

Legal Location Sec. - Twp. - Rng. **30 25S - 5E**
 Lease Name **MURRAY**
 Well No. **96**
 Test No. **1**
 Tested Interval **2042' - 2075'**
 County **BUTLER**
 State **KANSAS**
 Lease Owner/Company Name **CITIES SERVICE OIL COMPANY**

FLUID SAMPLE DATA		Date 6-28-71	Ticket Number 404829
Sampler Pressure _____ P.S.I.G. at Surface		Kind of Job OPEN HOLE	Halliburton District EL DORADO
Recovery: Cu. Ft. Gas _____		Tester MR. MACY	Witness MR. MILLER
cc. Oil _____		Drilling Contractor WHITE AND ELLIS DRILLING, INCORPORATED	
cc. Water _____		EQUIPMENT & HOLE DATA BC S	
cc. Mud _____		Formation Tested Kansas City	
Tot. Liquid cc. _____		Elevation 1414' KB	
Gravity _____ ° API @ _____ °F.		Net Productive Interval 3'	
Gas/Oil Ratio _____ cu. ft./bbl.		All Depths Measured From Kelly Bushing	
	RESISTIVITY _____	Total Depth 2075'	
	CHLORIDE CONTENT _____	Main Hole/Casing Size 7 7/8"	
Recovery Water _____ @ _____ °F. _____ ppm		Drill Collar Length 144' I.D. 2.25"	
Recovery Mud _____ @ _____ °F. _____ ppm		Drill Pipe Length 1913' I.D. 3.826"	
Recovery Mud Filtrate _____ @ _____ °F. _____ ppm		Packer Depth(s) 2042'	
Mud Pit Sample _____ @ _____ °F. _____ ppm		Depth Tester Valve 2034'	
Mud Pit Sample Filtrate _____ @ _____ °F. _____ ppm			
Mud Weight 9.5 vis 34 cp			

TYPE	AMOUNT	Depth Back Pres. Valve	Surface Choke	Bottom Choke
Cushion		Ft.	1/2"	3/4"
Recovered	94 Feet of	Muddy salt water		
Recovered	Feet of			
Recovered	Feet of			
Recovered	Feet of			
Recovered	Feet of			

Remarks **Tool opened for a 10 minute first flow with weak blow. Closed tool for 30 minute first closed in pressure. Reopened tool for 60 minute second flow with weak blow throughout flow. Closed tool for 30 minute second closed in pressure.**

TEMPERATURE	Gauge No. 737	Gauge No. 397	Gauge No.	TIME
	Depth: 2043 Ft.	Depth: 2070 Ft.	Depth: _____ Ft.	
Est. 95 °F.	12 Hour Clock	12 Hour Clock	_____ Hour Clock	Tool Opened 2100 A.M. P.M.
Actual _____ °F.	Blanked Off No	Blanked Off Yes	Blanked Off	Tool Closed 2310 A.M. P.M.
	Pressures		Pressures	
	Field	Office	Field	Office
Initial Hydrostatic	1006	1007	-	1020
First Period Flow	Initial	9	-	27
	Final	17	-	31
	Closed in	783	-	795
Second Period Flow	Initial	17	-	35
	Final	52	-	68
	Closed in	748	-	750
Third Period Flow	Initial			
	Final			
	Closed in			
Final Hydrostatic	1006	997	-	1008

Gauge No. 737		Depth 2043'		Clock No. 7101		12 hour		Ticket No. 404829			
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"	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.
0	.0000 12	.0000	15	.0000	21	.0000	50				
1	.0680 15	.0200	564	.0667	24	.0206	458				
2		.0400	697	.1333	29	.0412	628				
3		.0600	737	.2000	34	.0618	674				
4		.0800	753	.2667	40	.0824	695				
5		.1000	764	.3333	45	.1030	709				
6		.1200	771	.4000	50	.1236	719				
7		.1400	775			.1442	726				
8		.1600	779			.1648	731				
9		.1800	781			.1854	736				
10		.2000	783			.2060	740				
11											
12											
13											
14											
15											

