

FLUID SAMPLER DATA				Date 6-17 -70		Ticket Number 277544	
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.				Kind of Job OPEN HOLE		Halliburton District GREAT BEND	
				Tester MOORE		Witness WRIGHT	
				Drilling Contractor H-30, INCORPORATED		NM S	
EQUIPMENT & HOLE DATA							
				Formation Tested Kansas City			
				Elevation _____ Ft.			
				Net Productive Interval _____ Ft.			
				All Depths Measured From Kelly Bushing			
				Total Depth 3275' _____ Ft.			
				Main Hole/Casing Size 7 7/8" _____			
				Drill Collar Length NONE I.D. _____			
				Drill Pipe Length 3217' I.D. 3.826" _____			
				Packer Depth(s) 3240' _____ Ft.			
				Depth Tester Valve 3226' _____ Ft.			
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 _____ @ _____ °F. _____ ppm							
Mud Weight 10.4 vis 43 cp							
TYPE CUSHION		AMOUNT NONE		Depth Back Pres. Valve 3325' _____ Ft.		Surface Choke 1" _____ Bottom Choke 3/4" _____	
Recovered 30' Feet of		mud with slight oil show					
Recovered _____ Feet of							
Recovered _____ Feet of							
Recovered _____ Feet of							
Recovered _____ Feet of							
Remarks Tool opened @ 5:34 AM with a weak blow and a small increase.							
Took a 30 minute closed in pressure. Off bottom @ 7:04 AM							
TEMPERATURE		Gauge No. 1463		Gauge No. 396		Gauge No. _____	
Depth: 3230' _____ Ft.		Depth: 3271' _____ Ft.		Depth: _____ Ft.		TIME	
Est. 98 °F.		12 Hour Clock		12 Hour Clock		Tool _____ A.M.	
Blanked Off NO		Blanked Off YES		Blanked Off		Opened 5:34 _____	
3270' @						Tool _____ A.M.	
Actual 103 °F.		Pressures		Pressures		Closed 5:34 _____	
	Field	Office	Field	Office	Field	Office	Reported
							Minutes
Initial Hydrostatic	-	1859	1833	1879			
First Period Flow	Initial	6	26	29			
	Final	18	35	37			60
	Closed in	887	911	910			30
Second Period Flow	Initial						
	Final						
	Closed in						
Third Period Flow	Initial						
	Final						
	Closed in						
Final Hydrostatic	-	1834	1833	1860			

Legal Location Sec. - Twp. - Rng. 12 - 20 S - 13W
 Lease Name PANNING
 Well No. 1
 Test No. 1
 Field Area WILDCAT
 County BARTON
 State KANSAS
 Tested Interval 3240' - 3275'
 Lease Owner/Company Name DONALD T. INGELING

Gauge No. 1463			Depth 3230'		Clock No. 7098			12 hour	Ticket No. 277544						
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"	$\text{Log} \frac{t + \theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\text{Log} \frac{t + \theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\text{Log} \frac{t + \theta}{\theta}$	PSIG Temp. Corr.
0	.000	6	.000		18										
1	.0672	10	.0203		26										
2	.1344	12	.0406		42										
3	.2016	14	.0609		68										
4	.2688	15	.0812		123										
5	.3360	16	.1015		268										
6	.403	18	.1218		501										
7			.1421		676										
8			.1624		793										
9			.1827		854										
10			.203		887										
11															
12															
13															
14															
15															

Gauge No. 396			Depth 3271'			Clock No. 4197			hour 12						
0	.000	29	.000		37										
1	.0685	30	.021		47										
2	.1370	31	.042		62										
3	.2055	33	.063		89										
4	.2740	34	.084		148										
5	.3425	35	.105		292										
6	.411	37	.126		524										
7			.147		692										
8			.168		812										
9			.189		873										
10			.210		910										
11															
12															
13															
14															
15															

