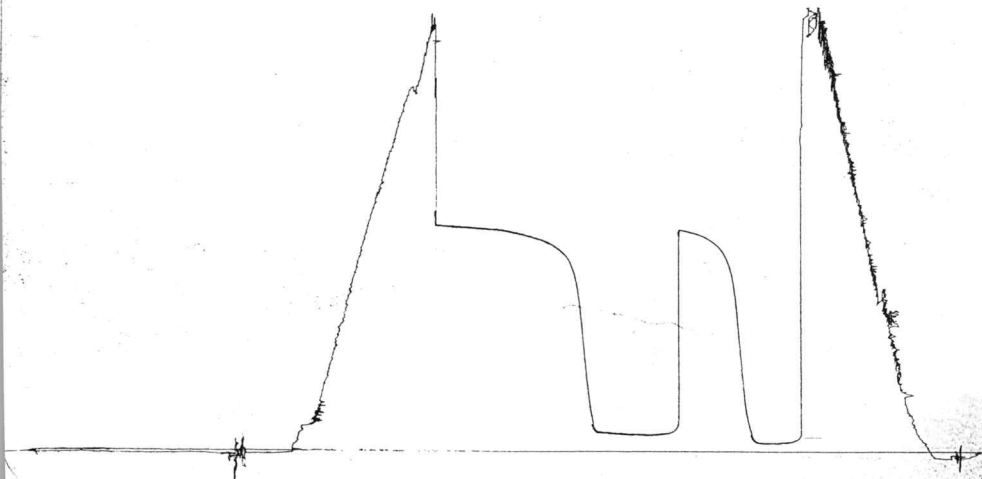
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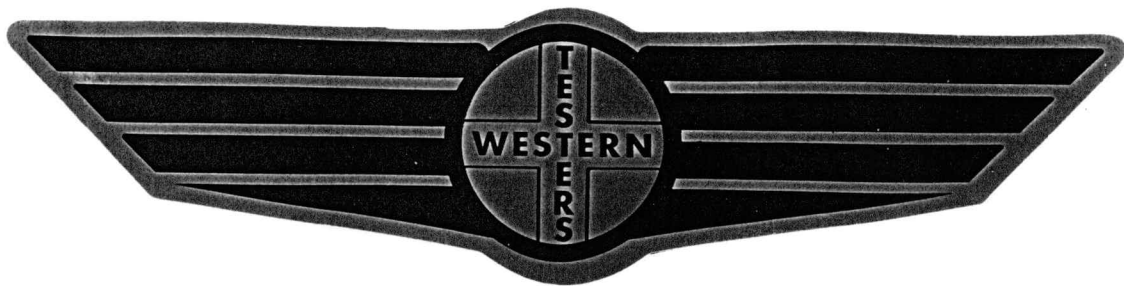


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FORMATION TEST REPORT



Home Office:

Wichita, Kansas 67201

P.O. Box 1599

Phone 1-800-688-7021

DST REPORT

GENERAL INFORMATION

DATE : 1/3/94
CUSTOMER : WILLIFORD ENERGY COMPANY
WELL : #1 TEST: 2
ELEVATION: 2870 GL
SECTION : 35
RANGE : 33W COUNTY: FINNEY
GAUGE SN#: 3849 RANGE : 4200

TICKET : 19967
LEASE : REA TRUST
GEOLOGIST: HUBBARD
FORMATION: ST LOUIS
TOWNSHIP : 22S
STATE : KS
CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 4720.00 ft TO: 4773.00 ft TVD: 4773.0 ft
DEPTH OF SELECTIVE ZONE: TEST TYPE: OIL
DEPTH OF RECORDERS: 4732.0 ft 4735.0 ft
TEMPERATURE: 117.0

DRILL COLLAR LENGTH:	433.0 ft	I.D.:	2.250 in
WEIGHT PIPE LENGTH :	0.0 ft	I.D.:	0.000 in
DRILL PIPE LENGTH :	4255.0 ft	I.D.:	3.800 in
TEST TOOL LENGTH :	32.0 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:	4715.0 ft	SIZE:	6.630 in
PACKER DEPTH:	4720.0 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. : MURFIN RIG 2
MUD TYPE : CHEMICAL
WEIGHT : 9.000 ppg
CHLORIDES : 2400 ppm
JARS-MAKE : WTC
DID WELL FLOW?: NO

