

RELEASED

ORIGINAL

JAN 29 1999

FROM CONFIDENTIAL

DST REPORT

## GENERAL INFORMATION

15-193-20652

1006

DATE : 6/17/96  
 CUSTOMER : RITCHIE EXPLOR/CANYON  
 WELL : #2 TEST: 1  
 ELEVATION: 3103 KB  
 SECTION : 11  
 RANGE : 33W COUNTY: THOMAS  
 AUCE SN#: 10270 RANGE : 4150

TICKET : 22083  
 LEASE : E SHUGHART  
 GEOLOGIST: CHRISTIAN  
 FORMATION: LANSING C  
 TOWNSHIP : 6S  
 STATE : KS  
 CLOCK : 12

OCT 3

CONFIDENTIAL

## WELL INFORMATION

PERFORATION INTERVAL FROM: 4014.00 ft TO: 4030.00 ft TVD: 4050.0 ft  
 DEPTH OF SELECTIVE ZONE: TEST TYPE: OIL  
 DEPTH OF RECORDERS: 4017.0 ft 4020.0 ft  
 TEMPERATURE: 111.0

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 :	3989.0 ft	I.D.:	3.800 in
TEST TOOL LENGTH :	25.0 ft	TOOL SIZE :	5.500 in
ANCHOR LENGTH :	16.0 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:	4009.0 ft	SIZE:	6.630 in
PACKER DEPTH:	4014.0 ft	SIZE:	6.630 in
PACKER DEPTH:	4030.0 ft	SIZE:	6.630 in
PACKER DEPTH:	0.0 ft	SIZE:	0.000 in

## MUD INFORMATION

~ DRILLING CON. : WHITE & ELLIS  
 MUD TYPE : STARCH  
 WEIGHT : 9.400 ppg  
 CHLORIDES : 11000 ppm  
 JARS-MAKE :  
 DID WELL FLOW?: NO

VISCOSITY : 42.00  
 WATER LOSS: 12.600

SERIAL NUMBER:  
 REVERSED OUT?: NO

PLEASE KEEP THIS  
 INFORMATION  
 CONFIDENTIAL

## COMMENTS

Comment

INITIAL FLOW PERIOD WEAK BLOW THROUGHOUT - 1/4 TO  
 1 INCH BLOW. FINAL FLOW PERIOD WEAK BLOW  
 THROUGHOUT - 1/2 TO 3/4 INCH BLOW.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	%	%	%	%	Comments
Oil	Gas	Water	Mud		
20.0	0.0	0.0	0.0	100.0	MUD W/SHOW OF OIL ON
0.0	0.0	0.0	0.0	0.0	TOP OF TOOL

RATE INFORMATION

OIL VOLUME:	0.0000	STB	TOTAL FLOW TIME:	60.0000	min.
GAS VOLUME:	0.0000	SCF	AVERAGE OIL RATE:	0.0000	STB/D
MUD VOLUME:	0.2805	STB	AVERAGE WATER RATE:	0.0000	STB/D
WATER VOLUME:	0.0000	STB			
TOTAL FLUID :	0.2805	STB			

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 1973.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	20.00	20.00
INITIAL SHUT-IN	45.00		1257.00
FINAL FLOW	30.00	31.00	31.00
FINAL SHUT-IN	45.00		1236.00

FINAL HYDROSTATIC PRESSURE: 1941.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2015.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	16.19	24.79
INITIAL SHUT-IN	45.00		1262.92
FINAL FLOW	30.00	66.01	42.54
FINAL SHUT-IN	45.00		1247.67

FINAL HYDROSTATIC PRESSURE: 1974.00

Company: RICHTHIE EXPLORATION/CANYON ENERGY  
 Well: #2 E SHUGHART  
 Field: TKT 22083 DST 1

[Monday: June 17, 1996]  
 Page 1

REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)
START FLOW 1				
1	0	0:51:54	0.0000	16.19
10	0	0:52:59	0.0180	18.83
19	0	0:55:16	0.0559	18.02
28	0	0:56:20	0.0739	20.65
37	0	0:57:25	0.0919	20.68
46	0	0:58:30	0.1099	20.72
55	0	0:59:35	0.1278	22.48
64	0	1: 0:39	0.1458	21.64
73	0	1: 1:44	0.1638	21.67
82	0	1: 2:49	0.1818	21.70
91	0	1: 3:54	0.1998	22.60
100	0	1: 4:58	0.2178	22.63
109	0	1: 6: 3	0.2358	22.66
118	0	1: 7: 8	0.2537	22.69
127	0	1: 8:13	0.2717	22.72
136	0	1: 9:17	0.2897	22.75
145	0	1:10:22	0.3077	22.78
154	0	1:11:27	0.3257	22.81
163	0	1:12:32	0.3437	22.85
172	0	1:13:36	0.3617	22.88
181	0	1:14:41	0.3796	22.91
190	0	1:15:46	0.3976	23.80
199	0	1:16:51	0.4156	23.83
208	0	1:17:55	0.4336	23.86
217	0	1:19: 0	0.4516	23.89
226	0	1:20: 5	0.4695	24.79
END FLOW 1				
START SHUTIN 1				
234	0	1:21: 2	0.4855	24.82
235	0	1:21:10	0.4875	24.82
244	0	1:22:14	0.5055	30.06
255	0	1:23:16	0.5227	560.03
265	0	1:24:20	0.5404	811.59
274	0	1:25:21	0.5575	914.83
283	0	1:26:24	0.5748	983.38
292	0	1:27:27	0.5925	1022.44
301	0	1:28:31	0.6101	1057.16
310	0	1:29:35	0.6279	1084.08
319	0	1:30:39	0.6457	1102.33
328	0	1:31:43	0.6635	1118.84
337	0	1:32:48	0.6814	1133.61
346	0	1:33:52	0.6993	1144.92
355	0	1:34:56	0.7172	1155.35
364	0	1:36: 1	0.7351	1164.93
373	0	1:37: 5	0.7530	1174.50
382	0	1:38:10	0.7709	1180.60
391	0	1:39:14	0.7888	1187.57
400	0	1:40:19	0.8068	1193.67
409	0	1:41:23	0.8247	1199.77
418	0	1:42:28	0.8426	1205.00
427	0	1:43:32	0.8606	1210.24
436	0	1:44:37	0.8785	1214.61
445	0	1:45:42	0.8965	1218.97
454	0	1:46:46	0.9144	1222.47

Company: RICHTIE EXPLORATION/CANYON ENERGY  
 Well: #2 E SHUGHART  
 Field: TKT 22083 DST 1

[Monday: June 17, 1996]  
 Page 2

REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)
463	0	1:47:51	0.9324	1226.84
472	0	1:48:56	0.9503	1230.34
481	0	1:50: 0	0.9683	1232.97
490	0	1:51: 5	0.9862	1235.60
499	0	1:52:10	1.0042	1238.24
508	0	1:53:14	1.0222	1241.74
517	0	1:54:19	1.0401	1244.37
526	0	1:55:24	1.0581	1247.00
535	0	1:56:28	1.0760	1248.77
544	0	1:57:33	1.0940	1251.40
553	0	1:58:38	1.1120	1253.16
562	0	1:59:42	1.1299	1254.93
571	0	2: 0:47	1.1479	1256.69
580	0	2: 1:52	1.1659	1258.46
589	0	2: 2:56	1.1839	1260.22
598	0	2: 4: 1	1.2018	1261.12
607	0	2: 5: 6	1.2198	1262.89
616	0	2: 6:10	1.2378	1262.92
		END SHUTIN 1		
		START FLOW 2		
617	0	2: 6:56	1.2505	66.01
619	0	2: 7:11	1.2546	61.68
628	0	2: 8:16	1.2726	53.90
637	0	2: 9:21	1.2906	49.60
646	0	2:10:26	1.3087	47.03
655	0	2:11:30	1.3267	45.32
664	0	2:12:35	1.3447	43.62
673	0	2:13:40	1.3626	42.78
682	0	2:14:45	1.3806	42.81
691	0	2:15:50	1.3986	41.11
700	0	2:16:54	1.4166	41.14
709	0	2:17:59	1.4346	41.17
714	0	2:25: 3	1.5525	40.50
723	0	2:26: 8	1.5705	41.40
732	0	2:27:13	1.5885	41.43
741	0	2:28:18	1.6064	41.46
750	0	2:29:22	1.6244	41.49
759	0	2:30:27	1.6424	41.52
768	0	2:31:32	1.6604	41.55
777	0	2:32:37	1.6784	41.58
786	0	2:33:41	1.6964	41.61
795	0	2:34:46	1.7144	41.64
804	0	2:35:51	1.7323	42.54
		END FLOW 2		
		START SHUTIN 2		
810	0	2:36:34	1.7443	49.50
813	0	2:36:55	1.7500	76.40
824	0	2:37:59	1.7679	528.31
834	0	2:39: 2	1.7854	807.62
843	0	2:40: 3	1.8025	908.26
852	0	2:41: 6	1.8199	977.68
861	0	2:42: 9	1.8375	1018.47
870	0	2:43:13	1.8552	1047.13
879	0	2:44:17	1.8730	1072.31
888	0	2:45:21	1.8908	1090.55