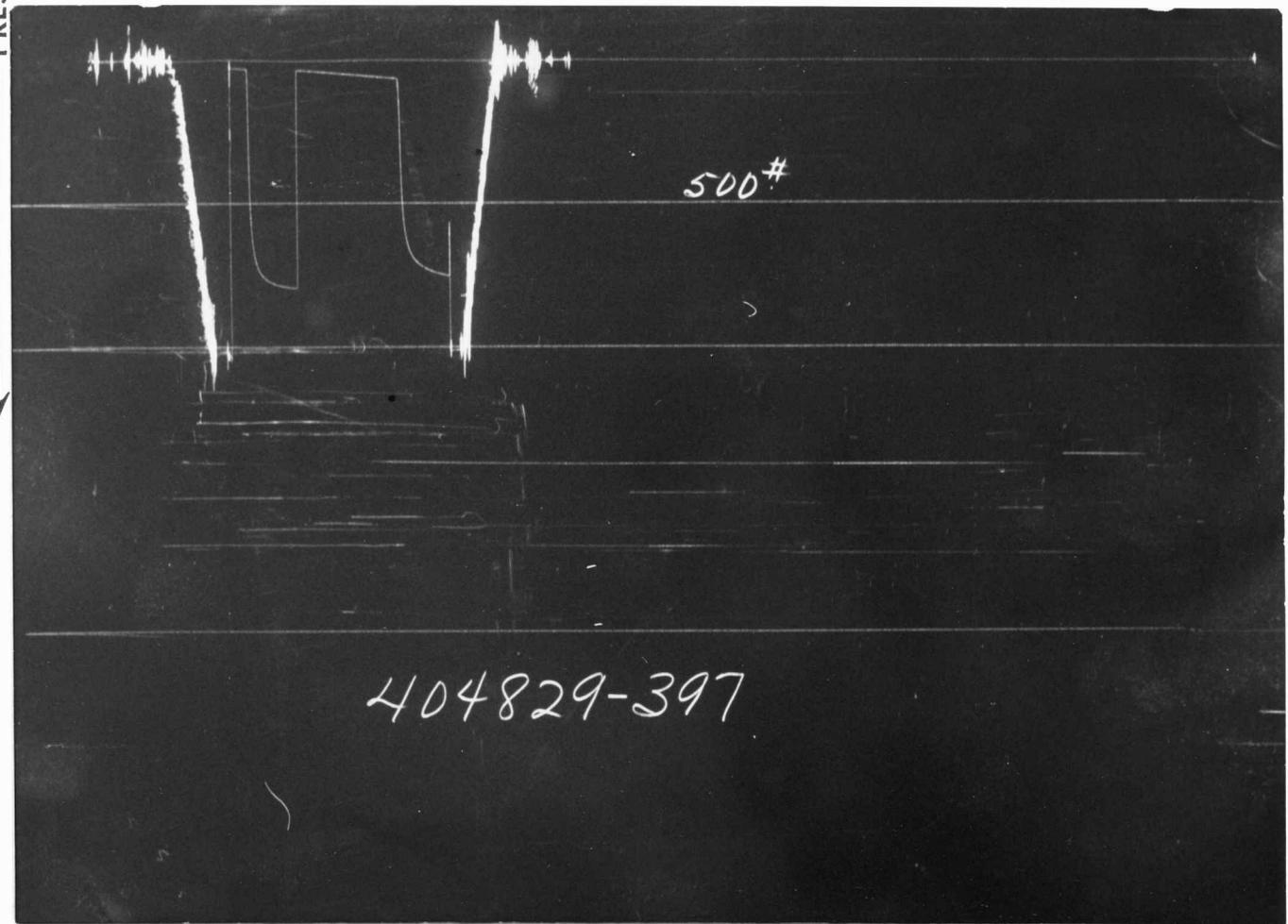
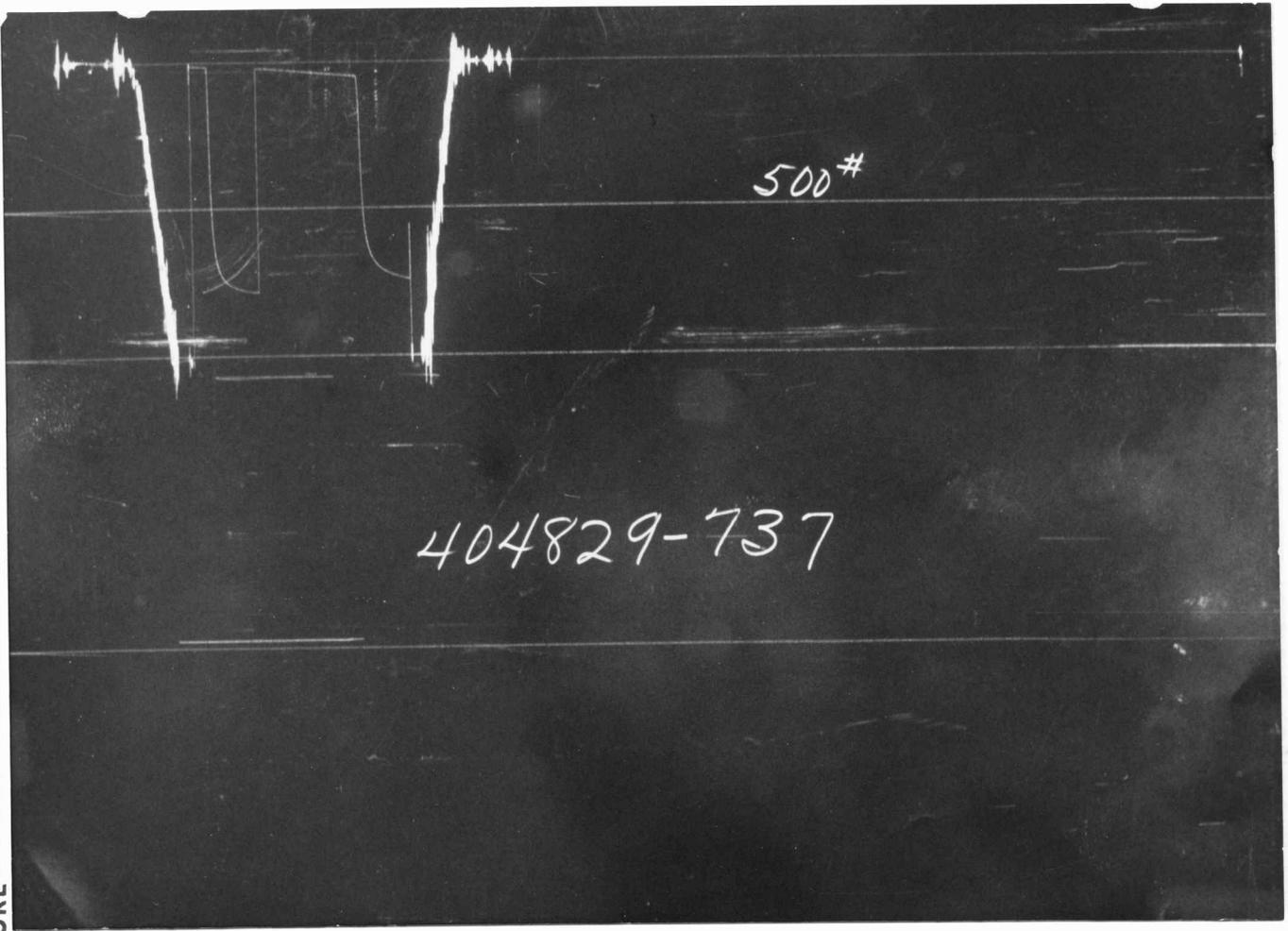
Gauge No. 397		Depth 2070'		Clock No. 3228		12 hour					
Time Defl. .000"	PSIG Temp. Corr.										
0	.0000 27	.0000	31	.0000	35	.0000	68				
1	.0680 31	.0199	619	.0673	38	.0206	528				
2		.0398	718	.1347	43	.0412	650				
3		.0597	751	.2020	49	.0618	689				
4		.0796	767	.2693	53	.0824	708				
5		.0995	777	.3367	58	.1030	720				
6		.1194	783	.4040	68	.1236	730				
7		.1393	787			.1442	737				
8		.1592	791			.1648	742				
9		.1791	794			.1854	748				
10		.1990	795			.2060	750				
11											
12											
13											
14											
15											
Reading Interval				3		10		3		Minutes	

REMARKS:

5



	O. D.	I. D.	LENGTH	DEPTH
Reversing Sub	5"		1'	
Water Cushion Valve				
Drill Pipe	4 1/2"	3.826"	1913'	
Drill Collars	6"	2.25"	144'	
Handling Sub & Choke Assembly				
Dual CIP Valve	5"	.87"	5'	
Dual CIP Sampler				
Hydro-Spring Tester	5"	.75"	5'	2034'
Multiple CIP Sampler				
Extension Joint				
AP Running Case	5"	3.75"	4'	2043'
Hydraulic Jar	5"		5'	
VR Safety Joint				
Pressure Equalizing Crossover				
Packer Assembly	6 3/4"	1"	4'	2042'
Distributor				
Packer Assembly				
Flush Joint Anchor	4 3/4"		25'	
Pressure Equalizing Tube				
Blanked-Off B.T. Running Case	5"	3.75"	4'	2070'
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.

FLUID SAMPLE DATA		Date	Ticket Number
Sampler Pressure _____ P.S.I.G. at Surface		6-29-71	404830
Recovery: Cu. Ft. Gas _____	cc. Oil _____	Kind of Job	Halliburton District
cc. Water _____	cc. Mud _____	OPEN HOLE	EL DORADO
Tot. Liquid cc. _____		Tester	Witness
		MR. MACY	MR. MILLER
Gravity _____ ° API @ _____ °F.		Drilling Contractor	WHITE & ELLIS DRILLING INCORPORATED
Gas/Oil Ratio _____ cu. ft./bbl.		EQUIPMENT & HOLE DATA IC S	
		Formation Tested	Kansas City
		Elevation	1414' KB Ft.
		Net Productive Interval	- Ft.
		All Depths Measured From	Kelly Bushing
		Total Depth	2166' Ft.
		Main Hole/Casing Size	7 7/8"
		Drill Collar Length	144' I.D. 2.25"
		Drill Pipe Length	2007' I.D. 3.826"
		Packer Depth(s)	2119' Ft.
		Depth Tester Valve	2107' Ft.

