FLUID SAMPLE DATA

Sampler Pressure _____ P.S.I.G. at Surface
Recovery: Cu. Ft. Gas _____
cc. Oil _____
cc. Water _____
cc. Mud _____
Tot. Liquid cc. _____
Gravity 38 ° API @ 60 °F.
Gas/Oil Ratio _____ cu. ft./bbl.

	RESISTIVITY		CHLORIDE CONTENT
Recovery Water	_____ @ _____ °F.		_____ ppm
Recovery Mud	_____ @ _____ °F.		
Recovery Mud Filtrate	_____ @ _____ °F.		_____ ppm
Mud Pit Sample	_____ @ _____ °F.		
Mud Pit Sample Filtrate	10 @ _____ °F.		_____ ppm
Mud Weight	9.7	vis 43	cp

Date 8-23-71 Ticket Number 503199
Kind of Job OPEN HOLE Halliburton District GREAT BEND
Tester C. L. NUTTING Witness -
Drilling Contractor GARVEY DRILLING COMPANY # 12 sm S

EQUIPMENT & HOLE DATA

Formation Tested Mississippi
Elevation 2427' DF Ft.
Net Productive Interval 8' Ft.
All Depths Measured From Derrick floor
Total Depth 4545' Ft.
Main Hole/Casing Size 7 7/8"
Drill Collar Length - I.D. -
Drill Pipe Length 4517' I.D. 3.826"
Packer Depth(s) 4537' Ft.
Depth Tester Valve 4525' Ft.

Cushion TYPE AMOUNT Ft. Depth Back Pres. Valve Surface Choke 1" Bottom Choke 3/4"

Mea. From Tester Valve

Recovered 360 Feet of gas
Recovered 170 Feet of clean gassy oil - 38 gravity @ 60°
Recovered 180 Feet of slightly muddy oil
Recovered Feet of
Recovered Feet of

Remarks Tool opened for 29 minute first flow with a weak blow increasing to strong in 19 minutes. Closed tool for 32 minute first closed in pressure. Tool reopened for 29 minute second flow with strong blow. Closed for 30 minute second closed in pressure. Off bottom at 11:28.

TEMPERATURE	Gauge No. 1717 Depth: 4534 Ft.	Gauge No. 1715 Depth: 4541 Ft.	Gauge No. Depth: Ft.	TIME
	12 Hour Clock	12 Hour Clock	Hour Clock	Tool Opened 9:28 A.M. P.M.
Est. °F.	Blanked Off no	Blanked Off yes	Blanked Off	
4540' Actual 123 °F.	Pressures	Pressures	Pressures	Tool Closed A.M. P.M.

	Field	Office	Field	Office	Field	Office	Reported Minutes	Computed Minutes
Initial Hydrostatic	-	2314	2390	2320				
First Period Flow Initial	-	14	17	20			—	—
First Period Flow Final	-	78	76	82			30	29
First Period Closed in	-	1277	1274	1279			30	32
Second Period Flow Initial	-	89	76	97			—	—
Second Period Flow Final	-	140	136	144			30	29
Second Period Closed in	-	1241	1249	1245			30	30
Third Period Flow Initial							—	—
Third Period Flow Final								
Third Period Closed in								
Final Hydrostatic	-	2309	2390	2317			—	—

Legal Location Sec. - Twp. - Rng. 5 22 24 W
Lease Name BOGER
Well No. 2
Test No. 1
Field Area WILDCAT
Tested Interval 4537-4545'
County HODGEMAN
State KANSAS
Lease Owner/Company Name PETROLEUM INCORPORATED

Gauge No.	1717	Depth	4534'	Clock No.	??	12 hour	Ticket No.	503199	

	First Flow Period		First Closed In Pressure			Second Flow Period		Second Closed In Pressure			Third Flow Period		Third Closed In Pressure		
	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.
0	.000	14	.000		78	.000	89	.000		140					
1	.0338	29	.0271		1060	.0336	92	.0212		1004					
2	.0676	40	.0542		1145	.0672	102	.0424		1086					
3	.1014	52	.0813		1189	.1008	112	.0636		1132					
4	.1352	61	.1084		1217	.1344	122	.0848		1161					
5	.1690	70	.1355		1237	.1680	131	.1060		1182					
6	.1960*	78	.1626		1252	.1950**	140	.1272		1199					
7			.1897		1264			.1484		1212					
8			.2170		1277			.1696		1224					
9								.1908		1234					
10								.2120		1241					
11															
12															
13															
14															
15															