Reading Interval 10 3 Minutes

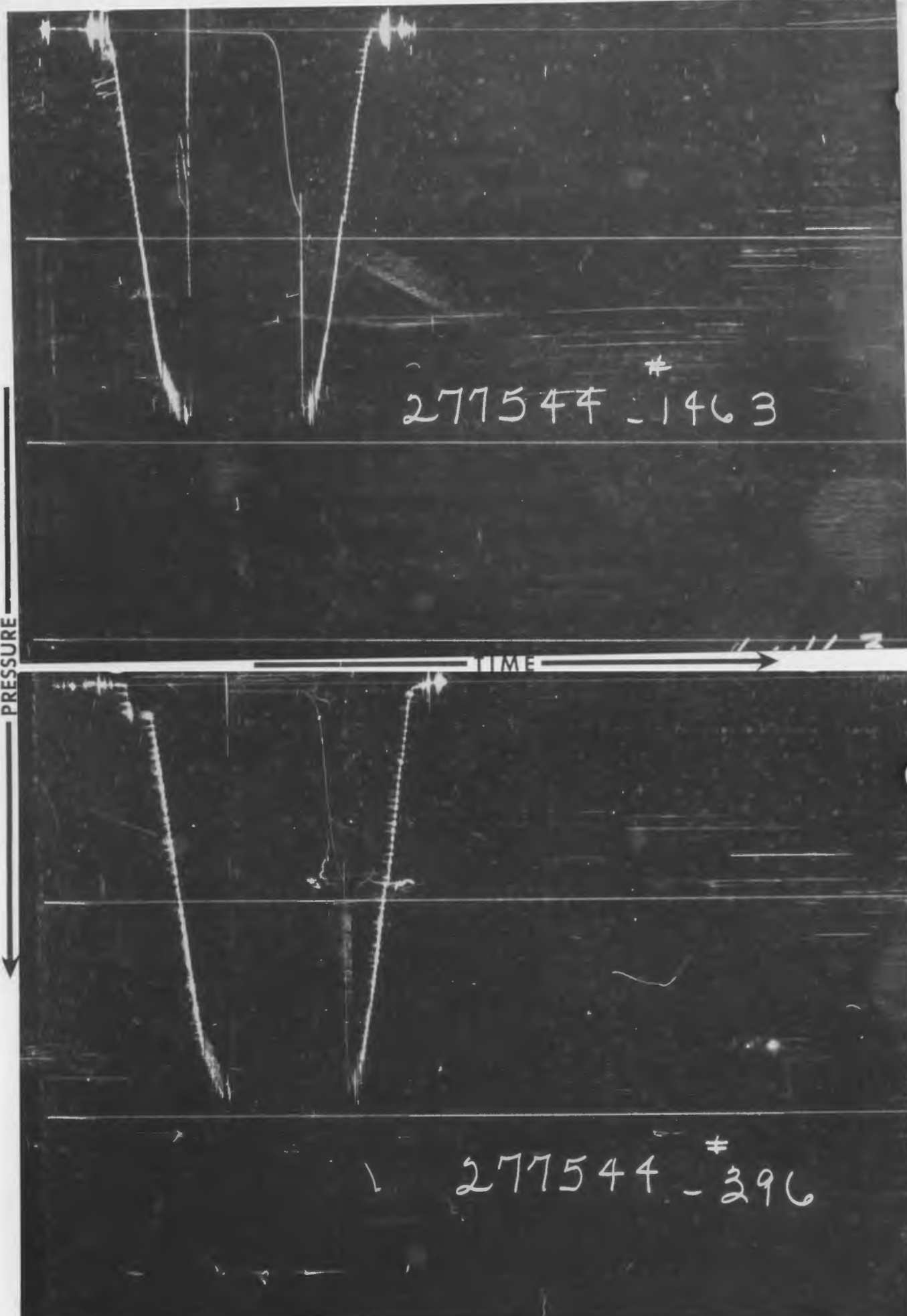
REMARKS:

	O. D.	I. D.	LENGTH	DEPTH
Reversing Sub	5.75"	2.75"	12"	
Water Cushion Valve	NONE			
Drill Pipe	4 1/2"	3.826"	3217'	
Drill Collars	-			
Handling Sub & Choke Assembly				
Dual CIP Valve	5"	.87"	60.92"	
Dual CIP Sampler				
Hydro-Spring Tester	5"	.75"	60.21"	3226'
Multiple CIP Sampler				
Extension Joint				
AP Running Case	5"	3.06"	49.63"	3230'
Hydraulic Jar	5"	.87"	39.46"	
VR Safety Joint	5"	1"	33.40"	
Pressure Equalizing Crossover				
Packer Assembly				
Distributor				
Packer Assembly	6 3/4"	1.53"	48.89"	3240'
Flush Joint Anchor	5"	2.37"	35.00'	
Pressure Equalizing Tube				
Blanked-Off B.T. Running Case	5"	3.06"	49.63"	3271'
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				

TEMPERATURE
RECORDER
CHART



10° each circle



The image contains two vertically stacked pressure-time graphs. Each graph has a vertical axis labeled 'PRESSURE' with a downward-pointing arrow and a horizontal axis labeled 'TIME' with a rightward-pointing arrow. The top graph shows two sharp, narrow pressure spikes. The bottom graph shows two similar spikes. Handwritten text is present in the center of each graph.

277544 - 1463

277544 - 396

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

FLUID SAMPLER DATA				Date 6/18/70		Ticket Number 277545	
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.				Kind of Job OPEN HOLE Tester L. MOORE O. ROBLES		Halliburton District GREAT BEND Witness MR. TOM WRIGHT	
				Drilling Contractor H - 30 INCORPORATED			
				EQUIPMENT & HOLE DATA LC			
				Formation Tested Arbuckle			
				Elevation 1846' Ft.			
				Net Productive Interval 3' Ft.			
				All Depths Measured From Kelly Bushing			
				Total Depth 3442' Ft.			
				Main Hole/Casing Size 7 7/8"			
				Drill Collar Length none I.D.			
				Drill Pipe Length 3416' I.D. 3.826"			
				Packer Depth(s) 3424' Ft.			
				Depth Tester Valve 3410' Ft.			
		RESISTIVITY	CHLORIDE CONTENT				
Recovery Water	_____ @ _____ ° F.	_____ ppm					
Recovery Mud	_____ @ _____ ° F.						
Recovery Mud Filtrate	_____ @ _____ ° F.	_____ ppm					
Mud Pit Sample	_____ @ _____ ° F.						
Mud Pit Sample Filtrate	10.7 @ _____ ° F.	_____ ppm					
Mud Weight	10.7 vis	47 cp					
Cushion		TYPE None	AMOUNT	Depth Back Pres. Valve 3409'	Surface Choke 1"	Bottom Choke 3/4"	
Recovered 5 Feet of mud with trace of oil.							
Recovered _____ Feet of							
Recovered _____ Feet of							
Recovered _____ Feet of							
Recovered _____ Feet of							
Remarks Tool opened at 12:17 PM with weak blow. Closed tool at 12:47 for closed in pressure. Off bottom at 1:07 PM.							
TEMPERATURE		Gauge No. 1463	Gauge No. 396	Gauge No.	TIME		
		Depth: 3414 Ft.	Depth: 3438 Ft.	Depth:			
		12 Hour Clock	12 Hour Clock	Hour Clock			
Est. 104 ° F.		Blanked Off No	Blanked Off Yes	Blanked Off	Tool XXX Opened 12:17 P.M.		
3437' @					Tool XXX Closed 12:47 P.M.		
Actual 100 ° F.		Pressures		Pressures		Pressures	
		Field	Office	Field	Office	Field	Office
Initial Hydrostatic	-		1938	1957	1952		
First Period Flow	Initial	-	10	26	22		
	Final	-	11	26	23		
	Closed in	-	38	44	48		
Second Period Flow	Initial						
	Final						
	Closed in						
Third Period Flow	Initial						
	Final						
	Closed in						
Final Hydrostatic	-		1930	1957	1944		