Company: RICHTHIE EXPLORATION/CANYON ENERGY  
Well: #2 E SHUGHART  
Field: TKT 22083 DST 1

[Monday: June 17, 1996]  
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REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)
897	0	2:46:26	1.9086	1106.20
906	0	2:47:30	1.9265	1120.10
915	0	2:48:34	1.9444	1131.41
924	0	2:49:39	1.9623	1143.58
933	0	2:50:43	1.9802	1152.29
942	0	2:51:48	1.9981	1160.12
951	0	2:52:52	2.0160	1167.09
960	0	2:53:57	2.0339	1173.19
969	0	2:55: 1	2.0519	1179.29
978	0	2:56: 6	2.0698	1186.26
987	0	2:57:10	2.0877	1190.63
996	0	2:58:15	2.1057	1195.86
1005	0	2:59:19	2.1236	1200.23
1014	0	3: 0:24	2.1416	1204.60
1023	0	3: 1:29	2.1595	1208.10
1032	0	3: 2:33	2.1775	1211.60
1041	0	3: 3:38	2.1954	1214.23
1050	0	3: 4:43	2.2134	1216.86
1059	0	3: 5:47	2.2314	1219.49
1068	0	3: 6:52	2.2493	1222.13
1077	0	3: 7:57	2.2673	1224.76
1086	0	3: 9: 1	2.2852	1227.39
1095	0	3:10: 6	2.3032	1230.02
1104	0	3:11:11	2.3212	1231.79
1113	0	3:12:15	2.3391	1233.55
1122	0	3:13:20	2.3571	1236.19
1131	0	3:14:25	2.3751	1237.95
1140	0	3:15:29	2.3930	1240.58
1149	0	3:16:34	2.4110	1241.48
1158	0	3:17:39	2.4290	1243.25
1167	0	3:18:43	2.4469	1245.01
1176	0	3:19:48	2.4649	1245.91
1185	0	3:20:53	2.4829	1247.67

WESTERN TESTING CO., INC.

KT JOR

OST # 1020



Inside Recorder

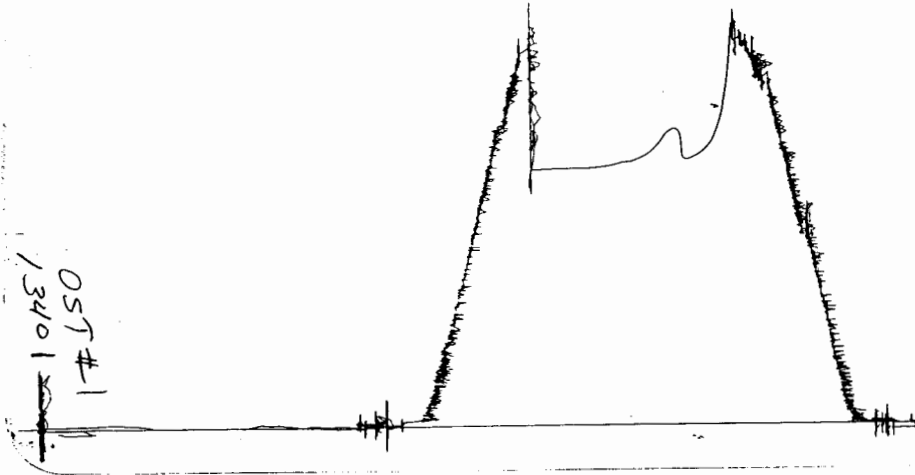
KT JOR

OST # 13550



Outside Recorder

7/14/85  
Below Steadole



Inside Recorder

Outside Recorder

DST REPORT

GENERAL INFORMATION

DATE : 6/18/96  
CUSTOMER : RITCHIE EXPLOR/CANYON  
WELL : #2 TEST: 2  
ELEVATION: 3103 KB  
SECTION : 11  
RANGE : 33W COUNTY: THOMAS  
AUCE SN#: 10270 RANGE : 4150  
TICKET : 22084  
LEASE : E SHUGHART  
GEOLOGIST: CHRISTIAN  
FORMATION: LANSING F  
TOWNSHIP : 6S  
STATE : KS  
CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 4048.00 ft TO: 4077.00 ft TVD: 4077.0 ft  
DEPTH OF SELECTIVE ZONE: TEST TYPE: OIL  
DEPTH OF RECORDERS: 4069.0 ft 4072.0 ft  
TEMPERATURE: 112.0  
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 : 4024.0 ft I.D.: 3.800 in  
TEST TOOL LENGTH : 24.0 ft TOOL SIZE : 5.500 in  
ANCHOR LENGTH : 29.0 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: 4043.0 ft SIZE: 6.630 in  
PACKER DEPTH: 4048.0 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. : WHITE & ELLIS  
MUD TYPE : STARCH VISCOSITY : 46.00 cp  
WEIGHT : 9.100 ppg WATER LOSS: 12.800 cc  
CHLORIDES : 11000 ppm  
JARS-MAKE :  
DID WELL FLOW?: NO SERIAL NUMBER:  
REVERSED OUT?: NO

COMMENTS

Comment

INITIAL FLOW PERIOD VERY WEAK BLOW - DIED IN 18  
MINUTES. FINAL FLOW PERIOD NO BLOW.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
1.0	100.0	0.0	0.0	0.0	CLEAN OIL GRAVITY 37
5.0	6.0	0.0	0.0	94.0	OIL CUT MUD

RATE INFORMATION

OIL VOLUME:	0.0182 STB	TOTAL FLOW TIME:	60.0000 min.
GAS VOLUME:	0.0000 SCF	AVERAGE OIL RATE:	2.0198 STB/D
MUD VOLUME:	0.0659 STB	AVERAGE WATER RATE:	0.0000 STB/D
WATER VOLUME:	0.0000 STB		
TOTAL FLUID :	0.0842 STB		

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2097.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	20.00	20.00
INITIAL SHUT-IN	30.00		62.00
FINAL FLOW	30.00	20.00	20.00
FINAL SHUT-IN	30.00		31.00

FINAL HYDROSTATIC PRESSURE: 2035.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2129.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	47.51	37.54
INITIAL SHUT-IN	30.00		64.33
FINAL FLOW	30.00	40.19	38.35
FINAL SHUT-IN	30.00		48.30

FINAL HYDROSTATIC PRESSURE: 2032.00

Company: RITCHIE EXPLORATION/CANYON  
 Well: #2 E. SHUGHART DST 2  
 Field: TKT 22084

