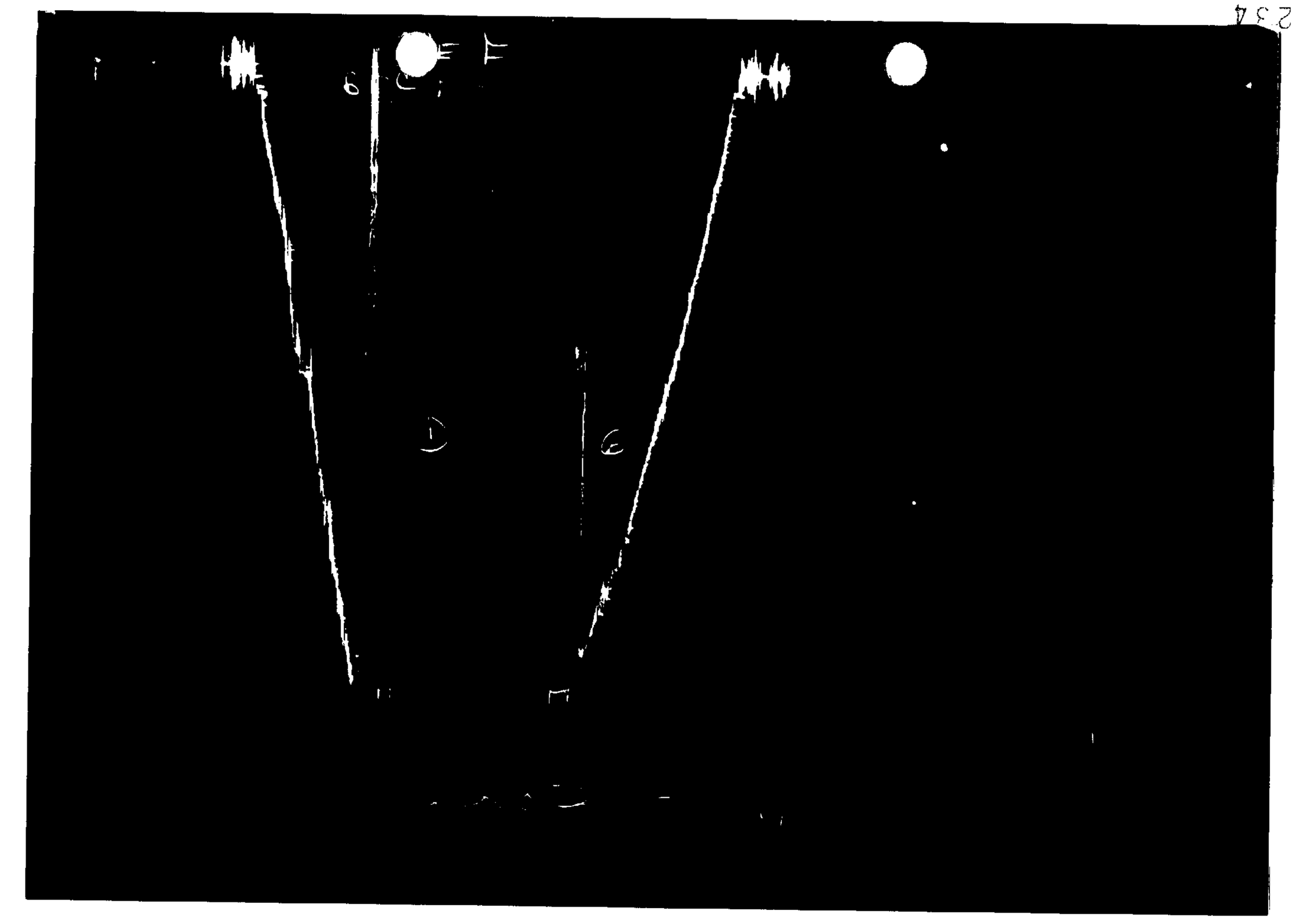
HALLIBURTON SERVICES

TICKET NO. 92285900
18-DEC-84
ARTESIA

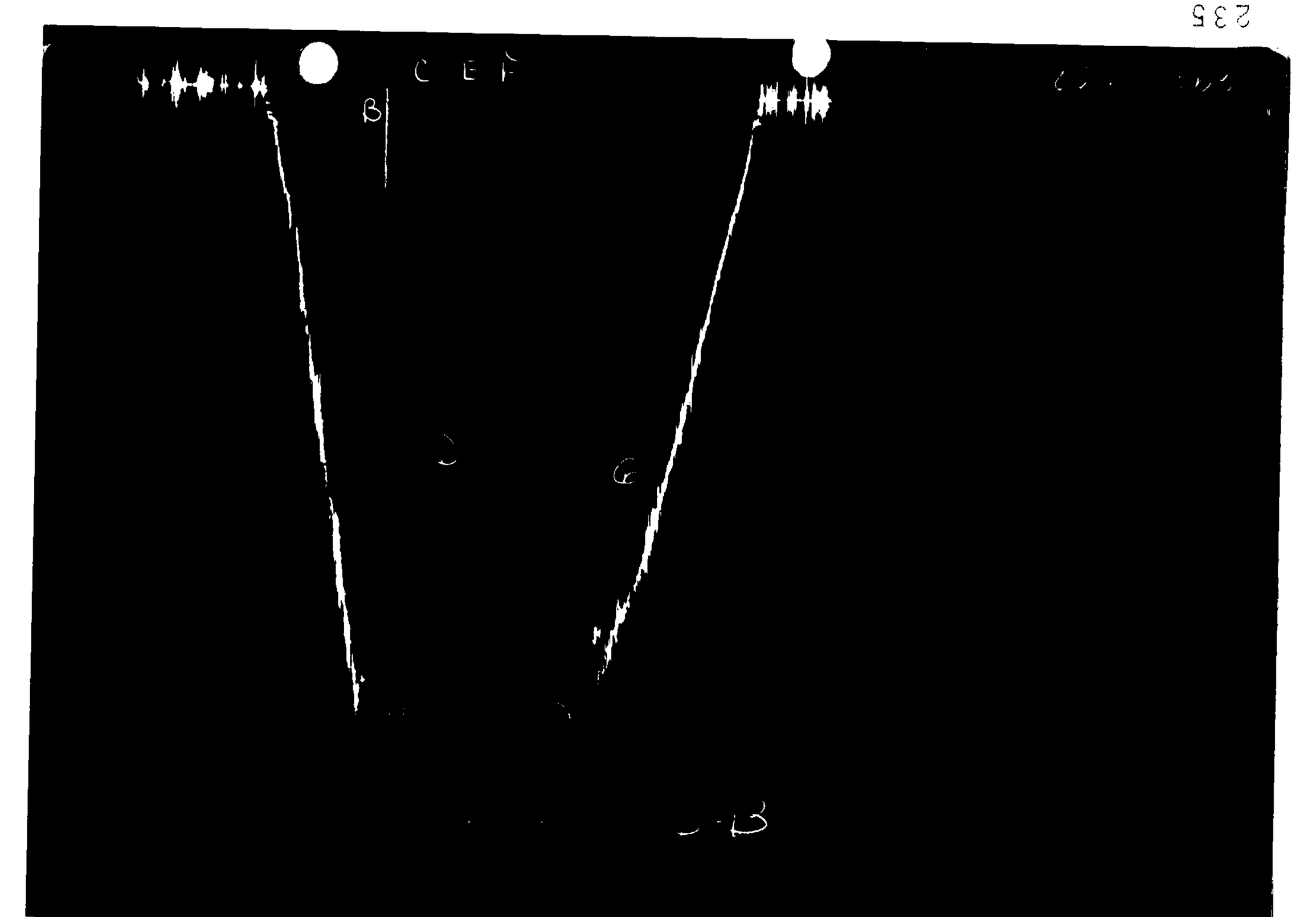
FORMATION TESTING SERVICE REPORT

SUNBURST STATE A COMMISSION — LEASE NAME
1 — WELL NO.
4 — TEST NO.
10284.' - 10340.' — TESTED INTERVAL
MANZANO OIL COMPANY — LEASE OWNER/COMPANY NAME
LEGAL LOCATION SEC. - TWP. - RNG.: 7 - 11 SOUTH - 33 EAST
FIELD AREA: NORTH BAGLEY
COUNTY: LEA
STATE: NEW MEXICO
PW