Legal Location
 Sec. - Twp. - Rng. **12 20S 13W**
 Lease Name
PANNING
 Well No.
1
 Test No.
2
 Tested Interval
3424' - 3442'

Field Area
WILDCAT
 County
BARTON
 State
KANSAS

Lease Owner/Company Name
DONALD T. INGELING

	O. D.	I. D.	LENGTH	DEPTH
Reversing Sub	5.75"	2.75"	12"	
Water Cushion Valve				
Drill Pipe	4 1/2"	3.826"	3416'	
Drill Collars				
Hondling Sub & Choke Assembly				
Dual CIP Valve	5"	.87"	60.92"	
Dual CIP Sampler				
Hydro-Spring Tester	5"	.75"	60.21"	3410'
Multiple CIP Sampler				
Extension Joint				
AP Running Case	5"	3.06"	49.63"	3414'
Hydraulic Jar	5"	.87"	3946"	
VR Safety Joint	5"	1"	33.40"	
Pressure Equalizing Crossover				
Packer Assembly				
Distributor				
Packer Assembly	6 3/4"	1.53"	48.89"	3424'
Flush Joint Anchor	5"	2.37"	18'	
Pressure Equalizing Tube				
Blanked-Off B.T. Running Case	5"	3.06"	49.63"	3438'
Drill Collars				
Anchor Pipe Safety Joint				
Packer Assembly				
Packer Assembly				
Anchor Pipe Safety Joint				
Side Woll Anchor				
Drill Collars				
Flush Joint Anchor				
Blanked-Off B.T. Running Case				

TEMPERATURE
RECORDER
CHART



10° each circle

PRESSURE

277545-1463

#1463

TIME

277545-396

#396

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

FLUID SAMPLER DATA				Date 6-18-70		Ticket Number 277546	
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.				Kind of Job OPEN HOLE Halliburton District GREAT BEND		Tester MOORE Witness WRIGHT Drilling Contractor H-30, INCORPORATED NM S	
EQUIPMENT & HOLE DATA							
				Formation Tested Arbuckle			
				Elevation 1846' K.B. _____ Ft.			
				Net Productive Interval 10' _____ Ft.			
				All Depths Measured From Kelly Bushing			
				Total Depth 3451' _____ Ft.			
				Main Hole/Casing Size 7 7/8"			
				Drill Collar Length _____ I.D. _____			
				Drill Pipe Length _____ I.D. 3.826"			
				Packer Depth(s) 3441' _____ Ft.			
				Depth Tester Valve 3422' _____ Ft.			
Recovery Water _____ @ _____ °F. _____ ppm Recovery Mud _____ @ _____ °F. _____ ppm Recovery Mud Filtrate _____ @ _____ °F. _____ ppm Mud Pit Sample _____ @ _____ °F. _____ ppm Mud Pit Sample Filtrate _____ @ _____ °F. _____ ppm Mud Weight 10.7 vis 47 sec. top		RESISTIVITY _____ CHLORIDE CONTENT _____					
Cushion TYPE NONE AMOUNT _____ Depth Back Pres. Valve 3421'		Surface Choke 1"		Bottom Choke 3/4"			
Recovered 10' Feet of mud							
Recovered _____ Feet of _____							
Recovered _____ Feet of _____							
Recovered _____ Feet of _____							
Recovered _____ Feet of _____							
Remarks Tool opened with a weak blow for a 29 minute flow - that died after 17 minutes. Took a 21 minute closed in pressure.							
TEMPERATURE		Gauge No. 1463 Depth: 3427' Ft.		Gauge No. 396 Depth: 3445' Ft.		Gauge No. _____ Depth: _____ Ft.	
3444' @ Est. 101 °F.		12 Hour Clock Blanked Off NO		12 Hour Clock Blanked Off YES		Hour Clock Blanked Off _____	
Actual _____ °F.		Pressures		Pressures		Pressures	
		Field	Office	Field	Office	Field	Office
Initial Hydrostatic		1966	1981	-	1996		
First Period	Flow Initial	26	10	-	22		
	Flow Final	26	10	-	22		
	Closed in	627	623	-	629		
Second Period	Flow Initial						
	Flow Final						
	Closed in						
Third Period	Flow Initial						
	Flow Final						
	Closed in						
Final Hydrostatic		1966	1940	-	1953		

 Legal Location
 Sec. - Twp. - Rng.