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 Page 1

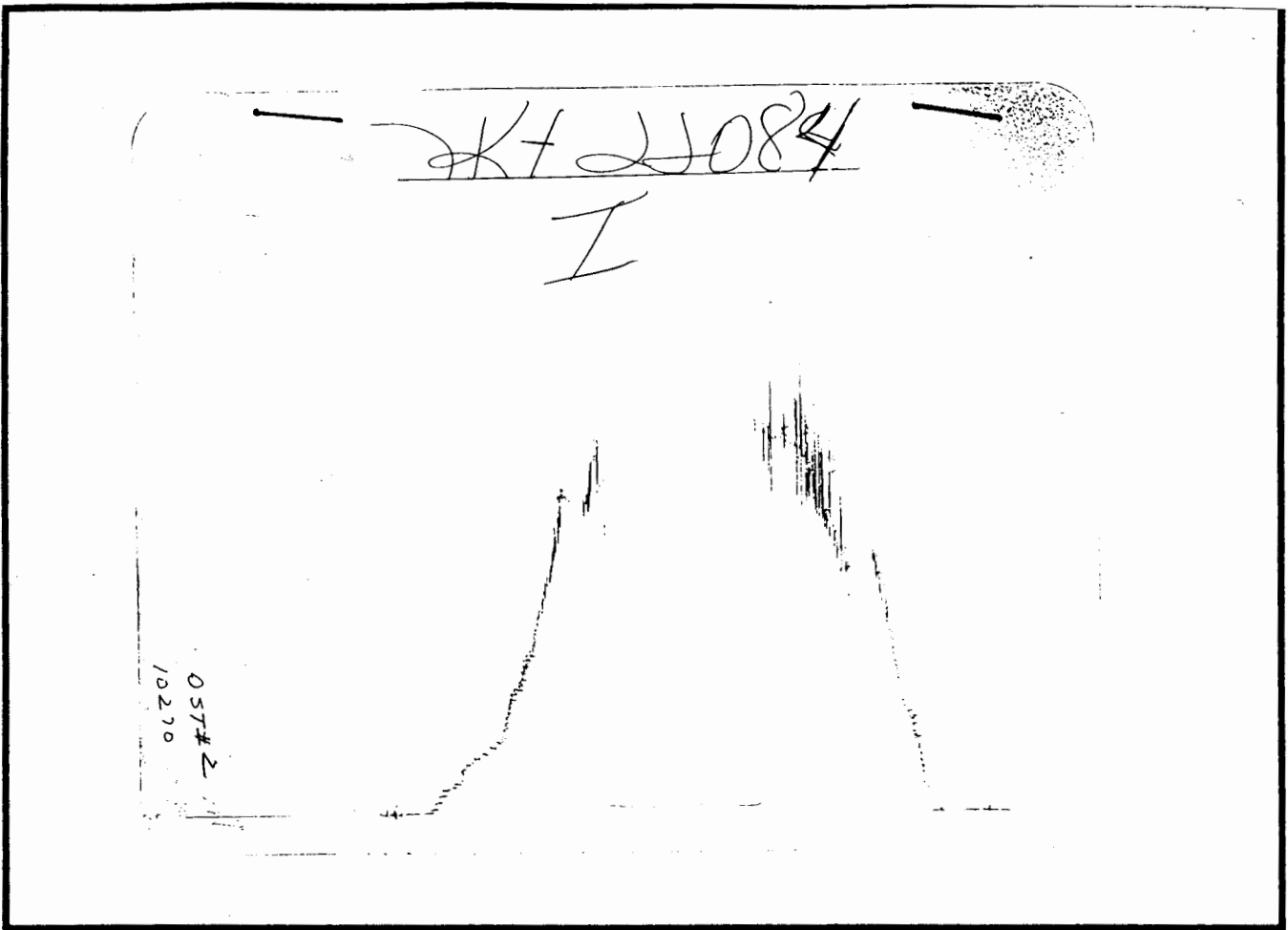
REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)
-----				
START FLOW 1				
1	0	15:50: 6	0.0000	47.51
9	0	15:51: 4	0.0160	46.66
18	0	15:52: 8	0.0340	44.95
27	0	15:53:13	0.0520	42.37
36	0	15:54:18	0.0700	41.52
45	0	15:55:23	0.0880	40.68
54	0	15:56:27	0.1060	39.83
63	0	15:57:32	0.1239	39.86
72	0	15:58:37	0.1419	39.01
81	0	15:59:42	0.1599	39.04
90	0	16: 0:46	0.1779	39.06
99	0	16: 1:51	0.1959	39.08
108	0	16: 2:56	0.2139	39.10
117	0	16: 4: 1	0.2319	39.13
126	0	16: 5: 5	0.2498	39.15
135	0	16: 6:10	0.2678	39.17
144	0	16: 7:15	0.2858	38.33
146	0	16: 9:17	0.3198	37.50
149	0	16:11: 5	0.3498	37.54
END FLOW 1				
START SHUTIN 1				
151	0	16:25:14	0.5856	39.58
160	0	16:26:19	0.6035	40.47
167	0	16:32:18	0.7034	43.19
176	0	16:33:23	0.7214	44.08
185	0	16:34:28	0.7394	45.84
194	0	16:35:33	0.7574	46.73
203	0	16:36:37	0.7753	47.62
212	0	16:37:42	0.7933	48.51
218	0	16:39:51	0.8293	51.16
222	0	16:42:30	0.8732	54.68
231	0	16:43:34	0.8912	56.44
240	0	16:44:39	0.9092	58.20
243	0	16:46:12	0.9351	60.83
250	0	16:47:32	0.9571	64.33
END SHUTIN 1				
START FLOW 2				
255	0	16:54: 8	1.0672	40.19
264	0	16:55:13	1.0852	40.21
270	0	16:57: 8	1.1171	38.51
275	0	16:58:41	1.1431	37.68
284	0	16:59:46	1.1611	36.84
285	0	17: 4:34	1.2410	36.07
294	0	17: 5:39	1.2590	35.22
299	0	17: 7: 5	1.2830	34.39
301	0	17: 8:24	1.3050	35.28
310	0	17: 9:29	1.3230	35.31
319	0	17:10:34	1.3410	35.33
328	0	17:11:38	1.3590	36.22
337	0	17:12:43	1.3769	36.24
344	0	17:13:55	1.3969	36.27
353	0	17:15: 0	1.4149	37.16
360	0	17:16:19	1.4369	36.32
364	0	17:18:14	1.4689	36.36

Company: RITCHIE EXPLORATION/CANYON  
Well: #2 E. SHUGHART DST 2  
Field: TKT 22084

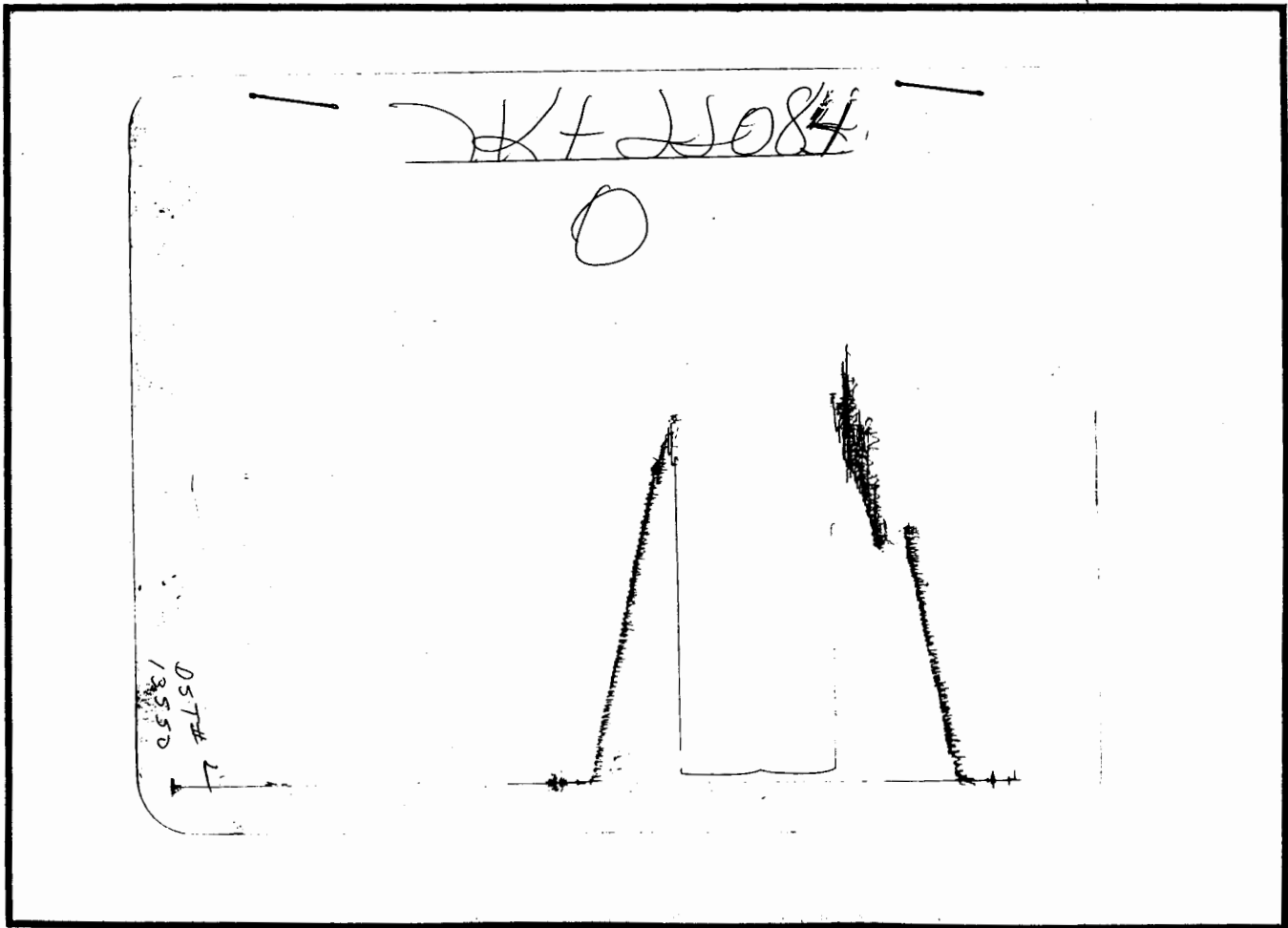
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REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)
373	0	17:19:19	1.4868	37.25
382	0	17:20:23	1.5048	37.27
391	0	17:21:28	1.5228	37.29
400	0	17:25:18	1.5868	36.51
409	0	17:26:23	1.6047	37.40
413	0	17:27:42	1.6267	37.43
420	0	17:30:13	1.6687	38.35
		END FLOW 2		
		START SHUTIN 2		
427	0	17:31: 4	1.6827	38.36
429	0	17:31:18	1.6867	38.37
438	0	17:32:23	1.7046	39.26
447	0	17:33:27	1.7226	39.28
451	0	17:34:32	1.7406	39.30
460	0	17:35:37	1.7586	40.19
469	0	17:36:42	1.7766	41.08
478	0	17:37:46	1.7945	41.97
487	0	17:38:51	1.8125	42.87
496	0	17:39:56	1.8305	43.76
505	0	17:41: 1	1.8485	43.78
514	0	17:42: 5	1.8665	44.67
523	0	17:43:10	1.8844	44.69
532	0	17:44:15	1.9024	45.58
541	0	17:45:20	1.9204	45.60
550	0	17:46:24	1.9384	47.36
559	0	17:47:29	1.9564	47.38
568	0	17:48:34	1.9743	48.27
577	0	17:49:38	1.9923	48.30