Gauge No.	1715	Depth	4541'	Clock No.	??	12 hour					
0	.000	20	.000		82	.000	97	.000		144					
1	.0331	33	.027		1049	.0336	97	.0198		1012					
2	.0662	45	.054		1144	.0672	110	.0396		1111					
3	.0993	55	.081		1191	.1008	120	.0594		1145					
4	.1324	64	.108		1220	.1344	131	.0792		1170					
5	.1655	75	.135		1242	.1680	142	.0990		1190					
6	.1920*	82	.162		1257	.1950**	144	.1188		1203					
7			.189		1273			.1386		1216					
8			.216		1279			.1584		1225					
9								.1782		1234					
10								.1980		1245					
11															
12															
13															
14															
15															
Reading Interval	5		4			5		3							Minutes

REMARKS: *Last interval is equal to 4 minutes . **Last = 4 minutes.

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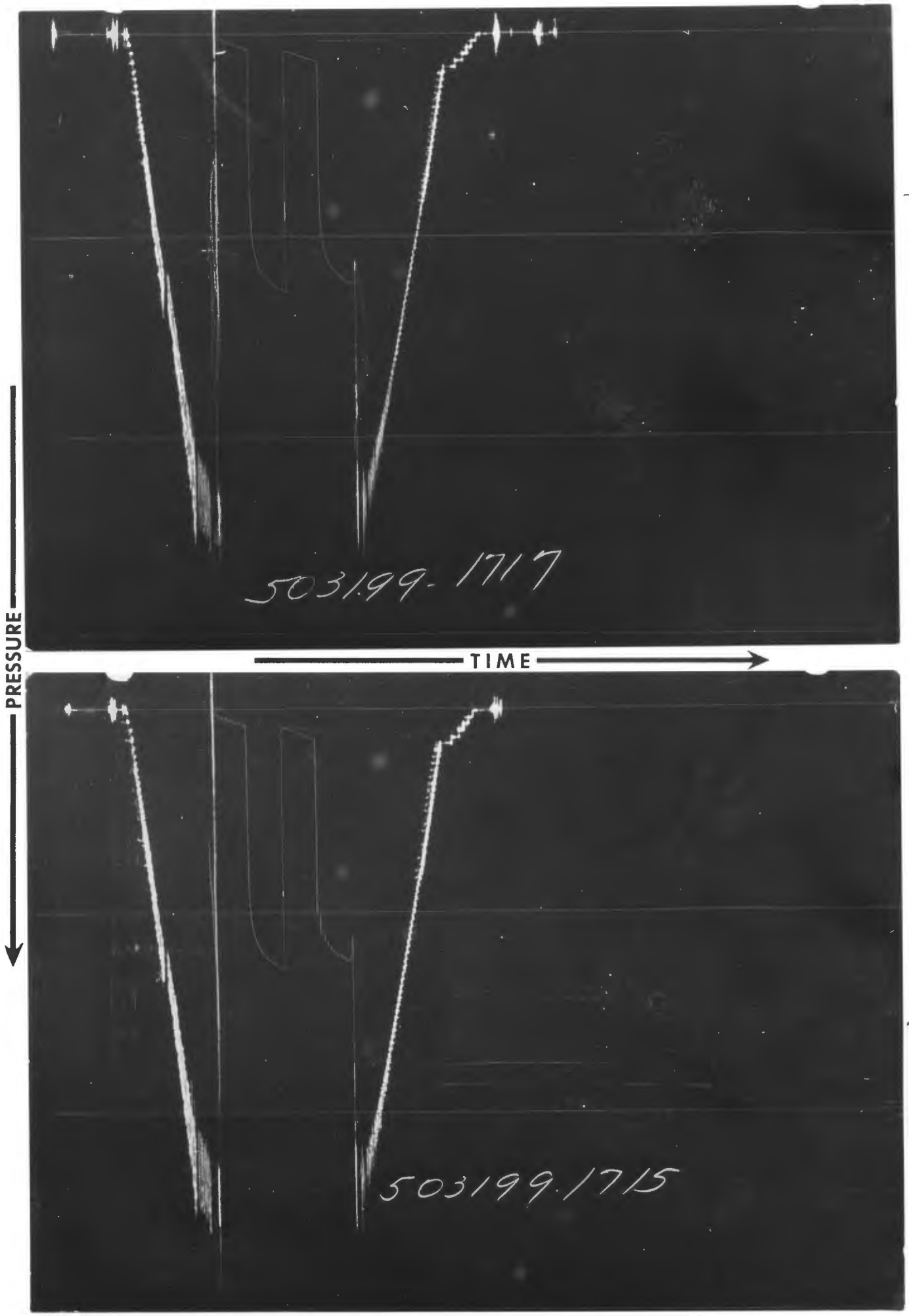
SPECIAL PRESSURE DATA