12 - 20S - 13W

 Field Area
 WILDCAT

County

BARTON

State

KANSAS

PANNING

 Well No. **1**

 Test No. **3**

 Tested Interval **3441' - 3451'**

 Lease Owner/Company Name
DONALD T. INGELING

Gauge No. 1463			Depth 3427'			Clock No. 7098			12 hour	Ticket No. 277546					
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"	$\text{Log} \frac{t + \theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\text{Log} \frac{t + \theta}{\theta}$	PSIG Temp. Corr.	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\text{Log} \frac{t + \theta}{\theta}$	PSIG Temp. Corr.
0	.000	10	.000		10										
1	.0348	10	.0125		16										
2	.0696	10	.0250		33										
3	.1044	10	.0375		50										
4	.1392	10	.0500		95										
5	.1740	10	.0625		164										
6	.202	10*	.0750		282										
7			.0875		392										
8			.1000		493										
9			.1125		564										
10			.131		623**										
11															
12															
13															
14															
15															

Gauge No. 396			Depth 3445'			Clock No. 4153			hour 12						
0	.000	22	.000		22										
1	.0341	22	.0135		24										
2	.0682	22	.0270		31										
3	.1023	22	.0405		58										
4	.1364	22	.0540		93										
5	.1705	22	.0675		151										
6	.198	22 *	.0810		250										
7			.0945		369										
8			.1080		490										
9			.1215		570										
10			.142		629**										
11															
12															
13															
14															
15															

Reading Interval 5

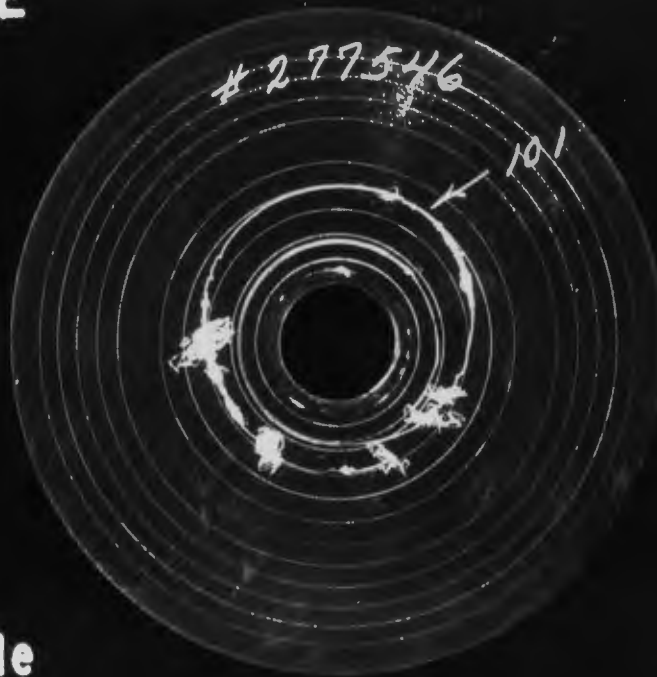
2

Minutes

REMARKS: * INTERVAL = 4 MINUTES. ** INTERVAL = 3 MINUTES.