WESTERN TESTING CO., INC.



Inside Recorder



Outside Recorder

DST REPORT

GENERAL INFORMATION

DATE : 6/19/96  
CUSTOMER : RITCHIE EXPLOR/CANYON  
WELL : #2 TEST: 3  
ELEVATION: 3103 KB  
SECTION : 11  
RANGE : 33W COUNTY: THOMAS  
GAUGE SN#: 10270 RANGE : 4150  
TICKET : 22085  
LEASE : E SHUGHART  
GEOLOGIST: CHRISTIAN  
FORMATION: LANSING J  
TOWNSHIP : 6S  
STATE : KS  
CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 4125.00 ft TO: 4170.00 ft TVD: 4170.0 ft  
DEPTH OF SELECTIVE ZONE: TEST TYPE: OIL  
DEPTH OF RECORDERS: 4128.0 ft 4131.0 ft  
TEMPERATURE: 113.0  
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 : 4101.0 ft I.D.: 3.800 in  
TEST TOOL LENGTH : 24.0 ft TOOL SIZE : 5.500 in  
ANCHOR LENGTH : 45.0 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: 4120.0 ft SIZE: 6.630 in  
PACKER DEPTH: 4125.0 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. : WHITE & ELLIS  
MUD TYPE : STARCH VISCOSITY : 42.00 cp  
WEIGHT : 9.200 ppg WATER LOSS: 14.000 cc  
CHLORIDES : 10000 ppm  
JARS-MAKE :  
DID WELL FLOW?: NO SERIAL NUMBER:  
REVERSED OUT?: NO

COMMENTS

Comment

INITIAL FLOW PERIOD WEAK BUILDING TO A FAIR BLOW -  
1/4 TO 3 1/4 INCH BLOW. FINAL FLOW PERIOD WEAK  
BUILDING BLOW - 2 TO 3 1/2 INCH BLOW.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
0.0	0.0	0.0	0.0	0.0	140 FT GAS ABOVE FLUID
40.0	49.0	6.0	0.0	45.0	MUDDY GASSY OIL
60.0	35.0	5.0	0.0	60.0	HEAVY OIL CUT MUD

RATE INFORMATION

OIL VOLUME:	0.5695 STB	TOTAL FLOW TIME:	90.0000 min.
GAS VOLUME:	0.4253 SCF	AVERAGE OIL RATE:	21.2303 STB/D
MUD VOLUME:	0.7574 STB	AVERAGE WATER RATE:	0.0000 STB/D
WATER VOLUME:	0.0000 STB		
TOTAL FLUID :	1.3269 STB		

FIELD TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2139.00

Description	Duration	p1	p End
INITIAL FLOW	45.00	52.00	62.00
INITIAL SHUT-IN	60.00		1298.00
FINAL FLOW	45.00	72.00	72.00
FINAL SHUT-IN	60.00		1267.00

FINAL HYDROSTATIC PRESSURE: 2118.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2139.00

Description	Duration	p1	p End
INITIAL FLOW	45.00	74.05	70.44
INITIAL SHUT-IN	60.00		1295.22
FINAL FLOW	45.00	90.50	85.13
FINAL SHUT-IN	60.00		1266.59

FINAL HYDROSTATIC PRESSURE: 2117.00

Company: RITCHIE EXPLORATION/CANYON  
Well: #2 E. SHUGHART DST 3  
Field: TKT 22085

[Wednesday: June 19, 1996  
Page 1

REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)
		START FLOW 1		
1	0	12: 0: 6	0.0000	74.05
9	0	12: 1: 3	0.0160	74.06
18	0	12: 2: 8	0.0340	69.75
27	0	12: 3:13	0.0520	68.90
36	0	12: 4:18	0.0700	65.44
45	0	12: 5:22	0.0880	64.59
54	0	12: 6:27	0.1060	63.74
63	0	12: 7:32	0.1240	62.03
70	0	12: 8:44	0.1440	59.44
79	0	12: 9:49	0.1619	59.46
88	0	12:10:53	0.1799	60.35
97	0	12:11:58	0.1979	60.36
106	0	12:13: 3	0.2159	61.25
115	0	12:14: 8	0.2339	62.13
124	0	12:15:12	0.2519	62.15
133	0	12:16:17	0.2698	63.03
142	0	12:17:22	0.2878	63.05
151	0	12:18:27	0.3058	63.07
160	0	12:19:31	0.3238	63.09
169	0	12:20:36	0.3418	63.10
178	0	12:21:41	0.3598	63.12
187	0	12:22:46	0.3777	64.00
196	0	12:23:50	0.3957	64.02
205	0	12:24:55	0.4137	64.04
214	0	12:26: 0	0.4317	64.06
223	0	12:27: 5	0.4497	64.94
232	0	12:28: 9	0.4677	64.96
241	0	12:29:14	0.4857	64.98
250	0	12:30:19	0.5036	65.86
259	0	12:31:24	0.5216	65.88
268	0	12:32:28	0.5396	65.89
277	0	12:33:33	0.5576	65.91
286	0	12:34:38	0.5756	66.80
295	0	12:35:43	0.5935	66.81
304	0	12:36:47	0.6115	67.70
313	0	12:37:52	0.6295	67.72
322	0	12:38:57	0.6475	67.73
331	0	12:40: 1	0.6655	67.75
340	0	12:41: 6	0.6835	68.64
349	0	12:42:11	0.7014	68.65
358	0	12:43:16	0.7194	69.54
367	0	12:44:20	0.7374	69.55
376	0	12:45:25	0.7554	70.44
		END FLOW 1		
		START SHUTIN 1		
382	0	12:46: 8	0.7674	73.05
385	0	12:46:30	0.7734	73.93
394	0	12:47:35	0.7913	79.15
403	0	12:48:39	0.8093	85.24
412	0	12:49:44	0.8272	96.53
421	0	12:50:48	0.8451	113.89
430	0	12:51:52	0.8629	149.47
439	0	12:52:56	0.8806	200.66
448	0	12:53:59	0.8982	288.28

WESTERN TESTING CO., INC.