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

Recovered	Feet of	Mud	Mea. From Tester Valve
75	Feet of	Mud	
	Feet of		

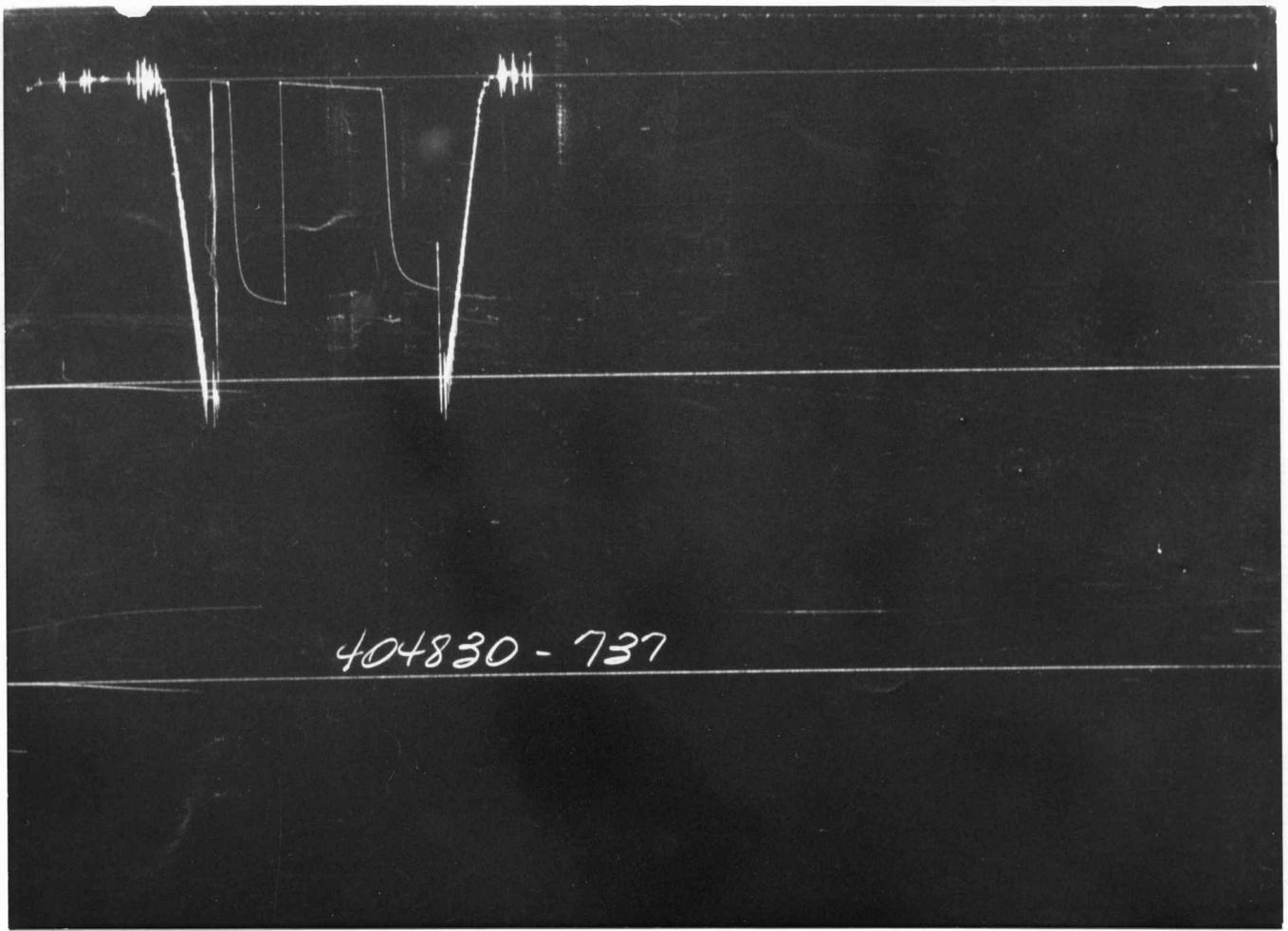
Remarks Opened tool for 10 minute first flow with a weak blow. Closed tool for 30 minute initial closed in pressure. Reopened tool for 59 minute second flow with a weak blow throughout test. Closed tool for 31 minute second closed in pressure.

TEMPERATURE	Gauge No. 737	Gauge No. 397	Gauge No.	TIME
	Depth: 2108' Ft.	Depth: 2161' Ft.	Depth: Ft.	
Est. 100 °F.	12 Hour Clock	12 Hour Clock	Hour Clock	Tool A.M.
	Blanked Off NO	Blanked Off YES	Blanked Off	Opened 11:07 P.M.
Actual °F.	Pressures	Pressures	Pressures	Tool A.M.
	Field Office	Field Office	Field Office	Closed 13:17 P.M.
Initial Hydrostatic	1049 1030	- 1061		Reported Computed
				Minutes Minutes
First Period Flow	Initial 9 5	- 37		
	Final 17 11	- 42		
	Closed in 748 745	- 772		10 10
Second Period Flow	Initial 17 15	- 49		
	Final 43 40	- 70		60 59
	Closed in 705 707	- 735		30 31
Third Period Flow	Initial			
	Final			
Closed in				
Final Hydrostatic	1032 1023	- 1054		

Legal Location Sec. - Twp. - Rng. 30 - 25 - 5E
 Lease Name MURRAY
 Well No. 96
 Test No. 2
 Tested Interval 2119' - 2166'
 County BUTLER
 State KANSAS
 Lease Owner/Company Name CITIERS SERVICE OIL COMPANY

