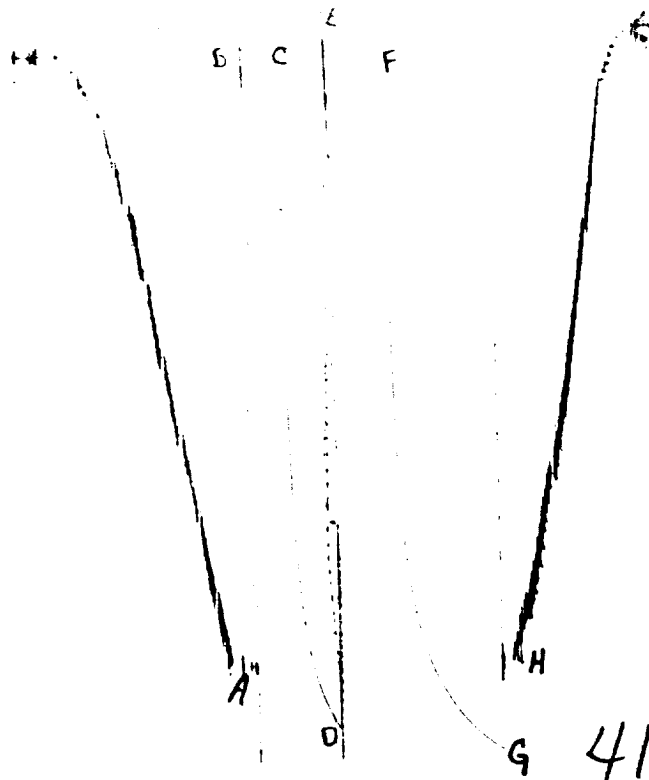


TICKET NO. 41793500
13-JUL-83
HOBBS

FORMATION TESTING SERVICE REPORT

STATION	20-14S-33E	FIELD AREA	SHUNDERS	COUNTY	LER	STATE NEW MEXICO	BC
DATE	7/13/83	TIME	10:00	TESTER	JOHN D. HOBBS	TESTER	JOHN D. HOBBS
TEST NO.	7505	TEST NO.	7506	TEST NO.	7507	TEST NO.	7508
TEST NO.	7509	TEST NO.	7510	TEST NO.	7511	TEST NO.	7512
TEST NO.	7513	TEST NO.	7514	TEST NO.	7515	TEST NO.	7516
TEST NO.	7517	TEST NO.	7518	TEST NO.	7519	TEST NO.	7520
TEST NO.	7521	TEST NO.	7522	TEST NO.	7523	TEST NO.	7524
TEST NO.	7525	TEST NO.	7526	TEST NO.	7527	TEST NO.	7528
TEST NO.	7529	TEST NO.	7530	TEST NO.	7531	TEST NO.	7532
TEST NO.	7533	TEST NO.	7534	TEST NO.	7535	TEST NO.	7536
TEST NO.	7537	TEST NO.	7538	TEST NO.	7539	TEST NO.	7540
TEST NO.	7541	TEST NO.	7542	TEST NO.	7543	TEST NO.	7544
TEST NO.	7545	TEST NO.	7546	TEST NO.	7547	TEST NO.	7548
TEST NO.	7549	TEST NO.	7550	TEST NO.	7551	TEST NO.	7552
TEST NO.	7553	TEST NO.	7554	TEST NO.	7555	TEST NO.	7556
TEST NO.	7557	TEST NO.	7558	TEST NO.	7559	TEST NO.	7560
TEST NO.	7561	TEST NO.	7562	TEST NO.	7563	TEST NO.	7564
TEST NO.	7565	TEST NO.	7566	TEST NO.	7567	TEST NO.	7568
TEST NO.	7569	TEST NO.	7570	TEST NO.	7571	TEST NO.	7572
TEST NO.	7573	TEST NO.	7574	TEST NO.	7575	TEST NO.	7576
TEST NO.	7577	TEST NO.	7578	TEST NO.	7579	TEST NO.	7580
TEST NO.	7581	TEST NO.	7582	TEST NO.	7583	TEST NO.	7584
TEST NO.	7585	TEST NO.	7586	TEST NO.	7587	TEST NO.	7588
TEST NO.	7589	TEST NO.	7590	TEST NO.	7591	TEST NO.	7592
TEST NO.	7593	TEST NO.	7594	TEST NO.	7595	TEST NO.	7596
TEST NO.	7597	TEST NO.	7598	TEST NO.	7599	TEST NO.	7600