GAUGE NO: 991 DEPTH: 10263.0 BLANKED OFF: NO HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE REPORTED	PRESSURE CALCULATED	TIME REPORTED	TIME CALCULATED	TYPE
A	INITIAL HYDROSTATIC	5388	5382.0			
B	INITIAL FIRST FLOW	87	65.1	30.0	22.6	F
C	FINAL FIRST FLOW	108	103.0			
C	INITIAL FIRST CLOSED IN	108	103.0	60.0	60.7	C
D	FINAL FIRST CLOSED-IN	2865	2866.2			
E	INITIAL SECOND FLOW	108	113.4	60.0	58.7	F
F	FINAL SECOND FLOW	152	160.2			
F	INITIAL SECOND CLOSED-IN	152	160.2	120.0	120.6	C
G	FINAL SECOND CLOSED-IN	3123	3105.1			
H	FINAL HYDROSTATIC	5215	5197.4			



GAUGE NO: 693 DEPTH: 10334.0 BLANKED OFF: YES HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE REPORTED	PRESSURE CALCULATED	TIME REPORTED	TIME CALCULATED	TYPE
A	INITIAL HYDROSTATIC	5253	5329.0			
B	INITIAL FIRST FLOW	65	95.9	30.0	22.6	F
C	FINAL FIRST FLOW	109	119.3			
C	INITIAL FIRST CLOSED-IN	109	119.3	60.0	60.7	C
D	FINAL FIRST CLOSED-IN	2881	2880.3			
E	INITIAL SECOND FLOW	130	128.4	60.0	58.7	F
F	FINAL SECOND FLOW	195	185.7			
F	INITIAL SECOND CLOSED IN	195	185.7	120.0	120.6	C
G	FINAL SECOND CLOSED-IN	3143	3131.6			
H	FINAL HYDROSTATIC	5209	5206.3			

EQUIPMENT & HOLE DATA

FORMATION TESTED: STRAWN
NET PAY (ft):
GROSS TESTED FOOTAGE: 56.0
ALL DEPTHS MEASURED FROM: KB - 12'
CASING PERFS. (ft):
HOLE OR CASING SIZE (in): 7.875
ELEVATION (ft): 4326
TOTAL DEPTH (ft): 10450.0
PACKER DEPTH(S) (ft): 10278, 10284, 10340, 10346
FINAL SURFACE CHOKE (in): 0.250
BOTTOM HOLE CHOKE (in): 0.750
MUD WEIGHT (lb/gal): 9.40
MUD VISCOSITY (sec): 45
ESTIMATED HOLE TEMP. (°F):
ACTUAL HOLE TEMP. (°F): @ ft

TICKET NUMBER: 92285900
DATE: 12-12-84 TEST NO: 4
TYPE DST: ON BTM. STRADDLE
HALLIBURTON CAMP: ARTESIA
TESTER: S. MC KEE, J. MARTINEZ
WITNESS: RONNIE CARRIER
DRILLING CONTRACTOR: WEK #2

FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY	CHLORIDES
MUD PIT	0.160 @ 64 °F	60000 ppm
TOP RECOVERY	0.160 @ 64 °F	60000 ppm
MIDDLE RECOVERY	0.160 @ 62 °F	61000 ppm
BOTTOM RECOVERY	0.160 @ 62 °F	61000 ppm
	@ °F	ppm
	@ °F	ppm

SAMPLER DATA

Psig AT SURFACE: 1400
cu.ft. OF GAS: 3.26
cc OF OIL: 0
cc OF WATER: 0
cc OF MUD: 1900
TOTAL LIQUID cc: 1900

HYDROCARBON PROPERTIES

OIL GRAVITY (°API): @ °F
GAS/OIL RATIO (cu.ft. per bbl):
GAS GRAVITY:

CUSHION DATA

TYPE	AMOUNT	WEIGHT

RECOVERED:

280 FEET OF GAS CUT MUD - SLIGHT TRACE OF OIL

MEASURED FROM TESTER VALVE

REMARKS:

REPORTED ELEVATION MEASURED AT GROUND LEVEL IS 4313.5'