LITTLE'S

503199

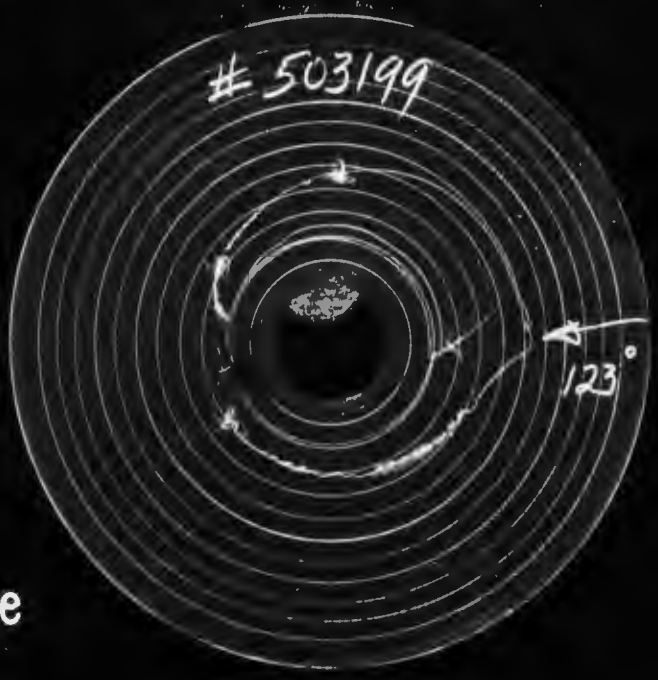


	O. D.	I. D.	LENGTH	DEPTH
Reversing Sub	5.75"	2.75"	1'	
Water Cushion Valve				
Drill Pipe	4.5"	3.826"	4517'	
Drill Collars				
Handling Sub & Choke Assembly				
Dual CIP Valve	5"	.87"	5'	
Dual CIP Sampler				
Hydro-Spring Tester	5"	.75"	5'	4525'
Multiple CIP Sampler				
Extension Joint				
AP Running Case	5"	3.06"	4'	4534'
Hydraulic Jar				
VR Safety Joint				
Pressure Equalizing Crossover				
Packer Assembly	6.75"	1.53"	5'	4537'
Distributor				
Packer Assembly				
Flush Joint Anchor	5"	2.37"	8'	
Pressure Equalizing Tube				
Blanked-Off B.T. Running Case	5"	3.06"	4'	4541'
Drill Collars				
Anchor Pipe Safety Joint				
Packer Assembly				
Packer Assembly				
Anchor Pipe Safety Joint				
Side Wall Anchor				
Drill Collars				
Flush Joint Anchor				
Blanked-Off B.T. Running Case				



Each Horizontal Line Equal to 1000 p.s.i.

TEMPERATURE
RECORDER
CHART



10° each circle

FLUID SAMPLE DATA

Sampler Pressure _____ P.S.I.G. at Surface
Recovery: Cu. Ft. Gas _____
cc. Oil _____
cc. Water _____
cc. Mud _____
Tot. Liquid cc. _____
Gravity 38 ° API @ 60 °F.
Gas/Oil Ratio _____ cu. ft./bbl.

	RESISTIVITY	CHLORIDE CONTENT
Recovery Water	_____ @ _____ °F.	_____ ppm
Recovery Mud	_____ @ _____ °F.	
Recovery Mud Filtrate	_____ @ _____ °F.	_____ ppm
Mud Pit Sample	_____ @ _____ °F.	
Mud Pit Sample Filtrate	10 @ _____ °F.	_____ ppm
Mud Weight	9.7 vis 53 cp	

Date 8-23-71 Ticket Number 503200
Kind of Job OPEN HOLE Halliburton District GREAT BEND
Tester C. L. NUTTING Witness -
Drilling Contractor GARVEY DRILLING COMPANY # 12 sm S

EQUIPMENT & HOLE DATA

Formation Tested Mississippi
Elevation 2427' DF Ft.
Net Productive Interval 16' Ft.
All Depths Measured From Derrick floor
Total Depth 4562' Ft.
Main Hole/Casing Size 7 7/8"
Drill Collar Length - I.D. -
Drill Pipe Length 4526' I.D. 3.826"
Packer Depth(s) 4546' Ft.
Depth Tester Valve 4534' Ft.