VISCOSITY : 52.00 cp
WATER LOSS: 8.400 cc

SERIAL NUMBER: 402
REVERSED OUT?: NO

COMMENTS

Comment

INITIAL FLOW PERIOD SURFACE BLOW SLOWLY BUILT TO
2 1/2 INCHES IN BUCKET IN 24 MINUTES - STABILIZED.
FINAL FLOW PERIOD SURFACE BLOW SLOWLY BUILT TO 1

DST REPORT (CONTINUED)

COMMENTS (CONTINUED)

Comment

INCH IN 30 MINUTES - STABILIZED.
R W ON WATER IN SAMPLER .23 @ 60 DEGREES F
CHLORIDES 33000 PPM

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
120.0	3.0	0.0	0.0	97.0	VERY SLIGHTLY OIL CUT MUD

RATE INFORMATION

OIL VOLUME:	0.0177	STB		
GAS VOLUME:	0.0000	SCF		
MUD VOLUME:	0.5724	STB		
WATER VOLUME:	0.0000	STB		
TOTAL FLUID :	0.5901	STB		
			TOTAL FLOW TIME:	90.0000 min.
			AVERAGE OIL RATE:	9.4416 STB/D
			AVERAGE WATER RATE:	0.0000 STB/D

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2438.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	40.00	59.00
INITIAL SHUT-IN	60.00		427.00
FINAL FLOW	60.00	72.00	93.00
FINAL SHUT-IN	120.00		427.00

FINAL HYDROSTATIC PRESSURE: 2389.00

DST REPORT (CONTINUED)

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2466.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	53.00	71.00
INITIAL SHUT-IN	57.00		438.00
FINAL FLOW	60.00	86.00	109.00
FINAL SHUT-IN	120.00		440.00

FINAL HYDROSTATIC PRESSURE: 2383.00

PRESSURE TRANSIENT REPORT

GENERAL INFORMATION

DATE : 1/3/94	TICKET : 19967
CUSTOMER : WILLIFORD ENERGY COMPANY	LEASE : REA TRUST
WELL : #1	GEOLOGIST: HUBBARD
ELEVATION: 2870 GL	FORMATION: ST LOUIS
SECTION : 35	TOWNSHIP : 22S
RANGE : 33W	STATE : KS
GAUGE SN#: 3849	CLOCK : 12
COUNTY: FINNEY	
RANGE : 4200	

INITIAL FLOW

Time (min)	Pressure	Delta P
0.00	53.00	53.00
5.00	53.00	0.00
10.00	56.00	3.00
15.00	62.00	6.00
20.00	66.00	4.00
25.00	69.00	3.00
30.00	71.00	2.00

INITIAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	111.00	111.00	11.00
6.00	193.00	82.00	6.00
9.00	280.00	87.00	4.33
12.00	332.00	52.00	3.50
15.00	365.00	33.00	3.00
18.00	382.00	17.00	2.67
21.00	394.00	12.00	2.43
24.00	402.00	8.00	2.25
27.00	411.00	9.00	2.11
30.00	415.00	4.00	2.00
33.00	418.00	3.00	1.91
36.00	422.00	4.00	1.83
39.00	428.00	6.00	1.77
42.00	430.00	2.00	1.71
45.00	432.00	2.00	1.67
48.00	434.00	2.00	1.63
51.00	436.00	2.00	1.59
54.00	437.00	1.00	1.56
57.00	438.00	1.00	1.53

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL FLOW

Time (min)	Pressure	Delta P
0.00	86.00	86.00
5.00	86.00	0.00
10.00	86.00	0.00
15.00	88.00	2.00
20.00	91.00	3.00
25.00	95.00	4.00
30.00	98.00	3.00
35.00	100.00	2.00
40.00	102.00	2.00
45.00	104.00	2.00
50.00	106.00	2.00
55.00	108.00	2.00
60.00	109.00	1.00

FINAL SHUT IN

Time (min)	Pressure	Delta P	Horner T
3.00	130.00	130.00	21.00
6.00	164.00	34.00	11.00
9.00	211.00	47.00	7.67
12.00	252.00	41.00	6.00
15.00	291.00	39.00	5.00
18.00	326.00	35.00	4.33
21.00	348.00	22.00	3.86
24.00	362.00	14.00	3.50
27.00	373.00	11.00	3.22
30.00	383.00	10.00	3.00
33.00	390.00	7.00	2.82
36.00	395.00	5.00	2.67
39.00	400.00	5.00	2.54
42.00	403.00	3.00	2.43
45.00	406.00	3.00	2.33
48.00	409.00	3.00	2.25
51.00	412.00	3.00	2.18
54.00	415.00	3.00	2.11
57.00	417.00	2.00	2.05
60.00	419.00	2.00	2.00
63.00	421.00	2.00	1.95
66.00	423.00	2.00	1.91
69.00	425.00	2.00	1.87
72.00	427.00	2.00	1.83
75.00	428.00	1.00	1.80