Company: RITCHIE EXPLORATION/CANYON  
 Well: #2 E. SHUGHART DST 3  
 Field: TKT 22085

[Wednesday: June 19, 1996  
 Page 2

REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)
457	0	12:55: 1	0.9155	421.86
466	0	12:56: 4	0.9328	546.78
475	0	12:57: 6	0.9502	670.82
484	0	12:58: 9	0.9674	813.08
493	0	12:59:11	0.9849	913.71
502	0	13: 0:15	1.0025	982.25
511	0	13: 1:18	1.0202	1049.91
520	0	13: 2:22	1.0379	1089.83
529	0	13: 3:27	1.0558	1115.87
538	0	13: 4:31	1.0737	1144.51
547	0	13: 5:35	1.0916	1158.40
556	0	13: 6:40	1.1095	1174.03
565	0	13: 7:44	1.1274	1187.06
574	0	13: 8:49	1.1453	1195.75
583	0	13: 9:53	1.1633	1205.30
592	0	13:10:58	1.1812	1214.00
601	0	13:12: 3	1.1991	1220.95
610	0	13:13: 7	1.2171	1227.04
619	0	13:14:12	1.2351	1231.39
628	0	13:15:17	1.2530	1236.62
637	0	13:16:21	1.2710	1240.10
646	0	13:17:26	1.2890	1244.46
655	0	13:18:31	1.3069	1248.81
664	0	13:19:35	1.3249	1251.43
673	0	13:20:40	1.3428	1255.78
682	0	13:21:45	1.3608	1258.40
691	0	13:22:49	1.3788	1261.89
700	0	13:23:54	1.3968	1265.38
709	0	13:24:59	1.4147	1267.13
718	0	13:26: 4	1.4327	1268.88
727	0	13:27: 8	1.4507	1272.37
736	0	13:28:13	1.4687	1274.12
745	0	13:29:18	1.4866	1275.87
754	0	13:30:22	1.5046	1277.62
763	0	13:31:27	1.5226	1278.51
772	0	13:32:32	1.5406	1280.26
781	0	13:33:37	1.5585	1282.01
790	0	13:34:41	1.5765	1282.90
799	0	13:35:46	1.5945	1284.65
808	0	13:36:51	1.6125	1285.53
817	0	13:37:55	1.6305	1287.28
826	0	13:39: 0	1.6484	1287.30
827	0	13:40:41	1.6764	1289.06
836	0	13:41:46	1.6944	1291.68
845	0	13:42:50	1.7124	1292.57
854	0	13:43:55	1.7303	1292.58
863	0	13:45: 0	1.7483	1294.34
872	0	13:46: 4	1.7663	1295.22
		END SHUTIN 1		
		START FLOW 2		
874	0	13:46:41	1.7764	90.50
878	0	13:47:10	1.7844	87.91
887	0	13:48:15	1.8024	85.32
896	0	13:49:19	1.8204	83.61
905	0	13:50:24	1.8384	82.76

Company: RITCHIE EXPLORATION/CANYON  
 Well: #2 E. SHUGHART DST 3  
 Field: TKT 22085

[Wednesday: June 19, 1996  
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REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)
914	0	13:51:29	1.8564	81.91
923	0	13:52:34	1.8744	81.06
932	0	13:53:38	1.8924	80.21
941	0	13:54:43	1.9104	80.22
950	0	13:55:48	1.9284	79.37
958	0	13:56:53	1.9464	79.39
967	0	13:57:57	1.9643	80.27
976	0	13:59: 2	1.9823	80.29
985	0	14: 0: 7	2.0003	80.31
994	0	14: 1:12	2.0183	80.33
1003	0	14: 2:16	2.0363	80.34
1012	0	14: 3:21	2.0543	80.36
1021	0	14: 4:26	2.0722	80.38
1030	0	14: 5:31	2.0902	80.40
1039	0	14: 6:35	2.1082	80.41
1048	0	14: 7:40	2.1262	81.30
1057	0	14: 8:45	2.1442	81.31
1066	0	14: 9:50	2.1622	81.33
1075	0	14:10:54	2.1802	82.22
1084	0	14:11:59	2.1981	82.23
1093	0	14:13: 4	2.2161	82.25
1102	0	14:14: 9	2.2341	82.27
1111	0	14:15:13	2.2521	82.29
1120	0	14:16:18	2.2701	82.30
1129	0	14:17:23	2.2881	82.32
1138	0	14:18:28	2.3060	83.20
1147	0	14:19:32	2.3240	83.22
1156	0	14:20:37	2.3420	83.24
1165	0	14:21:42	2.3600	83.26
1174	0	14:22:46	2.3780	84.14
1183	0	14:23:51	2.3960	84.16
1192	0	14:24:56	2.4139	84.18
1201	0	14:26: 1	2.4319	84.19
1210	0	14:27: 5	2.4499	85.08
1219	0	14:28:10	2.4679	85.09
1228	0	14:29:15	2.4859	85.11
1237	0	14:30:20	2.5039	85.13
		END FLOW 2		
		START SHUTIN 2		
1242	0	14:30:56	2.5138	86.01
1246	0	14:31:24	2.5218	86.01
1255	0	14:32:29	2.5398	86.03
1264	0	14:33:34	2.5578	89.52
1273	0	14:34:38	2.5757	98.21
1282	0	14:35:43	2.5936	116.44
1291	0	14:36:47	2.6115	139.01
1300	0	14:37:51	2.6293	183.26
1309	0	14:38:55	2.6469	245.72
1318	0	14:39:58	2.6644	336.81
1327	0	14:41: 0	2.6818	453.92
1336	0	14:42: 3	2.6992	582.30
1345	0	14:43: 5	2.7166	691.60
1354	0	14:44: 8	2.7340	805.24
1363	0	14:45:11	2.7515	899.80
1372	0	14:46:15	2.7691	967.46

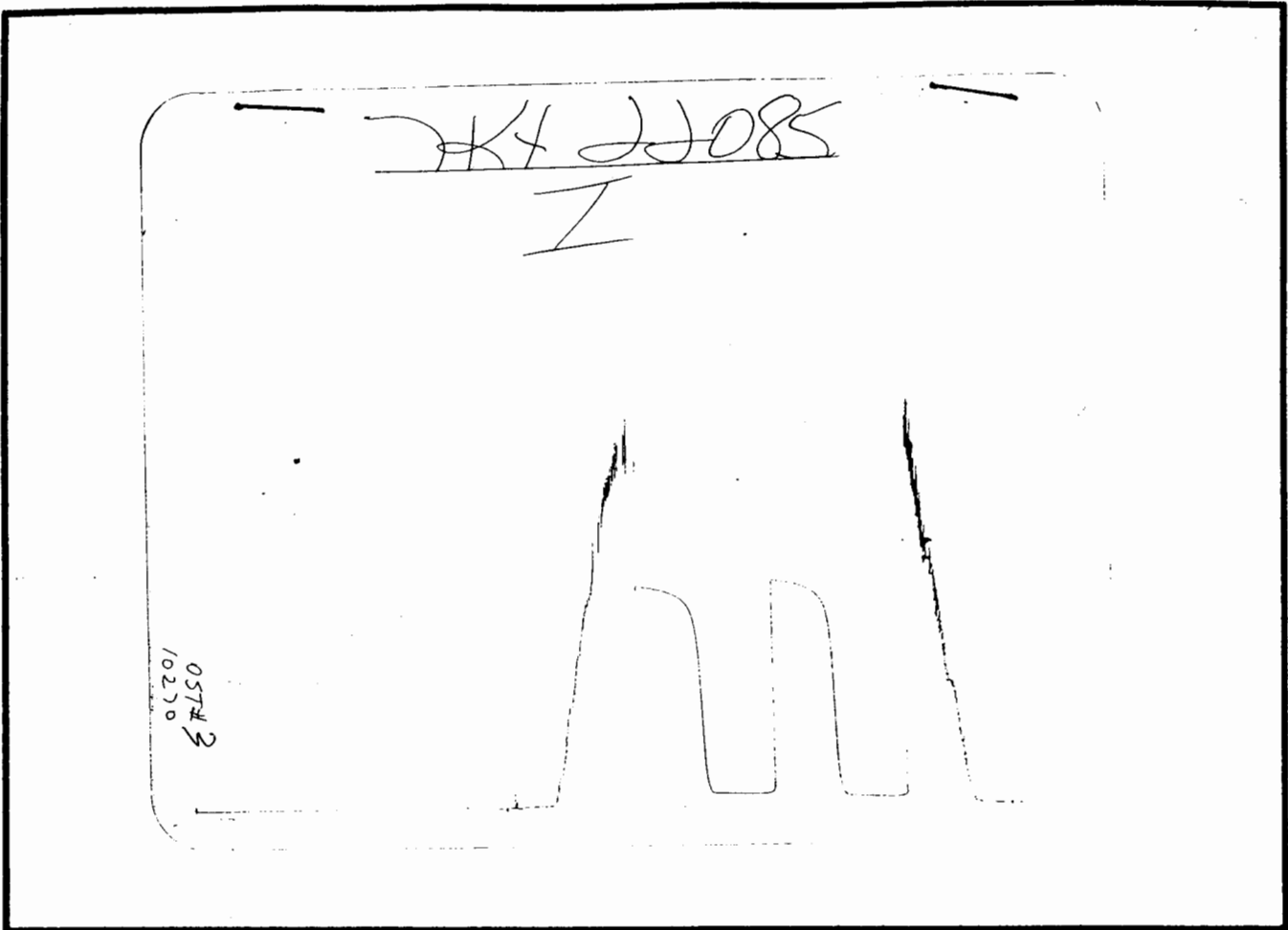
WESTERN TESTING CO., INC.