Cushion TYPE AMOUNT Ft. Depth Back Pres. Valve Surface Choke 1" Bottom Choke 3/4"

Recovered 300 Feet of gas
Recovered 250 Feet of clean oil
Recovered 180 Feet of slightly muddy oil
Recovered Feet of
Recovered Feet of

Meas. From Tester Valve

Remarks Tool opened for 29 minute first flow with strong blow. Closed tool for 32 minute first closed in pressure. Tool reopened for 30 minute second flow with a strong blow. Closed tool for 29 minute second closed in pressure.

TEMPERATURE	Gauge No. 1717	Gauge No. 1715	Gauge No.	TIME
	Depth: 4543 Ft.	Depth: 4558 Ft.	Depth: Ft.	
	12 Hour Clock	12 Hour Clock	Hour Clock	Tool ~~A.M.~~
Est. °F.	Blanked Off no	Blanked Off yes	Blanked Off	Opened 10:08 P.M.
4557'				Tool A.M.
Actual 114 °F.	Pressures	Pressures	Pressures	Closed 12:08 ~~P.M.~~

		Field	Office	Field	Office	Field	Office	Reported Minutes	Computed Minutes
Initial Hydrostatic		-	2317	2390	2331				
First Period	Flow Initial	-	15	26	33			———	———
	Flow Final	-	107	119	115			30	29
	Closed in	-	1239	1257	1250			30	32
Second Period	Flow Initial	-	121	119	134			———	———
	Flow Final	-	199	187	208			30	30
	Closed in	-	1194	1206	1201			30	29
Third Period	Flow Initial							———	———
	Flow Final								
	Closed in								
Final Hydrostatic		-	2315	2390	2285			———	———

Legal Location Sec. - Twp. - Rng. 5 22 24 W
Lease Name BOGER 'D'
Well No. 2
Test No. 2
Tested Interval 4546-4562'
Field Area WILDCAT
County HODGEMAN
State KANSAS
Lease Owner/Company Name PETROLEUM INCORPORATED

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FORMATION TEST DATA

LITTLE'S

Gauge No. 1717			Depth 4543'			Clock No. ??			12 hour	Ticket No. 503200				
	First Flow Period		First Closed In Pressure			Second Flow Period		Second Closed In Pressure			Third Flow Period		Third Closed In Pressure		
	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	Log $\frac{t+\theta}{\theta}$	PSIG Temp. Corr.
0	.000	15	.000		107	.000	121	.000		199					
1	.0333	35	.0265		984	.0333	133	.0206		946					
2	.0666	53	.0530		1078	.0666	145	.0412		1022					
3	.0999	67	.0795		1132	.0999	157	.0618		1068					
4	.1332	83	.1060		1166	.1332	172	.0824		1103					
5	.1665	97	.1325		1191	.1665	185	.1030		1126					
6	.1930*	107	.1590		1211	.2000	199	.1236		1146					
7			.1855		1226			.1442		1162					
8			.2120		1239			.1648		1177					
9								.1854		1188					
10								.1990**		1194					
11															
12															
13															
14															
15															

Gauge No. 1715				Depth 4558'			Clock No. ??		12 hour					
0	.000	33	.000		1[illegible]5	.000	134	.000		208				
1	.0334	45	.0265		998	.033	142	.0202		968				
2	.0668	62	.0530		1094	.066	154	.0404		1055				
3	.1002	77	.0795		1146	.099	168	.0606		1075				
4	.1336	92	.1060		1178	.132	182	.0808		1119				
5	.1670	106	.1325		1204	.165	194	.1010		1150				
6	.1940*	115	.1590		1222	.198	208	.1212		1153				
7			.1855		1238			.1414		1172				
8			.2120		1250			.1616		1187				
9								.1818		1200				
10								.1950**		1201				
11														
12														
13														
14														
15														
Reading Interval	5		4			5		3						Minutes

REMARKS: *Last interval is equal to 4 minutes. **Last = 2 minutes.