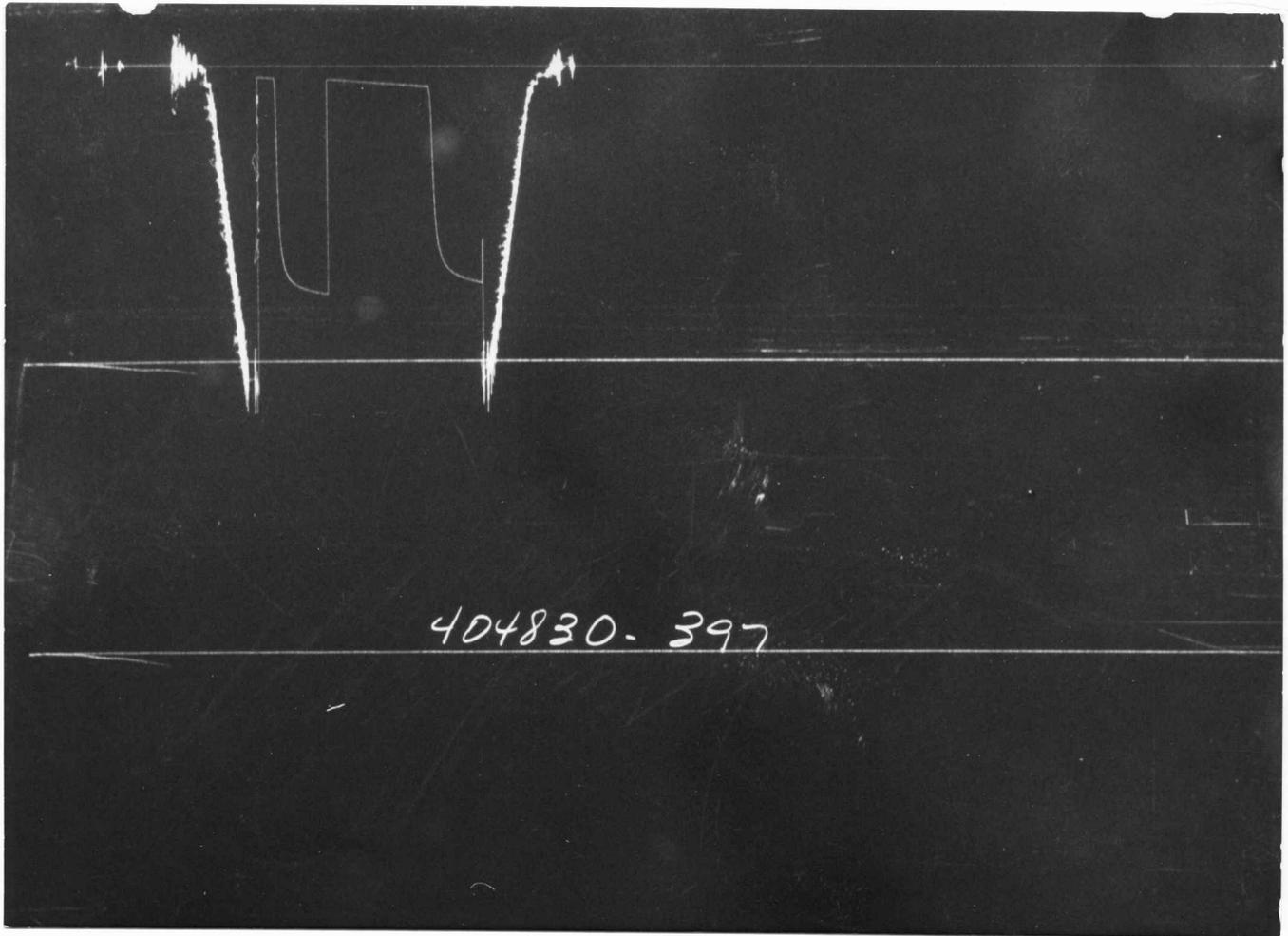


	O. D.	I. D.	LENGTH	DEPTH
Reversing Sub	5"		1'	
Water Cushion Valve				
Drill Pipe	4 1/2"	3.826"	2007'	
Drill Collars	6"	2.25"	144'	
Handling Sub & Choke Assembly				
Dual CIP Valve	5"	.87"	5'	
Dual CIP Sampler				
Hydro-Spring Tester	5"	.75"	5'	2107'
Multiple CIP Sampler				
Extension Joint				
AP Running Case	5"	3.75"	4'	2108'
Hydraulic Jar	5"		5'	
VR Safety Joint				
Pressure Equalizing Crossover				
Packer Assembly	6 3/4"	1"	4'	2119'
Distributor				
Packer Assembly				
Flush Joint Anchor	4 3/4"		43'	
Pressure Equalizing Tube				
Blanked-Off B.T. Running Case	5"	3.75"	4'	2161'
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.

Lease Location: **MURRAY**
 Sec. - Twp. - Rng.: **96**
 Lease Name: **30 25 SE**
 Well No.: **3**
 Tested Interval: **2487-2492'**
 County: **BUTLER**
 State: **KANSAS**
 Lease Owner/Company Name: **CITIES SERVICE OIL COMPANY**

FLUID SAMPLE DATA	
Sampler Pressure _____ P.S.I.G. at Surface	
Recovery: Cu. Ft. Gas _____	
cc. Oil _____	
cc. Water _____	
cc. Mud _____	
Tot. Liquid cc. 31.5	
Gravity _____ ° API @ 60 °F.	
Gas/Oil Ratio _____ cu. ft./bbl.	
	RESISTIVITY CHLORIDE CONTENT
Recovery Water _____ @ _____ °F. _____ ppm	
Recovery Mud _____ @ _____ °F. _____ ppm	
Recovery Mud Filtrate _____ @ _____ °F. _____ ppm	
Mud Pit Sample _____ @ _____ °F. _____ ppm	
Mud Pit Sample Filtrate 9.5 @ _____ °F. _____ ppm	
Mud Weight 9.5 vis 48 cp	

Date 6-30-71	Ticket Number 404831
Kind of Job OPEN HOLE	Halliburton District EL DORADO
Tester W. E. MACY	Witness R. J. MILLER
Drilling Contractor WHITE & ELLIS DRILLING INCORPORATED	

EQUIPMENT & HOLE DATA	
Formation Tested Viola	
Elevation 1414' KB	
Net Productive Interval 6'	
All Depths Measured From Kelly bushing	
Total Depth 2492'	
Main Hole/Casing Size 7 7/8"	
Drill Collar Length 144'	I.D. 2.25"
Drill Pipe Length 2316'	I.D. 3.826"
Packer Depth(s) 2483-2487'	
Depth Tester Valve 2470'	

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

Recovered	Amount	Description
Recovered	154	Feet of muddy oil
Recovered		Feet of

Remarks **Tool opened for 9 minute first flow with a weak blow building very slowly.**
Closed tool for 29 minute first closed in pressure. Tool reopened for 61
minute second flow with a weak to fair blow throughout. Closed for 31
minute second closed in pressure.

TEMPERATURE	Gauge No. 737		Gauge No. 397		Gauge No.		TIME	
	Depth:	Ft.	Depth:	Ft.	Depth:	Ft.	Hour Clock	
Est. 102 °F.	2471		2488				12	0912
	Blanked Off no		Blanked Off yes		Blanked Off			0912
	Blanked Off no		Blanked Off yes		Blanked Off			1125
Actual °F.	Pressures		Pressures		Pressures		Reported	Computed
	Field	Office	Field	Office	Field	Office	Minutes	Minutes
Initial Hydrostatic	1247	1261	-	1272				
First Period Flow	Initial	9	-	22				
	Final	26	-	28			10	9
	Closed in	843	-	845			30	29
Second Period Flow	Initial	26	-	34				
	Final	60	-	73			60	61
	Closed in	843	-	843			30	31
Third Period Flow	Initial							
	Final							
	Closed in							
Final Hydrostatic	1230	1215	-	1226				