Company: RITCHIE EXPLORATION/CANYON  
Well: #2 E. SHUGHART DST 3  
Field: TKT 22085

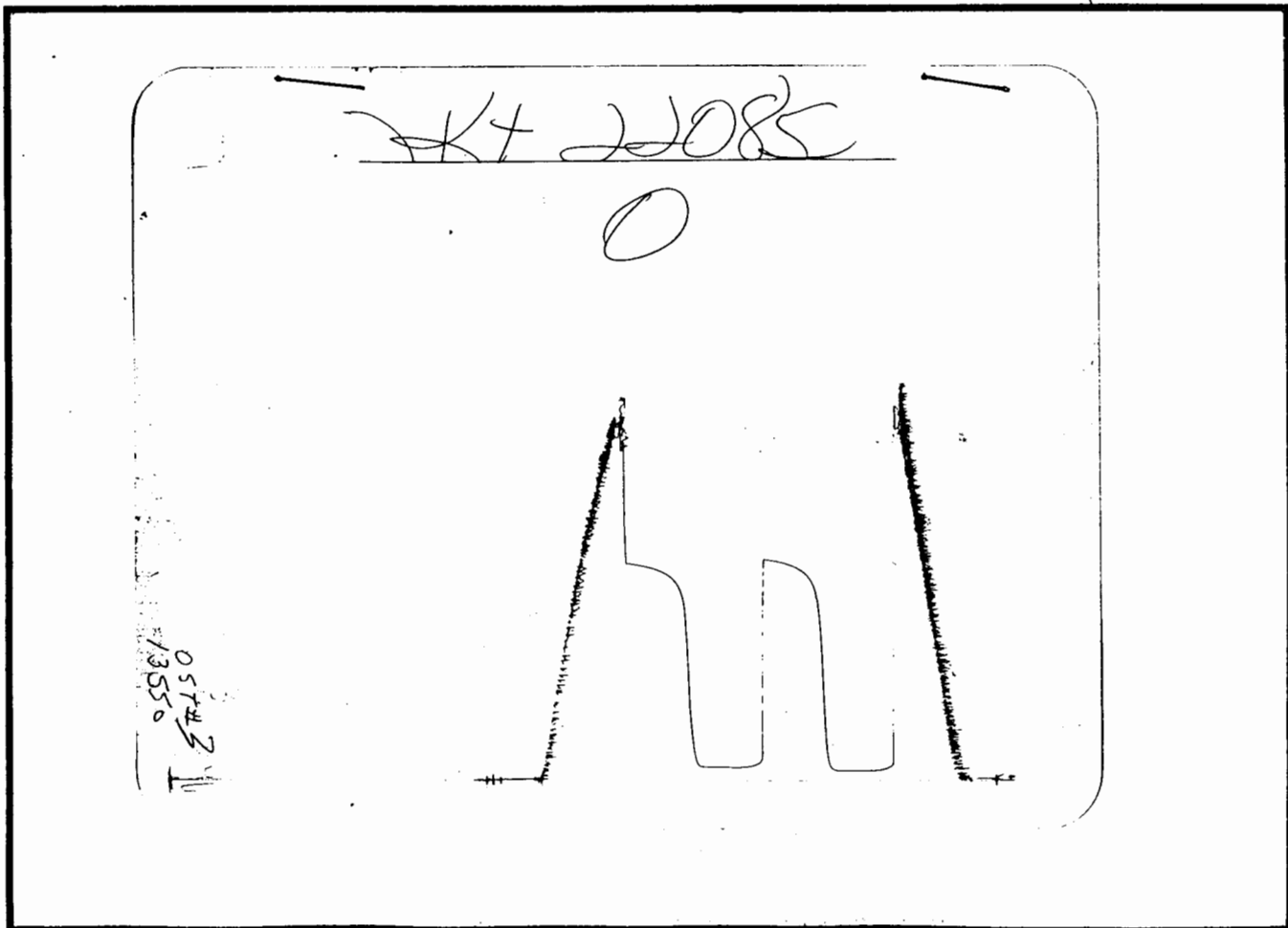
[Wednesday: June 19, 1  
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REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)
1381	0	14:47:19	2.7869	1015.18
1390	0	14:48:23	2.8047	1052.50
1399	0	14:49:27	2.8225	1083.74
1408	0	14:50:31	2.8404	1108.04
1417	0	14:51:35	2.8583	1126.27
1426	0	14:52:40	2.8762	1141.90
1435	0	14:53:44	2.8941	1154.06
1444	0	14:54:49	2.9120	1164.49
1453	0	14:55:54	2.9300	1172.31
1462	0	14:56:58	2.9479	1181.87
1471	0	14:58: 3	2.9658	1187.96
1480	0	14:59: 7	2.9838	1194.91
1489	0	15: 0:12	3.0018	1200.13
1498	0	15: 1:17	3.0197	1204.49
1507	0	15: 2:21	3.0377	1208.84
1516	0	15: 3:26	3.0556	1213.20
1525	0	15: 4:31	3.0736	1216.68
1534	0	15: 5:35	3.0916	1220.17
1543	0	15: 6:40	3.1095	1222.79
1552	0	15: 7:45	3.1275	1226.27
1561	0	15: 8:50	3.1455	1229.76
1570	0	15: 9:54	3.1635	1232.38
1579	0	15:10:59	3.1814	1235.00
1588	0	15:12: 4	3.1994	1237.62
1597	0	15:13: 8	3.2174	1239.37
1606	0	15:14:13	3.2354	1241.12
1615	0	15:15:18	3.2533	1242.87
1624	0	15:16:22	3.2713	1244.63
1633	0	15:17:27	3.2893	1246.38
1642	0	15:18:32	3.3073	1248.13
1651	0	15:19:37	3.3252	1249.88
1660	0	15:20:41	3.3432	1251.63
1669	0	15:21:46	3.3612	1253.39
1678	0	15:22:51	3.3792	1254.27
1687	0	15:23:56	3.3972	1256.02
1696	0	15:25: 0	3.4151	1257.77
1705	0	15:26: 5	3.4331	1258.66
1714	0	15:27:10	3.4511	1259.54
1723	0	15:28:14	3.4691	1261.30
1732	0	15:29:19	3.4870	1263.05
1741	0	15:30:24	3.5050	1263.07
1750	0	15:31:29	3.5230	1264.82
1759	0	15:32:33	3.5410	1265.70
1768	0	15:33:38	3.5590	1266.59

WESTERN TESTING CO., INC.



Inside Recorder



Outside Recorder

DST REPORT

GENERAL INFORMATION

DATE : 6/21/96  
CUSTOMER : RITCHIE EXPLOR/CANYON  
WELL : #2 TEST: 4  
ELEVATION: 3103 KB  
SECTION : 11  
RANGE : 33W COUNTY: THOMAS  
GAUGE SN#: 13551 RANGE : 4150  
TICKET : 21319  
LEASE : E SHUGHART  
GEOLOGIST: CHRISTIAN  
FORMATION: CHEROKEE  
TOWNSHIP : 6S  
STATE : KS  
CLOCK : 12

WELL INFORMATION

PERFORATION INTERVAL FROM: 4436.00 ft TO: 4470.00 ft TVD: 4470.0 ft  
DEPTH OF SELECTIVE ZONE: TEST TYPE: OIL  
DEPTH OF RECORDERS: 4439.0 ft 4442.0 ft  
TEMPERATURE: 0.0

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 :	4413.0 ft	I.D.:	3.800 in
TEST TOOL LENGTH :	23.0 ft	TOOL SIZE :	5.500 in
ANCHOR LENGTH :	34.0 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:	4431.0 ft	SIZE:	6.750 in
PACKER DEPTH:	4436.0 ft	SIZE:	6.750 in
PACKER DEPTH:	0.0 ft	SIZE:	0.000 in
PACKER DEPTH:	0.0 ft	SIZE:	0.000 in

MUD INFORMATION

DRILLING CON. : WHITE & ELLIS  
MUD TYPE : CHEMICAL  
WEIGHT : 9.300 ppg  
CHLORIDES : 10000 ppm  
JARS-MAKE :  
DID WELL FLOW?: NO  
VISCOSITY : 43.00 cp  
WATER LOSS: 13.600 cc  
SERIAL NUMBER:  
REVERSED OUT?: NO

COMMENTS

Comment

INITIAL FLOW PERIOD WEAK DECREASING BLOW - 1/4  
INCH. FINAL FLOW PERIOD NO BLOW.