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SPECIAL PRESSURE DATA

LITTLE'S

503200

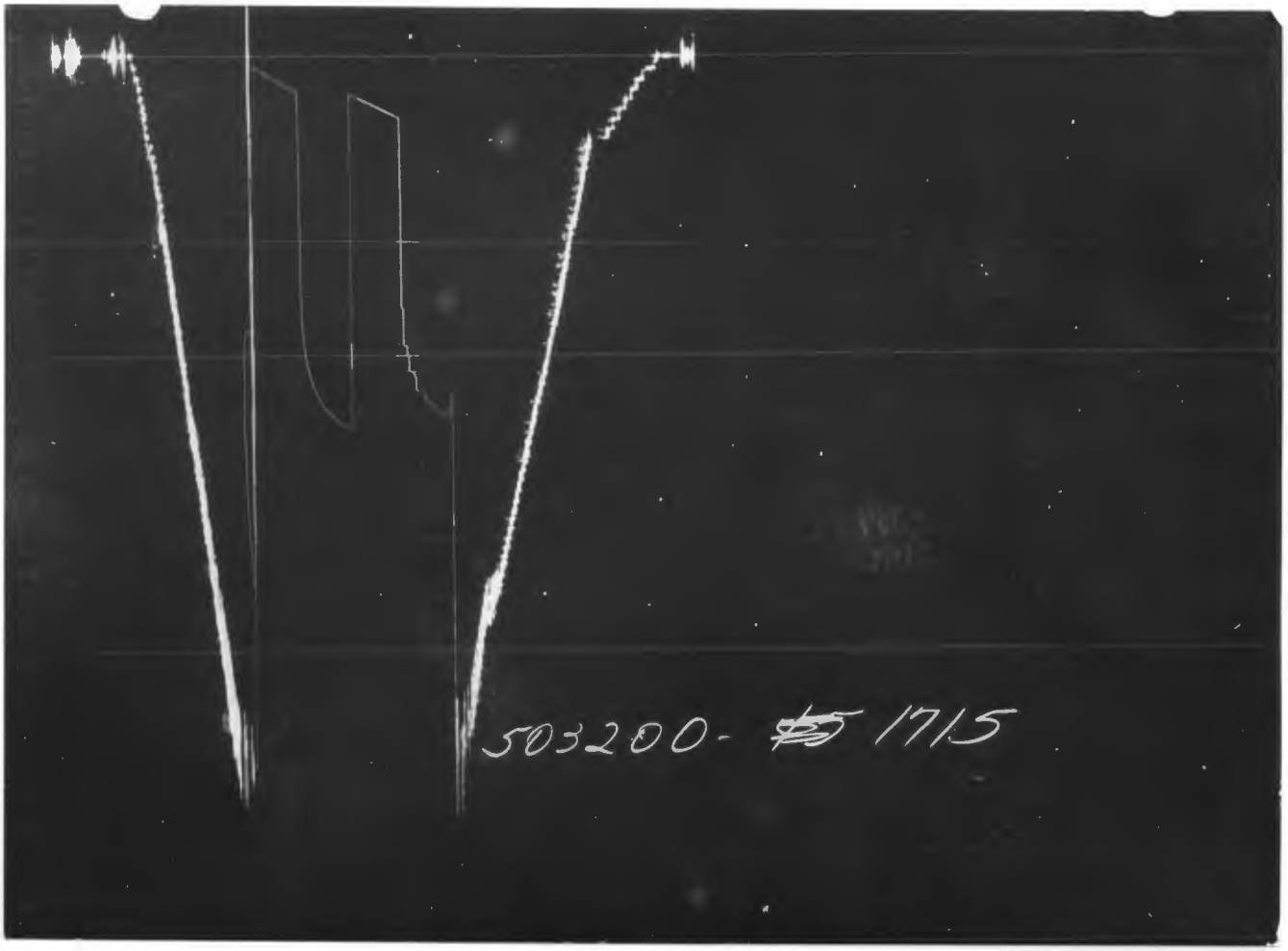


	O. D.	I. D.	LENGTH	DEPTH
Reversing Sub	5.75"	2.75"	1'	
Water Cushion Valve				
Drill Pipe	4½"	3.826"	4526'	
Drill Collars				
Handling Sub & Choke Assembly				
Dual CIP Valve	5"	.87"	5'	
Dual CIP Sampler				
Hydro-Spring Tester	5"	.75"	5'	4534'
Multiple CIP Sampler				
Extension Joint				
AP Running Case	5"	3.06"	4'	4543'
Hydraulic Jar				
VR Safety Joint				
Pressure Equalizing Crossover				
Packer Assembly	6.75"	1.53"	5'	4546'
Distributor				
Packer Assembly				
Flush Joint Anchor	5"	2.37"	16'	
Pressure Equalizing Tube				
Blanked-Off B.T. Running Case	5"	3.06"	4'	4558'
Drill Collars				
Anchor Pipe Safety Joint				
Packer Assembly				
Packer Assembly				
Anchor Pipe Safety Joint				
Side Wall Anchor				
Drill Collars				
Flush Joint Anchor				
Blanked-Off B.T. Running Case				