INITIAL HYDROSTATIC PRESSURE IS QUESTIONABLE

TYPE & SIZE MEASURING DEVICE: 6" POSITIVE CHOKE — TICKET NO: 92285900

TIME	CHOKE SIZE	SURFACE PRESSURE PSI	GAS RATE MCF	LIQUID RATE BPD	REMARKS
12-11-84					
2315					ON LOCATION
12-12-84					
0330					PICKED-UP TOOLS
0700					STARTED TOOLS IN HOLE
0900					OPENED TOOL - GOOD BLOW
0910		1			INCREASE IN SURFACE SI
0920	1/4"	2			"
0930	"	2			CLOSED TOOL - PRESSURE
					STABLE - NO GAS TO THE
					SURFACE.
1030	"	1			OPENED TOOL - GOOD BLOW
1040		2			INCREASE IN PSI - NO GAS
					TO THE SURFACE.
1050		1.5			DECREASE IN PRESSURE
1100		1			"
1110		.5			"
1120		"			" - STILL BUBBLE IN BUCKET
1130					CLOSED TOOL
1330					PULLED LOOSE - PULLED OUT OF
					HOLE.
					LAID DOWN TOOLS

TICKET NO: 92285900
CLOCK NO: 16710 HOUR: 24
HALLIBURTON SERVICES
GAUGE NO: 991
DEPTH: 10263.0

REF		MINUTES	PRESSURE	ΔP	$\frac{t\times\Delta t}{t+\Delta t}$	$\log\frac{t+\Delta t}{\Delta t}$
FIRST FLOW						
B	1	0.0	65.1			
	2	4.0	76.4	11.3		
	3	8.0	82.7	6.3		
	4	12.0	87.0	4.3		
	5	16.0	91.6	4.5		
	6	20.0	95.7	4.1		
C	7	22.6	103.0	7.4		
FIRST CLOSED-IN						
C	1	0.0	103.0			
	2	4.0	291.0	187.9	3.4	0.821
	3	8.0	461.8	358.7	5.9	0.584
	4	12.0	651.4	548.4	7.8	0.461
	5	16.0	860.1	757.1	9.4	0.383
	6	20.0	1100.2	997.2	10.6	0.329
	7	24.0	1352.0	1248.9	11.6	0.288
	8	28.0	1608.0	1505.0	12.5	0.257
	9	32.0	1875.2	1772.2	13.2	0.232
	10	36.0	2121.5	2018.5	13.9	0.212
	11	40.0	2321.7	2218.7	14.4	0.195
	12	44.0	2480.7	2377.7	14.9	0.180
	13	48.0	2606.1	2503.1	15.4	0.168
	14	52.0	2704.4	2601.4	15.8	0.157
	15	56.0	2788.3	2685.3	16.1	0.147
D	16	60.7	2866.2	2763.1	16.5	0.137
SECOND FLOW						
E	1	0.0	113.4			
	2	10.0	130.8	17.3		
	3	20.0	135.7	5.0		
	4	30.0	137.9	2.2		
	5	40.0	142.9	5.0		
	6	50.0	152.2	9.3		
F	7	58.7	160.2	8.0		
SECOND CLOSED-IN						
F	1	0.0	160.2			
	2	8.0	807.2	647.0	7.3	1.046
	3	16.0	1439.1	1278.9	13.4	0.783
	4	24.0	1970.6	1810.4	18.5	0.643
	5	32.0	2297.1	2136.9	23.0	0.549
	6	40.0	2495.7	2335.5	26.8	0.482
	7	48.0	2639.2	2479.0	30.2	0.430
	8	56.0	2739.0	2578.8	33.2	0.389
	9	64.0	2820.8	2660.5	35.8	0.356
	10	72.0	2881.6	2721.4	38.2	0.328
SECOND CLOSED-IN - CONTINUED						
	11	80.0	2937.1	2776.9	40.3	0.305
	12	88.0	2980.8	2820.6	42.3	0.284
	13	96.0	3017.6	2857.4	44.0	0.267
	14	104.0	3051.8	2891.6	45.6	0.251
	15	112.0	3081.0	2920.8	47.1	0.237
G	16	120.6	3105.1	2944.9	48.6	0.224

REMARKS:

TICKET NO: 92285900
CLOCK NO: 13428 HOUR: 24
HALLIBURTON SERVICES
GAUGE NO: 693
DEPTH: 10334.0

REF		MINUTES	PRESSURE	ΔP	$\frac{t\times\Delta t}{t+\Delta t}$	$\log\frac{t+\Delta t}{\Delta t}$
FIRST FLOW						
B	1	0.0	95.9			
	2	4.0	94.4	-1.5		
	3	8.0	100.9	6.5		
	4	12.0	106.1	5.2		
	5	16.0	112.2	6.1		
	6	20.0	116.1	3.9		
C	7	22.6	119.3	3.2		
FIRST CLOSED-IN						
C	1	0.0	119.3			
	2	4.0	257.3	138.0	3.4	0.825
	3	8.0	417.2	297.9	5.9	0.582
	4	12.0	603.6	484.3	7.8	0.460
	5	16.0	823.4	704.1	9.4	0.383
	6	20.0	1069.7	950.4	10.6	0.328
	7	24.0	1346.0	1226.7	11.6	0.288
	8	28.0	1635.3	1515.9	12.5	0.257
	9	32.0	1878.6	1759.3	13.2	0.232
	10	36.0	2121.5	2002.2	13.9	0.212
	11	40.0	2326.5	2207.2	14.4	0.194
	12	44.0	2486.1	2366.8	14.9	0.180
	13	48.0	2616.7	2497.3	15.4	0.168
	14	52.0	2715.2	2595.8	15.8	0.157
	15	56.0	2803.3	2684.0	16.1	0.147
D	16	60.7	2880.3	2761.0	16.5	0.137
SECOND FLOW						
E	1	0.0	128.4			
	2	10.0	151.2	22.8		
	3	20.0	159.9	8.7		
	4	30.0	162.5	2.6		
	5	40.0	167.7	5.2		
	6	50.0	178.6	10.8		
F	7	58.7	185.7	7.2		
SECOND CLOSED-IN						
F	1	0.0	185.7			
	2	8.0	710.2	524.5	7.3	1.049
	3	16.0	1334.6	1148.9	13.3	0.785
	4	24.0	1927.0	1741.3	18.5	0.642
	5	32.0	2281.9	2096.2	23.0	0.549
	6	40.0	2492.6	2306.9	26.8	0.482
	7	48.0	2643.7	2458.0	30.2	0.430
	8	56.0	2753.5	2567.8	33.2	0.389
	9	64.0	2836.8	2651.1	35.8	0.356
	10	72.0	2900.7	2715.0	38.2	0.328
SECOND CLOSED-IN - CONTINUED						
	11	80.0	2957.4	2771.7	40.3	0.305
	12	88.0	3004.0	2818.3	42.2	0.284
	13	96.0	3043.4	2857.6	44.0	0.267
	14	104.0	3076.4	2890.7	45.6	0.251
	15	112.0	3104.7	2919.0	47.1	0.237
G	16	120.6	3131.6	2945.9	48.6	0.224

REMARKS:

TICKET NO. 92285900

		O.D.	I.D.	LENGTH	DEPTH
1	DRILL PIPE	4.500	3.826	9698.0	
3	DRILL COLLARS	6.250	2.250	520.0	
50	IMPACT REVERSING SUB	5.750	3.000	1.0	10219.0
3	DRILL COLLARS	6.250	2.250	30.0	
5	CROSSOVER	5.750	3.000	1.0	
13	DUAL CIP SAMPLER	5.000	0.750	7.0	
60	HYDROSPRING TESTER	5.000	0.750	5.0	10261.0
80	AP RUNNING CASE	5.000	2.250	4.0	10263.0
15	JAR	5.000	1.750	5.0	
16	VR SAFETY JOINT	5.000	1.000	3.0	
17	PRESSURE EQUALIZING CROSSOVER	5.750	1.000	1.0	
70	OPEN HOLE PACKER	7.000	1.530	6.0	10278.0
70	OPEN HOLE PACKER	7.000	1.530	6.0	10284.0
20	FLUSH JOINT ANCHOR	5.750	2.870	38.0	
5	CROSSOVER	5.750	2.250	1.0	
20	FLUSH JOINT ANCHOR	4.750	2.370	5.0	
17	PRESSURE EQUALIZING CROSSOVER	5.750	1.000	1.0	
81	BLANKED-OFF RUNNING CASE	5.000	3.000	4.0	10334.0
5	CROSSOVER	5.750	3.000	1.0	
5	CROSSOVER	5.750	3.000	1.0	
70	OPEN HOLE PACKER	7.000	1.530	6.0	10340.0
70	OPEN HOLE PACKER	7.000	1.530	6.0	10346.0
19	ANCHOR PIPE SAFETY JOINT	5.750	1.500	5.0	
5	CROSSOVER	5.750	3.500	1.0	
3	DRILL COLLARS	6.250	2.250	93.0	
97	BIT	7.875		1.0	10449.0
	TOTAL DEPTH				10450.0

EQUIPMENT DATA