	O. D.	I. D.	LENGTH	DEPTH
Reversing Sub	5.75"	2.75"	12"	
Water Cushion Valve				
Drill Pipe	4.5"	3.826"	?	
Drill Collars	-	-	-	
Handling Sub & Choke Assembly				
Dual CIP Valve	5"	.87"	60.92"	
Dual CIP Sampler				
Hydro-Spring Tester	5"	.75"	60.21"	3422'
Multiple CIP Sampler				
Extension Joint				
AP Running Case	5"	3.06"	49.63"	3427'
Hydraulic Jar	5"	.87"	39.46"	
VR Safety Joint	5"	1"	33.40"	
Pressure Equalizing Crossover				
Packer Assembly	6 3/4"	1.53"	48.89"	3441'
Distributor				
Packer Assembly				
Flush Joint Anchor	5"	2.37"	10'	
Pressure Equalizing Tube				
Blanked-Off B.T. Running Case	5"	3.06"	49.63"	3445'
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				

TEMPERATURE
RECORDER
CHART



10° each circle

PRESSURE

277546-1463

#1463

TIME

277546-396

#396

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

PANNING

Lease Name

1

Well No.

4

Test No.

3442' - 3460'

Tested Interval

DONALD T. INGLING

Lease Owner/Company Name

Legal Location
Sec. - Twp. - Rng.

12-20S-13W

Field Area

WILDCAT

County

BARTON

State

KANSAS

FLUID SAMPLER DATA				Date 6-19-70		Ticket Number 277547	
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.				Kind of Job OPEN HOLE MR. ROBLES Tester MR. MOORE		Halliburton District GREAT BEND Witness WRIGHT	
				Drilling Contractor H-30, INCORPORATED		DR	
EQUIPMENT & HOLE DATA							
				Formation Tested Arbuckle			
				Elevation 18		Ft.	
				Net Productive Interval 18'		Ft.	
				All Depths Measured From Kelly Bushing			
				Total Depth 3460'		Ft.	
				Main Hole/Casing Size 7 7/8"			
				Drill Collar Length -		I.D. -	
				Drill Pipe Length 3418'		I.D. 3.826"	
				Packer Depth(s) 3442'		Ft.	
				Depth Tester Valve 3428'		Ft.	
TYPE		AMOUNT		Depth Back Ft.		Surface Choke	
Cushion				Pres. Valve 3427'		1"	
						Bottom Choke 3/4"	
Recovered	20	Feet of mud with water					
Recovered	10	Feet of oil					
Recovered		Feet of					
Recovered		Feet of					
Recovered		Feet of					
Remarks Opened tool for 90 minute flow with a weak blow to a very weak blow.							
Closed tool for 30 minute final closed in pressure.							
TEMPERATURE		Gauge No. 1463		Gauge No. 396		Gauge No.	
		Depth: 3432 Ft.		Depth: 3456 Ft.		Depth: Ft.	
		12 Hour Clock		12 Hour Clock		Hour Clock	
Est. 104 °F.		Blanked Off No		Blanked Off Yes		Blanked Off	
3455'						Tool A.M.	
Actual 102 °F.						Opened 10:20 P.M.	
		Pressures		Pressures		Tool A.M.	
						Closed 11:50 P.M.	
		Field	Office	Field	Office	Field	Office
Initial Hydrostatic		1948	1914		1930		
First Period	Flow Initial	26	9		24		
	Flow Final	33	14		27		
	Closed in	1922	564		577		
Second Period	Flow Initial						
	Flow Final						
	Closed in						
Third Period	Flow Initial						
	Flow Final						
	Closed in						
Final Hydrostatic			1905		1922		