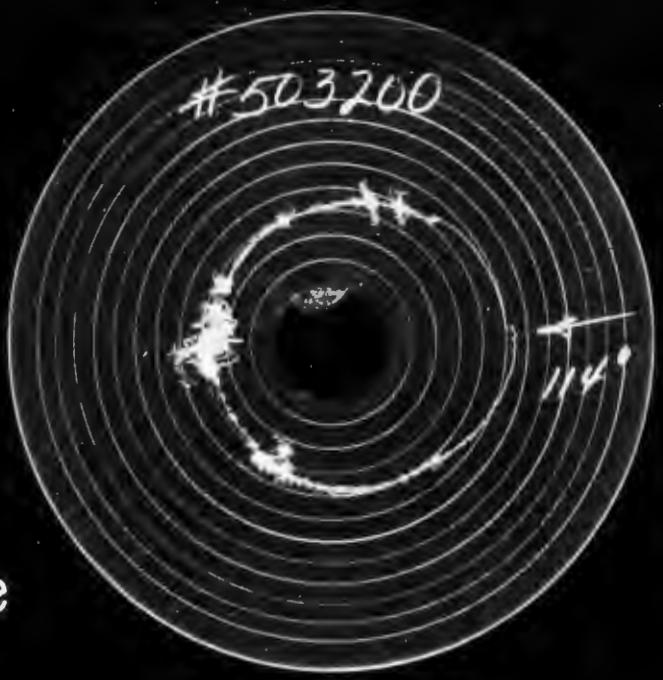
PRESSURE

TIME



Each Horizontal Line Equal to 1000 p.s.i.

TEMPERATURE
RECORDER
CHART



10° each circle

FLUID SAMPLE DATA

Sampler Pressure _____ P.S.I.G. at Surface
Recovery: Cu. Ft. Gas _____
cc. Oil _____
cc. Water _____
cc. Mud _____
Tot. Liquid cc. _____
Gravity _____ ° API @ _____ °F.
Gas/Oil Ratio _____ cu. ft./bbl.

	RESISTIVITY		CHLORIDE CONTENT
Recovery Water	____ @ ____ °F.		____ ppm
Recovery Mud	____ @ ____ °F.		
Recovery Mud Filtrate	____ @ ____ °F.		____ ppm
Mud Pit Sample	____ @ ____ °F.		
Mud Pit Sample Filtrate	10 @ ____ °F.		____ ppm
Mud Weight	9.7	vis 43	cp

Date 8-24-71 Ticket Number 497951
Kind of Job OPEN HOLE Halliburton District GREAT BEND
Tester MR. NUTTING Witness
Drilling Contractor GARVEY DRILLING COMPANY # 12 DR

EQUIPMENT & HOLE DATA

Formation Tested Mississippi
Elevation 2427' DF Ft.
Net Productive Interval 8' Ft.
All Depths Measured From Derrick Floor
Total Depth 4572' Ft.
Main Hole/Casing Size 7 7/8"
Drill Collar Length - I.D. -
Drill Pipe Length 4540' I.D. 3.286"
Packer Depth(s) 4564' Ft.
Depth Tester Valve 4552' Ft.

Cushion TYPE AMOUNT Ft. Depth Back Pres. Valve Surface Choke 1" Bottom Choke 3/4"

Recovered 2 Feet of mud
Recovered Feet of
Recovered Feet of
Recovered Feet of
Recovered Feet of

Meas. From Tester Valve

Remarks Opened tool for 30 minute first flow with a weak blow for 7 minutes. Closed tool for 30 minute first closed in pressure. Reopened tool for 30 minute second flow, dead. Closed tool for 30 minute second closed in pressure.

TEMPERATURE	Gauge No. 1717 Depth: 4561 Ft.	Gauge No. 1715 Depth: 4568 Ft.	Gauge No. Depth: Ft.	TIME
	12 Hour Clock	12 Hour Clock	Hour Clock	Tool Opened A.M. 11:56 ~~P.M.~~
Est. °F.	Blanked Off No	Blanked Off Yes	Blanked Off	
4567' Actual 111 °F.	Pressures	Pressures	Pressures	Tool Closed A.M. P.M.

		Field	Office	Field	Office	Field	Office	Reported Minutes	Computed Minutes
Initial Hydrostatic			2322	2477	2328				
First Period	Flow Initial		9	9	20			—	—
	Flow Final		9	17	20			30	
	Closed in		31	51	42			30	
Second Period	Flow Initial		9	17	25			—	—
	Flow Final		9	17	25			30	
	Closed in		24	34	35			30	
Third Period	Flow Initial							—	—
	Flow Final								
	Closed in								
Final Hydrostatic			2322	2477	2328			—	—

Legal Location Sec. - Twp. - Rng. 5-22-24W
Lease Name BOGER 'D'
Well No. 2
Test No. 3
Field Area WILDCAT
Tested Interval 4564'-4572'
County HODGEMAN
State KANSAS
Lease Owner/Company Name PETROLEUM, INCORPORATED