417935-731

GAUGE NO: 731 DEPTH: 7488.0 BLANKED OFF: NO HOUR OF CLOCK: 00

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	3255	3261.5			
B	INITIAL FIRST FLOW	28	15.0	30.0	29.6	F
C	FINAL FIRST FLOW	42	36.4			
C	INITIAL FIRST CLOSED-IN	42	36.4	60.0	60.0	C
D	FINAL FIRST CLOSED-IN	3582	3608.5			
E	INITIAL SECOND FLOW	57	44.3	60.0	58.8	F
F	FINAL SECOND FLOW	71	79.3			
F	INITIAL SECOND CLOSED-IN	71	79.3	120.0	121.6	C
G	FINAL SECOND CLOSED-IN	3724	3743.5			
H	FINAL HYDROSTATIC	3255	3268.3			



GAUGE NO: 255 DEPTH: 7532.0 BLANKED OFF: YES HOUR OF CLOCK: 24

ID	DESCRIPTION	PRESSURE		TIME		TYPE
		REPORTED	CALCULATED	REPORTED	CALCULATED	
A	INITIAL HYDROSTATIC	3283	3274.9			
B	INITIAL FIRST FLOW	28	33.5	30.0	29.6	F
C	FINAL FIRST FLOW	42	52.1			
C	INITIAL FIRST CLOSED-IN	42	52.1	60.0	60.0	C
D	FINAL FIRST CLOSED-IN	3594	3623.2			
E	INITIAL SECOND FLOW	56	58.5	60.0	58.8	F
F	FINAL SECOND FLOW	85	90.8			
F	INITIAL SECOND CLOSED-IN	85	90.8	120.0	121.6	C
G	FINAL SECOND CLOSED-IN	3735	3755.6			
H	FINAL HYDROSTATIC	3283	3278.5			

EQUIPMENT & HOLE DATA

FORMATION TESTED: ABO
 NET PAY (ft): _____
 GROSS TESTED FOOTAGE: 31.0
 ALL DEPTHS MEASURED FROM: KB
 CASING PERFS. (ft): _____
 HOLE OR CASING SIZE (in): 7.875
 ELEVATION (ft): 4231
 TOTAL DEPTH (ft): 7536.0
 PACKER DEPTH(S) (ft): 7500, 7505
 FINAL SURFACE CHOKE (in): _____
 BOTTOM HOLE CHOKE (in): 0.750
 MUD WEIGHT (lb/gal): 8.40
 MUD VISCOSITY (sec): 29
 ESTIMATED HOLE TEMP. (°F): 95
 ACTUAL HOLE TEMP. (°F): @ _____ ft

TICKET NUMBER: 41793500

DATE: 7-9-83 TEST NO: 1

TYPE DST: OPEN HOLE

HALLIBURTON CAMP:
HOBBS

TESTER: GOMEZ

WITNESS: BARNES

DRILLING CONTRACTOR:
STERLING DRILLING COMPANY #21

FLUID PROPERTIES FOR RECOVERED MUD & WATER

SOURCE	RESISTIVITY	CHLORIDES
_____	_____ @ _____ °F	_____ ppm
_____	_____ @ _____ °F	_____ ppm
_____	_____ @ _____ °F	_____ ppm
_____	_____ @ _____ °F	_____ ppm
_____	_____ @ _____ °F	_____ ppm
_____	_____ @ _____ °F	_____ ppm

SAMPLER DATA

Pstg AT SURFACE: 10
 cu.ft. OF GAS: 0.00
 cc OF OIL: 0
 cc OF WATER: 2400
 cc OF MUD: 0
 TOTAL LIQUID cc: 2400

HYDROCARBON PROPERTIES

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

CUSHION DATA

TYPE	AMOUNT	WEIGHT
_____	_____	_____
_____	_____	_____

RECOVERED:

180' OF DRILLING FLUID MIXED WITH FORMATION WATER

MEASURED FROM
TESTED

REMARKS:

ELEVATION REPORTED IS AT GROUND LEVEL.