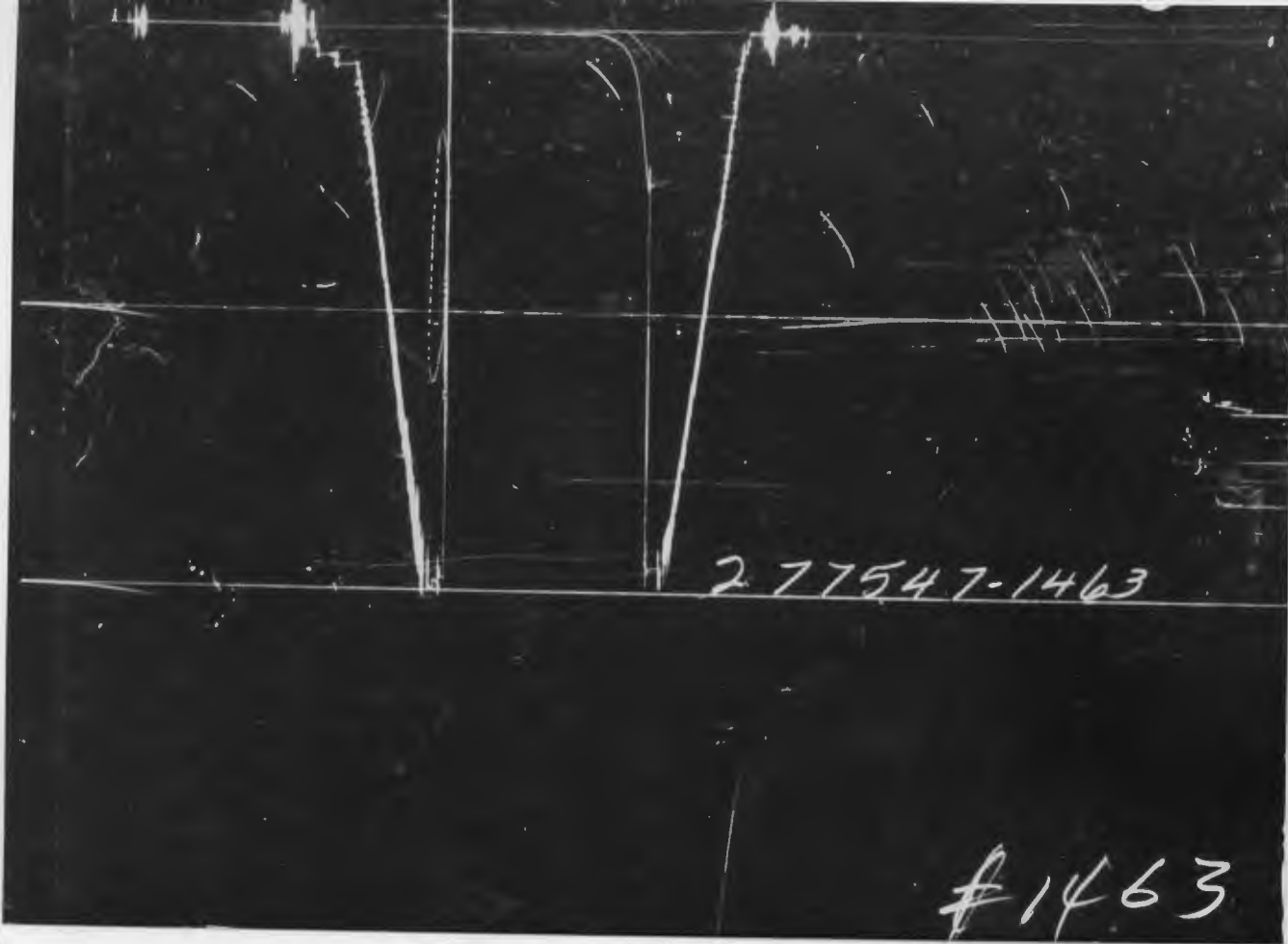
	O. D.	I. D.	LENGTH	DEPTH
Reversing Sub	5.75"	2.75"	12"	
Water Cushion Valve				
Drill Pipe	4½"	3.826"	3418'	
Drill Collars				
Handling Sub & Choke Assembly	5"	.87"	60.92"	
Dual CIP Valve				
Dual CIP Sampler	5"	.75"	60.21"	3428'
Hydro-Spring Tester				
Multiple CIP Sampler				
Extension Joint				
AP Running Case	5"	3.06"	49.63"	3432'
Hydraulic Jar	5"	.87"	39.46"	
VR Safety Joint	5"	1"	33.40"	
Pressure Equalizing Crossover				
Packer Assembly	6 3/4"	1.53"	48.89"	3442'
Distributor				
Packer Assembly				
Flush Joint Anchor	5"	2.37"	18'	
Pressure Equalizing Tube				
Blanked-Off B.T. Running Case	5"	3.06"	49.63"	3456'
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				