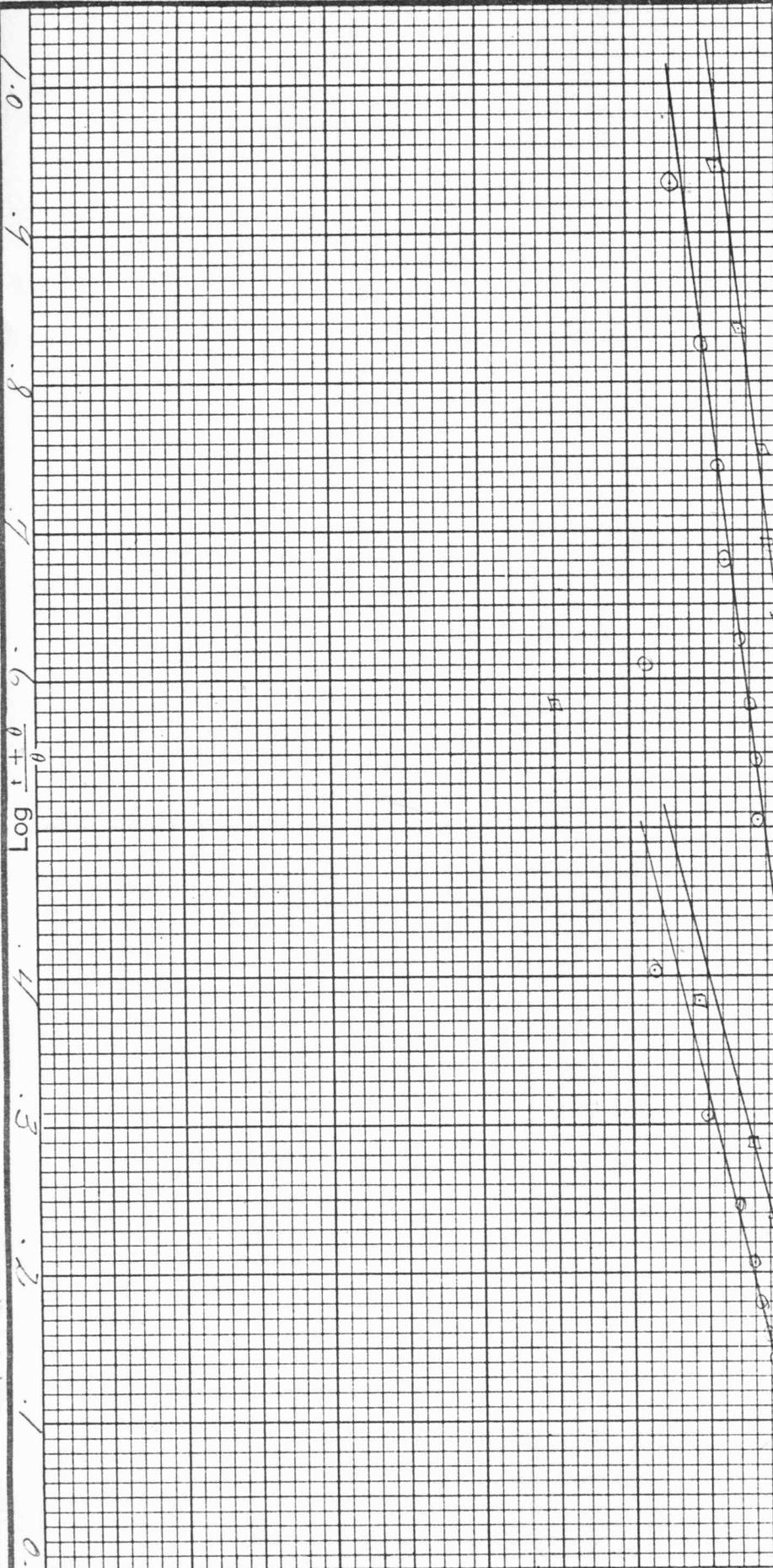
Gauge No. 737		Depth 2471'		Clock No. 7101		12 hour		Ticket No. 404831	
First Flow Period		First Closed In Pressure		Second Flow Period		Second Closed In Pressure		Third Flow Period	
Time Defl. .000"	PSIG Temp. Corr.								
Log $t + \frac{\theta}{\theta}$		Log $t + \frac{\theta}{\theta}$		Log $t + \frac{\theta}{\theta}$		Log $t + \frac{\theta}{\theta}$		Log $t + \frac{\theta}{\theta}$	
0	.000	.000	21	.000	26	.000	65		
1	.0142	.0208	802	.0407	29	.021	796		
2	.0284	.0416	823	.0814	34	.042	818		
3	.0426	.0624	830	.1221	38	.063	826		
4	.0568	.0832	834	.1628	42	.084	830		
5	.0640*	.1040	836	.2035	46	.105	832		
6		.1248	837	.2442	51	.126	833		
7		.1456	838	.2849	54	.147	835		
8		.1664	839	.3256	59	.168	836		
9		.1872	839	.3663	62	.189	837		
10		.2010**	839	.4140***	65	.217***	837		
11									
12									
13									
14									
15									

Gauge No. 397		Depth 2488'		Clock No. 3228		12 hour	
Time Defl. .000"	PSIG Temp. Corr.						
Log $t + \frac{\theta}{\theta}$		Log $t + \frac{\theta}{\theta}$		Log $t + \frac{\theta}{\theta}$		Log $t + \frac{\theta}{\theta}$	
0	.000	.000	28	.000	34	.000	73
1	.0131	.0208	810	.0412	37	.0204	810
2	.0262	.0416	829	.0824	42	.0408	825
3	.0393	.0624	836	.1236	46	.0612	832
4	.0524	.0832	839	.1648	49	.0816	835
5	.0590*	.1040	840	.2060	55	.1020	838
6		.1248	843	.2472	59	.1224	839
7		.1456	844	.2884	63	.1428	840
8		.1664	844	.3296	66	.1632	841
9		.1872	845	.3708	71	.1836	842
10		.2010**	845	.4190***	73	.2110***	843
11							
12							
13							
14							
15							

Reading Interval 2 3 6 3 Minutes

REMARKS: *Last interval is equal to 1 minutes. **Last = 2 minutes. ***Last = 7 minutes. ****Last = 4 minutes.

TICKET NO.	404831	
BT GAUGE NO.	INITIAL	FINAL
737	⊙	⊙
397	◊	◊



760 780 800 820 840 860 880
Psig

EXTRAPOLATED PRESSURE GRAPH

(5)

Liquid Production

B.T. Gauge Numbers			737	397	Ticket Number	404831
Initial Hydrostatic			1261	1272	Elevation	1414 ft.
Final Hydrostatic			1215	1226	Indicated Production	-
1st Flow	Initial	Time	14	22	1st Flow	-
	Final	9	21	28	2nd Flow	20
	Closed In Pressure	29	839	845	3rd Flow	-
2nd Flow	Initial	Time	26	34	Drill Collar Length	144 ft.
	Final	61	65	73	Drill Collar I.D.	2.25 in.
	Closed In Pressure	31	837	843	Drill Pipe Factor	0.01422 bbls./ft.
3rd Flow	Initial	Time			Hole Size	7.875 in.
	Final				Footage Tested	6' ft.
	Closed In Pressure				Mud Weight	9.5 lbs./gal.
Extrapolated Static Pressure	1st		846	850	Viscosity, Oil or Water	9.0 cp
	2nd		850	855	Oil API Gravity	31.5°
	3rd		-	-	Water Specific Gravity	-
	1st		-	-	Temperature	102 °F
Slope P/10	2nd		826	831		
	3rd		-	-		
			-	-		

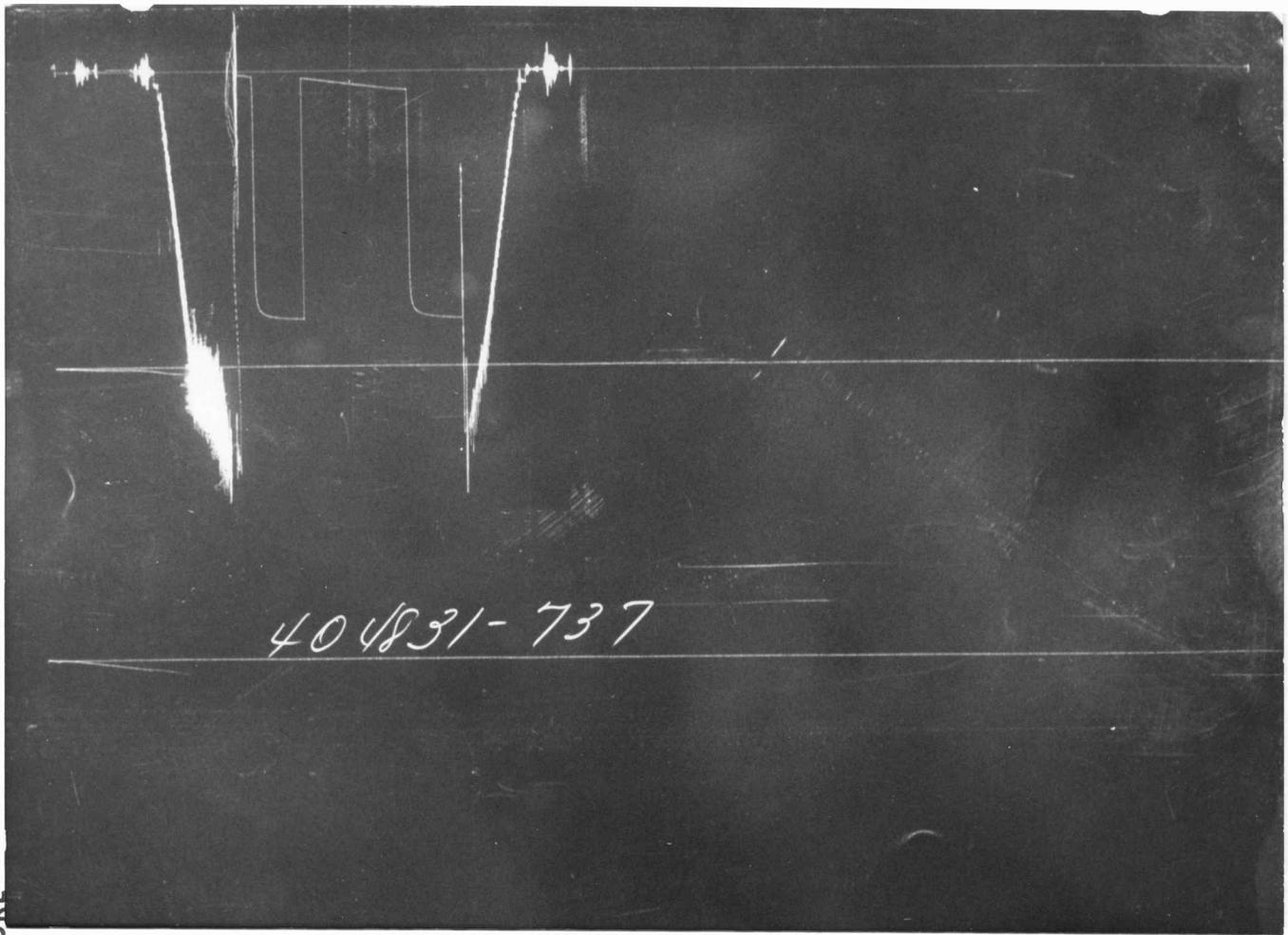
Remarks: Due to short first flow period there were no calculations attempted. The results shown on this sheet are based on office corrected readings and computer calculated results as shown under summary heading below.