PRESSURE TRANSIENT REPORT (CONTINUED)

FINAL SHUT IN (CONTINUED)

<u>Time (min)</u>	<u>Pressure</u>	<u>Delta P</u>	<u>Horner T</u>
78.00	429.00	1.00	1.77
81.00	430.00	1.00	1.74
84.00	431.00	1.00	1.71
87.00	432.00	1.00	1.69
90.00	433.00	1.00	1.67
93.00	434.00	1.00	1.65
96.00	435.00	1.00	1.63
99.00	436.00	1.00	1.61
102.00	437.00	1.00	1.59
105.00	438.00	1.00	1.57
108.00	439.00	1.00	1.56
111.00	440.00	1.00	1.54
114.00	440.00	0.00	1.53
117.00	440.00	0.00	1.51
120.00	440.00	0.00	1.50

FLUID SAMPLE REPORT

GENERAL INFORMATION

DATE	: 1/3/94	TICKET	: 19967
CUSTOMER	: WILLIFORD ENERGY COMPANY	LEASE	: REA TRUST
WELL	: #1	TEST:	2
ELEVATION:	2870 GL	GEOLOGIST:	HUBBARD
SECTION	: 35	FORMATION:	ST LOUIS
RANGE	: 33W	TOWNSHIP	: 22S
GAUGE SN#:	3849	STATE	: KS
	COUNTY: FINNEY	CLOCK	: 12
	RANGE : 4200		

SAMPLE INFORMATION

PRESSURE IN SAMPLER:	20.00 PSIG	BHT:	117.0 DEG F
TOTAL VOLUME OF SAMPLER:	3150.00 cc		
TOTAL VOLUME OF SAMPLE:	2700.00 cc		
OIL:	378.00 cc		
WATER:	162.00 cc		
MUD:	2160.00 cc		
GAS:	0.22 cc		
OTHER:	0.00 cc		

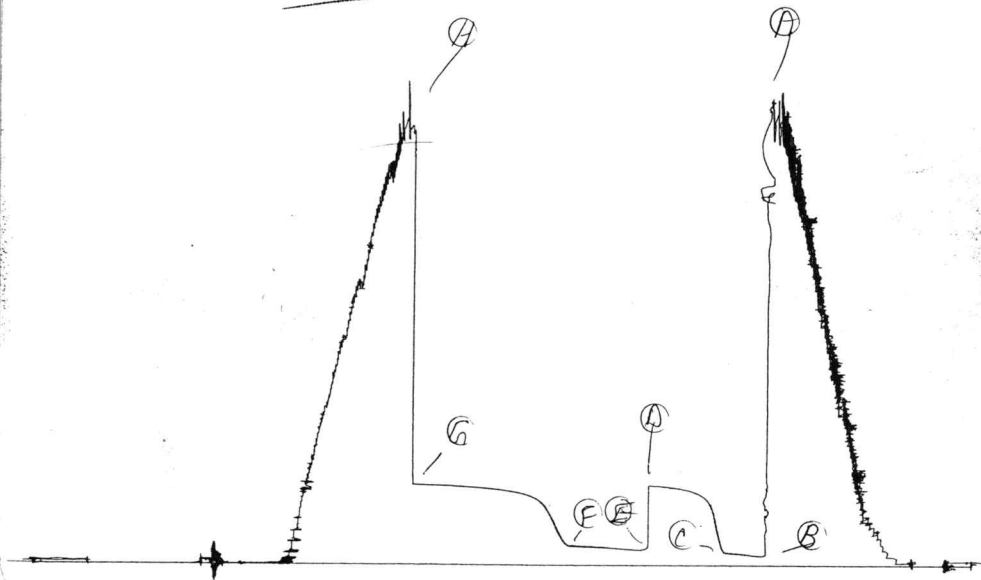
RESISTIVITY

DRILLING MUD:	.23 @ 60 DEGREES F	CHLORIDE CONTENT:	33000.00 ppm
MUD PIT SAMPLE:	1.5 @ 65 DEGREES F	CHLORIDE CONTENT:	4200.00 ppm
GAS/OIL RATIO:		GRAVITY:	
WHERE WAS SAMPLE DRAINED:	ON LOCATION		
REMARKS:			

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