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FORMATION TEST DATA

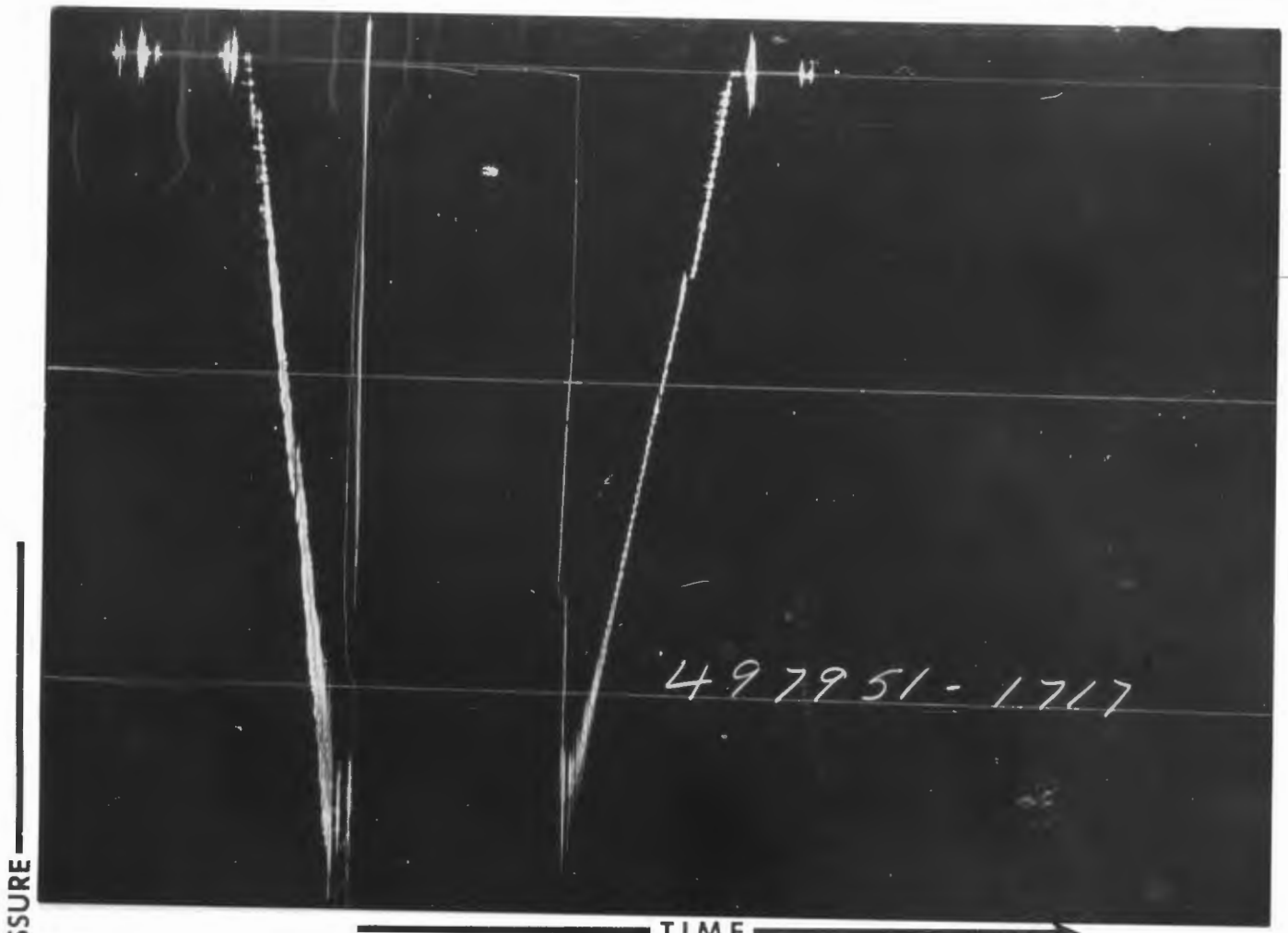
LITTLE'S

5

497951

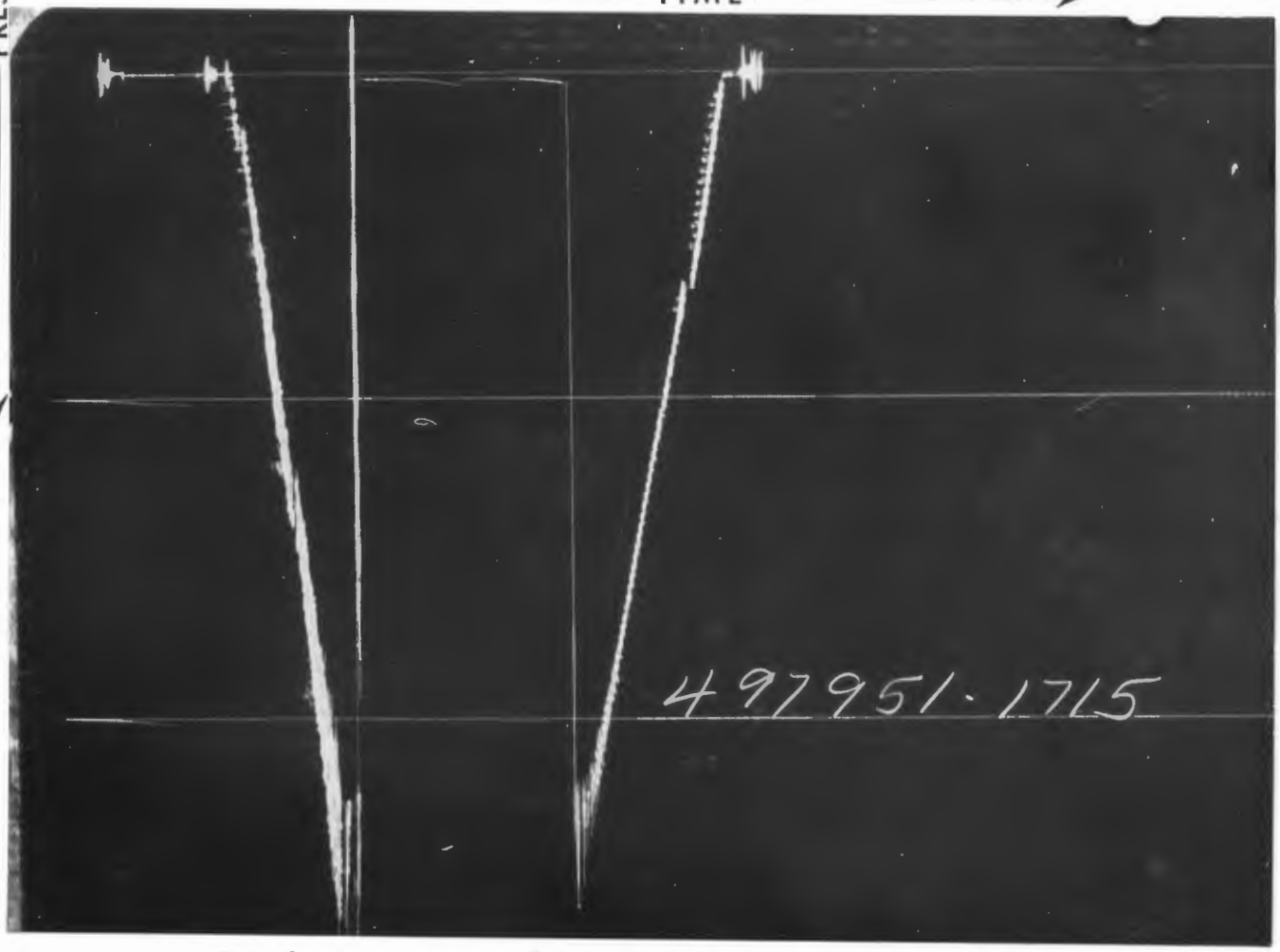


	O. D.	I. D.	LENGTH	DEPTH
Reversing Sub	5.75"	2.75"	1'	
Water Cushion Valve				
Drill Pipe	4.5"	3.826"	4540'	
Drill Collars				
Handling Sub & Choke Assembly				
Dual CIP Valve	5"	.87"	5'	
Dual CIP Sampler				
Hydro-Spring Tester	5"	.75"	5'	4552'
Multiple CIP Sampler				
Extension Joint				
AP Running Case	5"	3.06"	4'	4561'
Hydraulic Jar				
VR Safety Joint				
Pressure Equalizing Crossover				
Packer Assembly	6.75"	1.53"	5'	4564'
Distributor				
Packer Assembly				
Flush Joint Anchor	5"	2.37"	8'	
Pressure Equalizing Tube				
Blanked-Off B.T. Running Case	5"	3.06"	4'	4568'
Drill Collars				
Anchor Pipe Safety Joint				
Packer Assembly				
Packer Assembly				
Anchor Pipe Safety Joint				
Side Wall Anchor				
Drill Collars				
Flush Joint Anchor				
Blanked-Off B.T. Running Case				



PRESSURE

TIME



Each Horizontal Line Equal to 1000 p.s.i.

TEMPERATURE
RECORDER
CHART



10° each circle