SUMMARY		B.T. Gauge No. 737			B.T. Gauge No. 397			
		Depth 2471'			Depth 2488'			
PRODUCT	EQUATION	FIRST	SECOND	THIRD	FIRST	SECOND	THIRD	UNITS
Production	$Q = \frac{1440 R}{t}$		19			20		bbls. day
Transmissability	$\frac{Kh}{\mu} = \frac{162.6 Q}{m}$		129.60			136.67		md. ft. cp
Indicated Flow Capacity	$Kh = \frac{Kh}{\mu} \mu$		1166.4			1230.0		md. ft.
Average Effective Permeability	$K = \frac{Kh}{h}$		-			-		md.
	$K_r = \frac{Kh}{h_1}$		194.412			205.011		md.
Damage Ratio	$DR = .183 \frac{P_s - P_f}{m}$		5.98			5.96		-
Theoretical Potential w/Damage Removed	$Q_1 = Q DR$		114			120		bbls. day
Approx. Radius of Investigation	$b \approx \sqrt{Kt}$ or $\sqrt{Kt_0}$		-			-		ft.
	$b_1 \approx \sqrt{K_1 t}$ or $\sqrt{K_1 t_0}$		116.6			119.7		ft.
Potentiometric Surface *	$Pot. = EI - GD + 2.319 P_s$		914			908		ft.

NOTICE: These calculations are based upon information furnished by you and taken from Drill Stem Test pressure charts, and are furnished you for your information. In furnishing such calculations and evaluations based thereon, Halliburton is merely expressing its opinion. You agree that Halliburton makes no warranty express or implied as to the accuracy of such calculations or opinions, and that Halliburton shall not be liable for any loss or damage, whether due to negligence or otherwise, in connection with such calculations and opinions.

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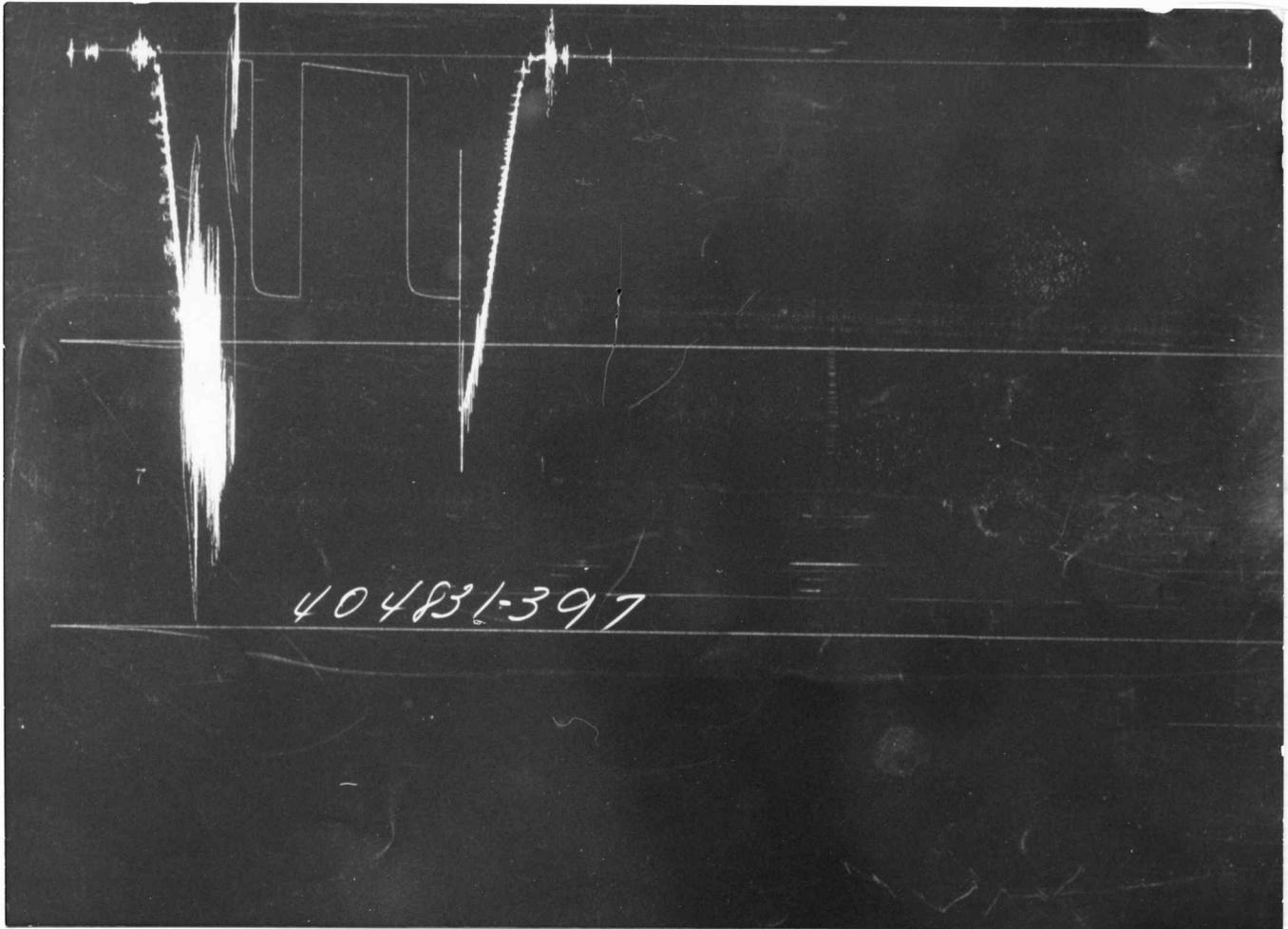
	O. D.	I. D.	LENGTH	DEPTH
Reversing Sub	5"		1'	
Water Cushion Valve				
Drill Pipe	4 1/2"	3.826"	2316'	
Drill Collars	6"	2.25"	144'	
Handling Sub & Choke Assembly				
Dual CIP Valve	5"	.87"	5'	
Dual CIP Sampler				
Hydro-Spring Tester	5"	.75"	5'	2470'
Multiple CIP Sampler				
Extension Joint				
AP Running Case	5"	3.75"	4'	2471'
Hydraulic Jar	5"		5'	
VR Safety Joint				
Pressure Equalizing Crossover				
Packer Assembly	6 3/4"	1"	4'	2483'
Distributor				
Packer Assembly	6 3/4"	1"	4'	2487'
Flush Joint Anchor	4 3/4"		1'	
Pressure Equalizing Tube				
Blanked-Off B.T. Running Case	5"	3.75 "	4'	2488'
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				