**TEMPERATURE
RECORDER
CHART**

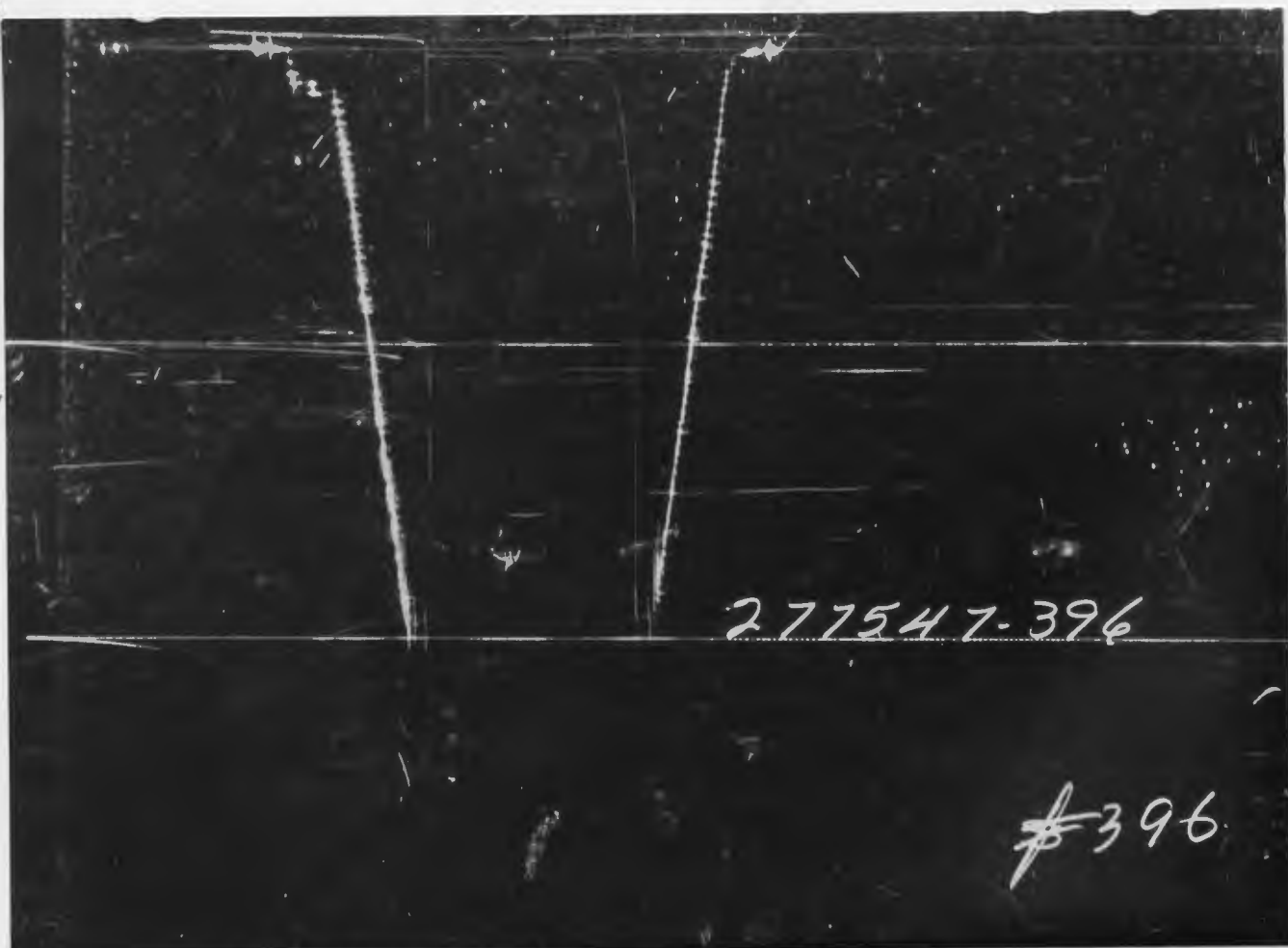


10° each circle

PRESSURE



TIME



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