TYPE & SIZE MEASURING DEVICE:

POSITIVE CHOKE

TICKET NO: 4175760

[illegible]

TICKET NO: 41793500

CLOCK NO: 2314 HOUR: 24


 HALLIBURTON
SERVICES

GAUGE NO: 731

DEPTH: 7488.0

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$	REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$	
FIRST FLOW						SECOND CLOSED-IN - CONTINUED						
B	1	0.0	15.0			11	80.0	3569.6	3490.3	42.0	0.30	
	2	5.0	19.4	4.4		12	88.0	3612.2	3532.9	44.1	0.30	
	3	10.0	23.7	4.3		13	96.0	3650.0	3570.7	46.0	0.29	
	4	15.0	27.3	3.6		14	104.0	3682.4	3603.1	47.8	0.29	
	5	20.0	30.6	3.3		15	112.0	3711.6	3632.4	49.4	0.29	
	6	25.0	34.1	3.6		16	120.0	3738.5	3659.2	50.9	0.29	
C	7	29.6	36.4	2.3		G	17	121.6	3743.5	3664.2	51.2	0.29
FIRST CLOSED-IN												
C	1	0.0	36.4									
	2	4.0	259.1	222.7	3.5	0.924						
	3	8.0	1543.5	1507.1	6.3	0.673						
	4	12.0	2345.8	2309.3	8.5	0.540						
	5	16.0	2717.6	2681.1	10.4	0.454						
	6	20.0	2929.2	2892.8	11.9	0.394						
	7	24.0	3078.3	3041.8	13.3	0.348						
	8	28.0	3192.8	3156.3	14.4	0.313						
	9	32.0	3279.8	3243.4	15.4	0.284						
	10	36.0	3352.0	3315.6	16.2	0.261						
	11	40.0	3408.4	3372.0	17.0	0.240						
	12	44.0	3455.5	3419.1	17.7	0.223						
	13	48.0	3501.1	3464.7	18.3	0.208						
	14	52.0	3540.5	3504.1	18.9	0.195						
	15	56.0	3575.4	3539.0	19.3	0.184						
D	16	60.0	3608.5	3572.1	19.8	0.174						
SECOND FLOW												
E	1	0.0	44.3									
	2	10.0	49.1	4.9								
	3	20.0	55.9	6.7								
	4	30.0	61.6	5.7								
	5	40.0	67.3	5.7								
	6	50.0	73.7	6.4								
F	7	58.8	79.3	5.6								
SECOND CLOSED-IN												
F	1	0.0	79.3									
	2	8.0	2079.8	2000.5	7.4	1.079						
	3	16.0	2667.7	2588.4	13.5	0.815						
	4	24.0	2939.7	2860.4	18.9	0.670						
	5	32.0	3109.5	3030.2	23.5	0.575						
	6	40.0	3235.4	3156.1	27.5	0.507						
	7	48.0	3330.1	3250.8	31.1	0.453						
	8	56.0	3400.6	3321.3	34.3	0.411						
	9	64.0	3467.0	3387.8	37.1	0.376						
	10	72.0	3522.9	3443.6	39.7	0.348						

REMARKS:

TICKET NO: 41793500

CLOCK NO: 6115 HOUR: 24



 HALLIBURTON

 SERVICES

GAUGE NO: 255

DEPTH: 7532.0

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	33.5			
2	5.0	35.9	2.4		
3	10.0	39.5	3.6		
4	15.0	42.9	3.4		
5	20.0	45.7	2.8		
6	25.0	49.6	3.8		
C 7	29.6	52.1	2.6		
FIRST CLOSED-IN					
C 1	0.0	52.1			
2	4.0	380.8	328.7	3.5	0.927
3	8.0	1678.7	1626.6	6.3	0.672
4	12.0	2357.2	2305.0	8.5	0.541
5	16.0	2713.1	2661.0	10.4	0.454
6	20.0	2932.5	2880.4	11.9	0.395
7	24.0	3082.3	3030.2	13.2	0.349
8	28.0	3201.6	3149.4	14.4	0.313
9	32.0	3293.4	3241.2	15.4	0.284
10	36.0	3364.3	3312.1	16.2	0.260
11	40.0	3423.3	3371.2	17.0	0.240
12	44.0	3473.4	3421.3	17.7	0.223
13	48.0	3519.4	3467.2	18.3	0.208
14	52.0	3557.5	3505.4	18.8	0.196
15	56.0	3592.2	3540.1	19.3	0.184
D 16	60.0	3623.2	3571.0	19.8	0.174
SECOND FLOW					
E 1	0.0	58.5			
2	10.0	62.9	4.4		
3	20.0	69.7	6.8		
4	30.0	75.4	5.7		
5	40.0	81.1	5.7		
6	50.0	86.4	5.3		
F 7	58.8	90.8	4.4		
SECOND CLOSED-IN					
F 1	0.0	90.8			
2	8.0	2067.1	1976.4	7.4	1.078
3	16.0	2667.3	2576.6	13.6	0.814
4	24.0	2946.1	2855.3	18.8	0.671
5	32.0	3124.4	3033.7	23.5	0.575
6	40.0	3248.2	3157.4	27.5	0.506
7	48.0	3338.7	3247.9	31.1	0.453
8	56.0	3412.9	3322.1	34.3	0.411
9	64.0	3474.7	3384.0	37.1	0.377
10	72.0	3535.7	3445.0	39.7	0.348

REF	MINUTES	PRESSURE	ΔP	$\frac{t \times \Delta t}{t + \Delta t}$	$\log \frac{t + \Delta t}{\Delta t}$
SECOND CLOSED-IN - CONTINUED					
11	80.0	3582.1	3491.3	42.0	0.323
12	88.0	3623.2	3532.4	44.1	0.302
13	96.0	3660.5	3569.7	46.0	0.283
14	104.0	3694.8	3604.0	47.8	0.267
15	112.0	3725.4	3634.7	49.4	0.253
16	120.0	3751.0	3660.2	50.9	0.240
G 17	121.6	3755.6	3664.9	51.2	0.237

REMARKS:

HALLIBURTON DIVISION LABORATORY

HALLIBURTON SERVICES
MIDLAND DIVISION
HOBBS, NEW MEXICO 88240

LABORATORY WATER ANALYSIS

No. W83-812

To Pogo Production CompanyDate 7-11-83

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Box 10340Midland, TexasATTN: Mr. Bill WilliamsSubmitted by _____ Date Rec. 7-11-83Well No. _____ State WES #1 Depth 7536' Formation NDCounty _____ Lea _____ Field Saunders Source DST #1

	<u>Sampler</u>	<u>Tool Top</u>	<u>Top of Fluid</u>
Resistivity	<u>0.062 @ 74°F.</u>	<u>0.062 @ 74°F.</u>	<u>0.082 @ 74°F.</u>
Specific Gravity	<u>1.126</u>		
pH	<u>6.9</u>		
Calcium (Ca)	<u>10,200</u>		<u>*MPL</u>
Magnesium (Mg)	<u>2,520</u>		
Chlorides (Cl)	<u>114,000</u>	<u>113,000</u>	<u>69,000</u>
Sulfates (SO ₄)	<u>1,900</u>		
Bicarbonates (HCO ₃)	<u>255</u>		
Soluble Iron (Fe)	<u>Nil</u>		
<u>Pit Sample - Res. @ 74°F. - 0.439 Chlorides, mpl - 7,000</u>			

Remarks:

*Milligrams per liter

Respectfully submitted,

Analyst: Brewer

HALLIBURTON COMPANY

By

W. L. Brewer
CHEMIST

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