404831-737

↑
PRESSURE

TIME →



404831-397

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

FLUID SAMPLE DATA		Date	6-30-71	Ticket Number	404832
Sampler Pressure _____	P.S.I.G. at Surface	Kind of Job	OPEN HOLE	Halliburton District	EL DORADO
Recovery: Cu. Ft. Gas _____		Tester	W. E. MACY	Witness	R. J. MILLER
cc. Oil _____		Drilling Contractor	WHITE & ELLIS DRILLING INCORPORATED SM		
cc. Water _____		EQUIPMENT & HOLE DATA			
cc. Mud _____		Formation Tested	Simpson		
Tot. Liquid cc. _____		Elevation	1414'	KB	Ft.
Gravity _____ ° API @ _____ °F.		Net Productive Interval	15'		Ft.
Gas/Oil Ratio _____ cu. ft./bbl.		All Depths Measured From	Kelly bushing		
		Total Depth	2580'		Ft.
		Main Hole/Casing Size	7 7/8"		
		Drill Collar Length	144'	I.D.	2.25"
		Drill Pipe Length	2409'	I.D.	3.826"
		Packer Depth(s)	2561-2565' Ft.		
		Depth Tester Valve	2553' Ft.		

TYPE	AMOUNT	Depth Back Pres. Valve	Surface Choke	Bottom Choke
Cushion			1/4"	3/4"
Recovered	110	Feet of muddy salt water		
Recovered		Feet of		
Recovered		Feet of		
Recovered		Feet of		
Recovered		Feet of		

Remarks Tool opened for 11 minute first flow with a weak blow throughout. Closed tool for 29 minute first closed in pressure. Tool reopened for 60 minute second flow with a very weak blow throughout. Closed tool for 30 minute second closed in pressure.

TEMPERATURE	Gauge No. 737		Gauge No. 397		Gauge No.		TIME	
	Depth:	2566 Ft.	Depth:	2575 Ft.	Depth:	Ft.		
Est. 105 °F.	12 Hour Clock		12 Hour Clock		Hour Clock		Tool	A.M.
	Blanked Off -		Blanked Off yes		Blanked Off		Opened	0015 PAA
Actual °F.	Pressures		Pressures		Pressures		Tool	A.M.
	Pressures		Pressures		Pressures		Closed	0225 PAA
	Field	Office	Field	Office	Field	Office	Reported	Computed
Initial Hydrostatic	1273	1286	-	1294			Minutes	Minutes
First Period	Flow Initial	26	13	-	22			
	Flow Final	26	18	-	26		10	11
	Closed in	877	881	-	885		30	29
Second Period	Flow Initial	26	27	-	35			
	Flow Final	60	58	-	65		60	60
	Closed in	877	870	-	875		30	30
Third Period	Flow Initial							
	Flow Final							
	Closed in							
Final Hydrostatic	1273	1278	-	1285				