DST REPORT (CONTINUED)

FLUID RECOVERY

Feet of Fluid	% Oil	% Gas	% Water	% Mud	Comments
35.0	0.0	0.0	0.0	100.0	MUD

RATE INFORMATION

OIL VOLUME:	0.0000	STB	TOTAL FLOW TIME:	60.0000	min.
GAS VOLUME:	0.0000	SCF	AVERAGE OIL RATE:	0.0000	STB/D
MUD VOLUME:	0.4909	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: 2310.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	104.00	104.00
INITIAL SHUT-IN	30.00		826.00
FINAL FLOW	30.00	104.00	104.00
FINAL SHUT-IN	30.00		209.00

FINAL HYDROSTATIC PRESSURE: 2216.00

OFFICE TIME & PRESSURE INFORMATION

INITIAL HYDROSTATIC PRESSURE: 2266.00

Description	Duration	p1	p End
INITIAL FLOW	30.00	102.71	96.46
INITIAL SHUT-IN	30.00		779.31
FINAL FLOW	30.00	114.63	59.56
FINAL SHUT-IN	30.00		180.05

FINAL HYDROSTATIC PRESSURE: 2220.00

Company: RITCHIE EXPLOR/CANYON  
Well: #2 E SHUGHART DST 4  
Field: TKT 21319

[Friday: June 21, 1996]  
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REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)
-----				
START FLOW 1				
1	0	7:10:25	0.0000	102.71
6	0	7:11: 1	0.0100	102.69
15	0	7:12: 6	0.0279	97.43
24	0	7:13:11	0.0458	92.16
33	0	7:14:15	0.0638	90.38
42	0	7:15:20	0.0818	88.61
51	0	7:16:24	0.0997	82.47
60	0	7:17:29	0.1177	81.56
69	0	7:18:34	0.1356	80.66
78	0	7:19:38	0.1536	79.75
87	0	7:20:43	0.1716	79.71
96	0	7:21:48	0.1896	81.42
105	0	7:22:53	0.2075	77.02
114	0	7:23:57	0.2255	74.37
123	0	7:25: 2	0.2435	73.47
132	0	7:26: 7	0.2615	75.17
141	0	7:27:12	0.2795	76.88
150	0	7:28:16	0.2975	80.32
159	0	7:29:21	0.3155	77.67
168	0	7:30:26	0.3334	77.64
177	0	7:31:31	0.3515	80.21
186	0	7:32:36	0.3695	83.66
195	0	7:33:40	0.3875	86.24
204	0	7:34:45	0.4055	90.55
213	0	7:35:50	0.4236	96.61
222	0	7:36:55	0.4415	93.96
231	0	7:38: 0	0.4595	92.18
240	0	7:39: 4	0.4775	93.02
249	0	7:40: 9	0.4955	96.46
END FLOW 1				
START SHUTIN 1				
250	0	7:40:17	0.4975	97.33
258	0	7:41:14	0.5136	102.52
267	0	7:42:20	0.5317	114.68
276	0	7:43:25	0.5498	123.35
285	0	7:44:30	0.5680	143.35
294	0	7:45:36	0.5862	166.83
303	0	7:46:42	0.6045	197.27
312	0	7:47:48	0.6228	225.98
321	0	7:48:54	0.6412	260.78
330	0	7:50: 0	0.6596	299.93
339	0	7:51: 6	0.6780	338.22
348	0	7:52:13	0.6964	378.25
357	0	7:53:19	0.7148	419.14
366	0	7:54:25	0.7332	454.82
375	0	7:55:31	0.7517	498.33
384	0	7:56:38	0.7700	533.13
393	0	7:57:44	0.7884	568.80
402	0	7:58:50	0.8068	604.47
411	0	7:59:56	0.8251	638.40
420	0	8: 1: 2	0.8435	670.59
429	0	8: 2: 8	0.8618	701.91
438	0	8: 3:14	0.8801	728.00
447	0	8: 4:19	0.8983	755.83

WESTERN TESTING CO., INC.

Company: RITCHIE EXPLOR/CANYON  
 Well: #2 E SHUGHART DST 4  
 Field: TKT 21319

[Friday: June 21, 1996]  
 Page 2

REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)
456	0	8: 5:25	0.9166	779.31
		END SHUTIN 1		
		START FLOW 2		
464	0	8: 9:11	0.9793	114.63
473	0	8:10:16	0.9973	111.11
482	0	8:11:20	1.0152	101.49
491	0	8:12:25	1.0331	97.97
500	0	8:13:29	1.0511	94.45
509	0	8:14:34	1.0690	94.41
518	0	8:15:39	1.0870	93.51
527	0	8:16:43	1.1050	93.47
536	0	8:17:48	1.1230	93.43
545	0	8:18:53	1.1409	88.17
554	0	8:19:57	1.1588	81.17
563	0	8:21: 2	1.1768	76.77
572	0	8:22: 6	1.1947	74.99
581	0	8:23:11	1.2127	70.60
590	0	8:24:16	1.2306	67.95
599	0	8:25:20	1.2486	66.17
608	0	8:26:25	1.2665	64.40
617	0	8:27:30	1.2845	63.49
626	0	8:28:34	1.3025	61.71
635	0	8:29:39	1.3205	61.67
644	0	8:30:44	1.3384	60.76
653	0	8:31:49	1.3564	60.73
662	0	8:32:53	1.3744	60.69
671	0	8:33:58	1.3924	59.78
680	0	8:35: 3	1.4104	59.74
689	0	8:36: 8	1.4284	59.71
698	0	8:37:12	1.4463	59.67
707	0	8:38:17	1.4643	59.63
716	0	8:39:22	1.4823	59.60
725	0	8:40:27	1.5003	59.56
		END FLOW 2		
		START SHUTIN 2		
730	0	8:41: 2	1.5103	59.54
734	0	8:41:31	1.5183	59.52
743	0	8:42:36	1.5363	59.49
752	0	8:43:41	1.5543	59.45
761	0	8:44:45	1.5722	58.54
770	0	8:45:50	1.5902	58.50
779	0	8:46:55	1.6082	58.47
788	0	8:48: 0	1.6262	58.43
797	0	8:49: 5	1.6442	59.26
806	0	8:50: 9	1.6622	60.10
815	0	8:51:14	1.6802	60.93
824	0	8:52:19	1.6982	61.77
833	0	8:53:24	1.7162	63.47
842	0	8:54:28	1.7342	65.18
851	0	8:55:33	1.7522	66.88
860	0	8:56:38	1.7702	69.46
869	0	8:57:43	1.7882	71.16
878	0	8:58:48	1.8062	72.87
887	0	8:59:53	1.8242	76.31
896	0	9: 0:57	1.8422	78.89

Company: RITCHIE EXPLOR/CANYON  
Well: #2 E SHUGHART DST 4  
Field: TKT 21319

[Friday: June 21, 1996]  
Page 3

REC #	DAY	REAL TIME	DT (HRS)	BHP (PSIA)
905	0	9: 2: 2	1.8602	79.72
914	0	9: 3: 7	1.8782	82.30
923	0	9: 4:12	1.8962	84.00
932	0	9: 5:17	1.9143	86.58
941	0	9: 6:22	1.9323	88.28
950	0	9: 7:26	1.9503	90.86
959	0	9: 8:31	1.9683	93.44
968	0	9: 9:36	1.9863	96.88
977	0	9:10:41	2.0043	102.07
986	0	9:11:46	2.0224	108.13
995	0	9:12:51	2.0404	114.19
1004	0	9:13:56	2.0585	120.25
1013	0	9:15: 1	2.0766	128.05
1022	0	9:16: 6	2.0946	134.98
1031	0	9:17:11	2.1127	143.66
1040	0	9:18:16	2.1308	152.33
1049	0	9:19:21	2.1488	157.52
1058	0	9:20:26	2.1669	167.06
1067	0	9:21:31	2.1849	170.51
1076	0	9:22:36	2.2030	180.05

WESTERN TESTING CO., INC.