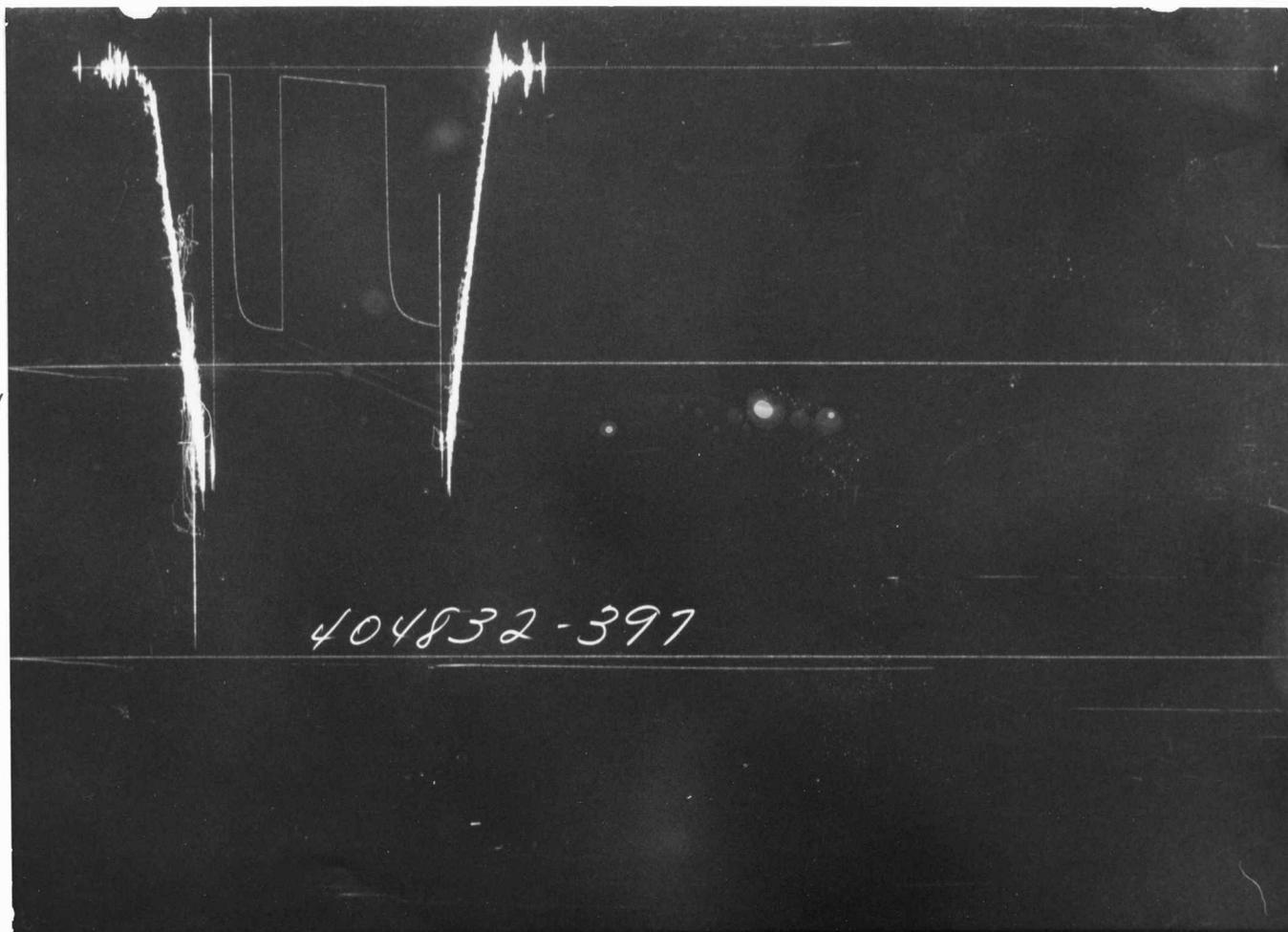
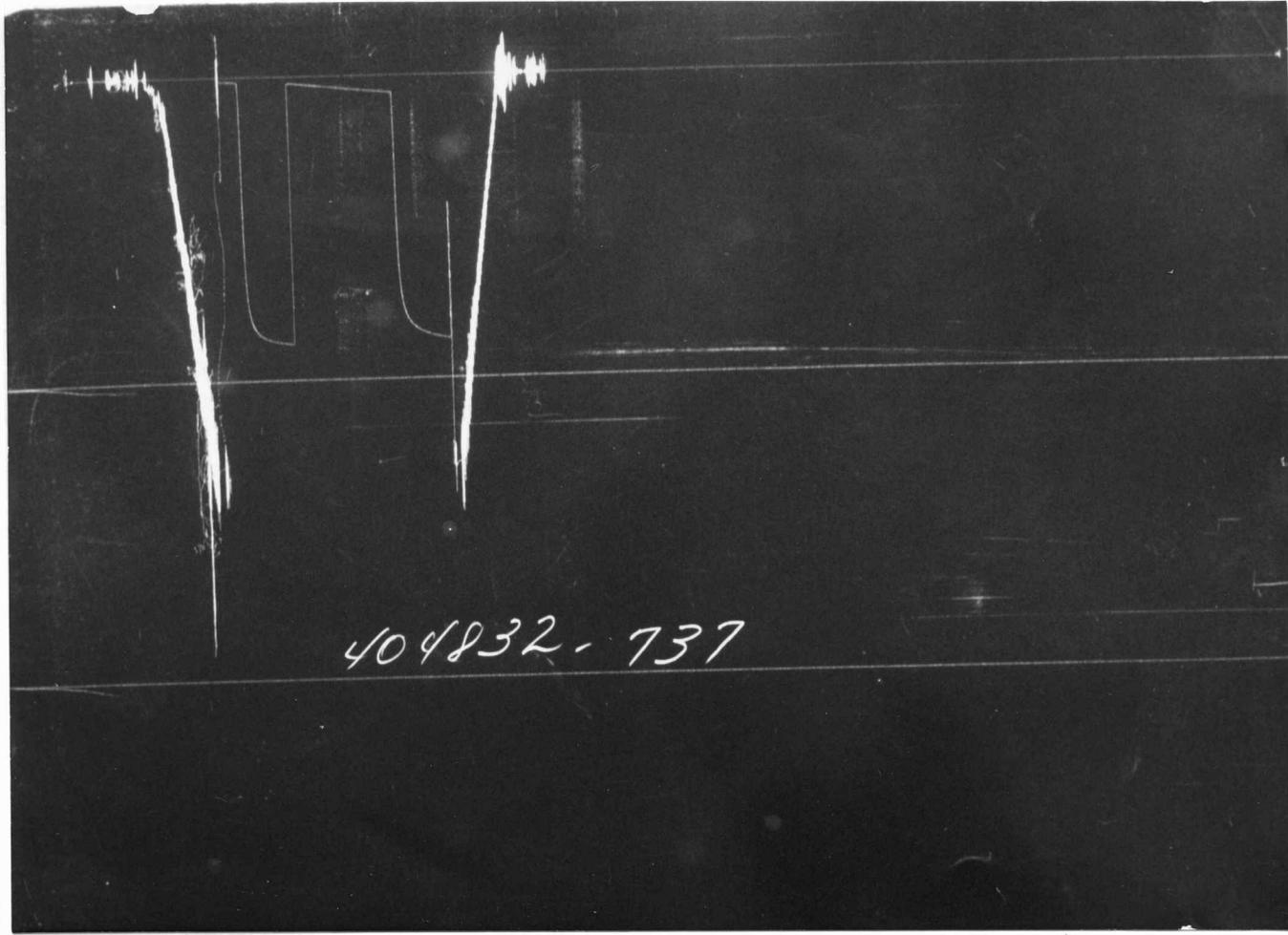
Legal Location Sec. - Twp. - Rng. 30 25 5E
 Lease Name MURRAY
 Well No. 96
 Test No. 4
 Field Area EL DORADO
 County BUTLER
 State KANSAS
 Tested Interval 2565-2580'
 Lease Owner/Company Name CITIERS SERVICE OIL COMPANY

Gauge No.		737		Depth		2566'		Clock No.		7101		12 hour		Ticket 404832	
First Flow Period		Closed In Pressure		Second Flow Period		Closed In Pressure		Third Flow Period		Closed In Pressure		Third Flow Period		Closed In Pressure	
Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\text{Log } \frac{t + \theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	$\text{Log } \frac{t + \theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	$\text{Log } \frac{t + \theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	$\text{Log } \frac{t + \theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.
0	.000	13		18	.000	27	58	.000		58					
1	.0138	15	.0204	741	.067	28	720	.0206		720					
2	.0276	15	.0408	820	.134	34	796	.0412		796					
3	.0414	15	.0612	846	.201	40	822	.0618		822					
4	.0552	15	.0816	858	.268	46	837	.0824		837					
5	.0760*	18	.1020	866	.335	52	846	.1030		846					
6			.1224	871	.402	58	854	.1236		854					
7			.1428	875			859	.1442		859					
8			.1632	877			863	.1648		863					
9			.1836	880			867	.1854		867					
10			.1970**	881			870	.2060		870					
11															
12															
13															
14															
15															

Gauge No.		397		Depth		2575'		Clock No.		3228		12 hour			
Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\text{Log } \frac{t + \theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	$\text{Log } \frac{t + \theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	$\text{Log } \frac{t + \theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	$\text{Log } \frac{t + \theta}{\theta}$	PSIG Temp. Corr.		
0	.000	22		26	.000	35	65	.000		65					
1	.0135	23	.0204	750	.0677	36	736	.0204		736					
2	.0270	24	.0408	826	.1354	42	803	.0408		803					
3	.0405	24	.0612	852	.2031	48	830	.0612		830					
4	.0540	25	.0816	863	.2708	54	843	.0816		843					
5	.0740*	26	.1020	871	.3385	59	853	.1020		853					
6			.1224	877	.4060	65	859	.1224		859					
7			.1428	880			865	.1428		865					
8			.1632	883			869	.1632		869					
9			.1836	884			872	.1836		872					
10			.1970**	885			875	.2040		875					
11															
12															
13															
14															
15															

Reading Interval 2 3 10 3
 REMARKS: *Last interval is equal to 3 minutes. **Last = 2 minutes.

	O. D.	I. D.	LENGTH	DEPTH
Reversing Sub	5"		1'	
Water Cushion Valve				
Drill Pipe	4½"	3.826"	2409'	
Drill Collars	6"	2.25"	144'	
Handling Sub & Choke Assembly				
Dual CIP Valve	5"	.87"	5'	
Dual CIP Sampler				
Hydro-Spring Tester	5"	.75"	5'	2553'
Multiple CIP Sampler				
Extension Joint				
AP Running Case	5"	3.75"	4'	2566'
Hydraulic Jar	5"		5'	
VR Safety Joint				
Pressure Equalizing Crossover				
Packer Assembly	6 3/4"	1"	4'	2561'
Distributor				
Packer Assembly	6 3/4"	1"	4'	2565'
Flush Joint Anchor	4 3/4"		7'	
Pressure Equalizing Tube				
Blanked-Off B.T. Running Case	5"	3.75"	4'	2575'
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.

404832-737

404832-397