FLUID SAMPLE REPORT

GENERAL INFORMATION

DATE : 6/21/96  
CUSTOMER : RITCHIE EXPLOR/CANYON  
WELL : #2 TEST: 4  
ELEVATION: 3103 KB  
SECTION : 11  
RANGE : 33W COUNTY: THOMAS  
GAUGE SN#: 13551 RANGE : 4150  
TICKET : 21319  
LEASE : E SHUGHART  
GEOLOGIST: CHRISTIAN  
FORMATION: CHEROKEE  
TOWNSHIP : 6S  
STATE : KS  
CLOCK : 12

SAMPLE INFORMATION

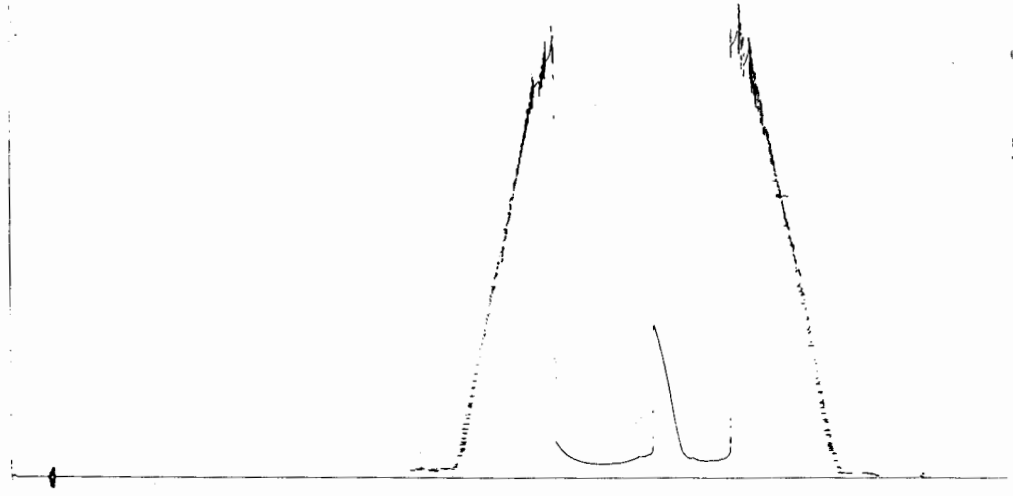
PRESSURE IN SAMPLER: 100.00 PSIG BHT: 0.0 DEG F  
TOTAL VOLUME OF SAMPLER: 3150.00 cc  
TOTAL VOLUME OF SAMPLE: 3150.00 cc  
OIL: 0.00 cc  
WATER: 0.00 cc  
MUD: 3150.00 cc  
GAS: 0.00 cc  
OTHER: 0.00 cc

RESISTIVITY

DRILLING MUD: CHLORIDE CONTENT: 0.00 ppm  
MUD PIT SAMPLE: CHLORIDE CONTENT: 0.00 ppm  
GAS/OIL RATIO: GRAVITY:  
WHERE WAS SAMPLE DRAINED:  
REMARKS:

13551  
95744

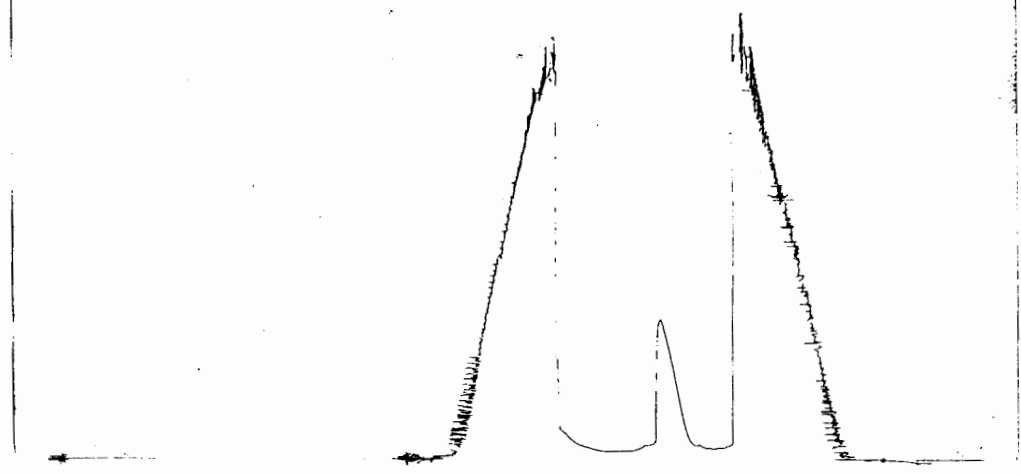
KT 21319  
I



Inside Recorder

13269  
95744

KT 21319  
O

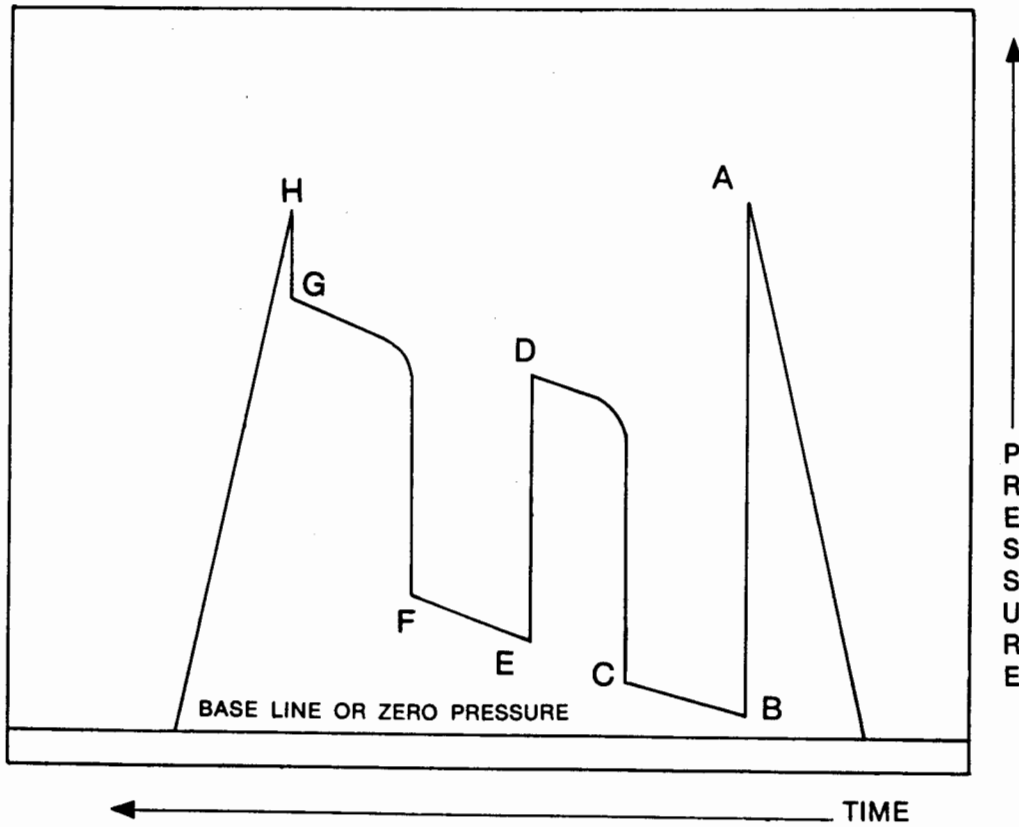


Outside Recorder

### COMPANY TERMS

Western Testing Co., Inc. shall not be liable for damages of any kind to the property or personnel of the one for whom a test is made or for any loss suffered or sustained directly or indirectly through the use of its equipment, of its statements or opinion concerning the results of any test. Tools lost or damaged in the hole shall be paid at cost by the party for whom the test is made.

### AK-1 Recorders



A - Initial Hydrostatic

B - First Initial Flow

C - First Final Flow

D - Initial Shut-In

E - Second Initial Flow

F - Second Final Flow

G - Final Shut-In

H - Final Hydrostatic