

FLUID SAMPLE DATA		Date	8-13-80	Ticket Number	988512
Sampler Pressure	170 P.S.I.G. at Surface	Kind of D.S.T.	OPEN HOLE	Halliburton Location	GREAT BEND
Recovery: Cu. Ft. Gas	.33	Tester	MR. DREWS	Witness	MR. WHISTLER
cc. Oil	58.75	Drilling Contractor	EMPHASIS OIL OPERATIONS BC		
cc. Water		EQUIPMENT & HOLE DATA			
cc. Mud		Formation Tested	Scranton		
Tot. Liquid cc.		Elevation	1772'	KB	
Gravity	39 ° API @ 60 °F.	Net Productive Interval	10.5'		
Gas/Oil Ratio	892 cu. ft./bbl.	All Depths Measured From	Kelly Bushing		
		Total Depth	2476'		
		Main Hole/Casing Size	7 7/8"		
		Drill Collar Length	181'	I.D.	2.25"
		Drill Pipe Length	2270'	I.D.	3.340"
		Packer Depth(s)	2446' - 2451'		
		Depth Tester Valve	2430'		

TYPE	AMOUNT	Depth Back Ft.	Surface Choke	Bottom Choke
Cushion			2"	.75"
Recovered	310 Feet of Gas in pipe			
Recovered	10 Feet of Drilling mud			
Recovered	5 Feet of Free oil			
Recovered	60 Feet of Slightly oil and gas cut mud			
Recovered	180 Feet of Muddy water			
Remarks	180 feet of Water			

SEE PRODUCTION TEST DATA SHEET.

TEMPERATURE	Gauge No.	7752	Gauge No.	7751	Gauge No.	7751	TIME (00:00-24:00 hrs.)
	Depth:	2431'	Ft.	Depth:	2472'	Ft.	
Est. °F.	12 Hour Clock	Blanked Off	NO	12 Hour Clock	Blanked Off	YES	Hour Clock
2471'							Tool Opened 1237
Actual 96 °F.							Opened Bypass 1647
	Field	Office	Field	Office	Field	Office	Reported Minutes
Initial Hydrostatic		1266.8	1301	1281.6			Computed Minutes
First Period	Flow Initial	21.1	40	39.0			
	Flow Final	84.5	90	100.0			10 10
	Closed in	835.3	847	849.5			60 61
Second Period	Flow Initial	102.6	90	115.0			
	Flow Final	225.3	220	237.0			60 60
	Closed in	813.5	827	828.7			120 119
Third Period	Flow Initial						
	Flow Final						
	Closed in						
Final Hydrostatic		1254.9	1282	1269.7			

Legal Location Sec. - Twp. - Rng. NW SE NE 18 - 20S - 10W  
 Lease Name MUNTEL  
 Well No. 6  
 Test No. 1  
 Tested Interval 2451' - 2476'  
 Field Area CHASE-SILICA  
 County RICE  
 State KANSAS  
 Lease Owner/Company Name SOHIO PETROLEUM COMPANY



Gauge No.		7752		Depth		2431'		Clock No.		14237		12 hour		Ticket No.		988512	
First Flow Period		Closed In Pressure		Second Flow Period		Closed In Pressure		Second Flow Period		Third Flow Period		Closed In Pressure		Third Flow Period		Third Flow Period	
Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\text{Log } \frac{t + \theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\text{Log } \frac{t + \theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\text{Log } \frac{t + \theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\text{Log } \frac{t + \theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.
0	.0000	21.1		.0000	84.5	.0000	102.6	.0000	225.3	.0000	225.3	.0000	225.3	.0000			
1	.0132	33.1		.0268	630.9	.0668	130.7	.0468	603.1**	.0668	603.1**	.0468	603.1**	.0668			
2	.0264	47.2		.0535	724.2	.1337	154.9	.1002	679.5	.1337	679.5	.1002	679.5	.1337			
3	.0396	60.3		.0803	763.8	.2005	175.0	.1537	718.2	.2005	718.2	.1537	718.2	.2005			
4	.0528	72.4		.1070	783.7	.2673	193.1	.2071	744.0	.2673	744.0	.2071	744.0	.2673			
5	.0660	84.5		.1338	797.6	.3342	208.2	.2605	760.9	.3342	760.9	.2605	760.9	.3342			
6				.1605	806.5	.4010	225.3	.3140	771.8	.4010	771.8	.3140	771.8	.4010			
7				.1873	813.5			.3674	781.7			.3674	781.7				
8				.2140	818.4			.4209	788.7			.4209	788.7				
9				.2408	822.4			.4743	793.6			.4743	793.6				
10				.2675	825.4			.5278	798.6			.5278	798.6				
11				.2943	827.3			.5812	802.5			.5812	802.5				
12				.3210	830.3			.6347	806.5			.6347	806.5				
13				.3478	832.3			.6881	808.5			.6881	808.5				
14				.3746	833.3			.7416	811.5			.7416	811.5				
15				.4080	835.3*			.7950	813.5			.7950	813.5				
Gauge No.		7751		Depth		2472'		Clock No.		14235		12hour					
Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\text{Log } \frac{t + \theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\text{Log } \frac{t + \theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\text{Log } \frac{t + \theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.	Time Defl. .000"	$\text{Log } \frac{t + \theta}{\theta}$	Time Defl. .000"	PSIG Temp. Corr.
0	.0000	39.0		.0000	100.0	.0000	115.0	.0000	237.0	.0000	237.0	.0000	237.0	.0000			
1	.0132	48.0		.0264	649.5	.0663	146.0	.0466	615.8**	.0663	615.8**	.0466	615.8**	.0663			
2	.0264	62.0		.0529	740.5	.1327	170.0	.1000	693.0	.1327	693.0	.1000	693.0	.1327			
3	.0396	75.0		.0793	779.2	.1990	190.0	.1533	733.6	.1990	733.6	.1533	733.6	.1990			
4	.0528	89.0		.1057	800.0	.2653	228.0	.2066	758.4	.2653	758.4	.2066	758.4	.2653			
5	.0660	100.0		.1321	812.8	.3317	223.0	.2599	774.2	.3317	774.2	.2599	774.2	.3317			
6				.1586	822.7	.3980	237.0	.3132	787.1	.3980	787.1	.3132	787.1	.3980			
7				.1850	828.7			.3665	796.0			.3665	796.0				
8				.2114	833.6			.4198	820.9			.4198	820.9				
9				.2378	837.6			.4731	808.9			.4731	808.9				
10				.2643	840.5			.5264	813.8			.5264	813.8				
11				.2907	843.5			.5798	817.8			.5798	817.8				
12				.3171	845.5			.6331	820.7			.6331	820.7				
13				.3435	847.5			.6864	823.7			.6864	823.7				
14				.3700	848.5			.7397	825.7			.7397	825.7				
15				.4030	849.5*			.7930	828.7			.7930	828.7				
Reading Interval		2		4		10		8								Minutes	
REMARKS: *Interval = 5 minutes **Interval = 7 minutes																	

SPECIAL PRESSURE DATA

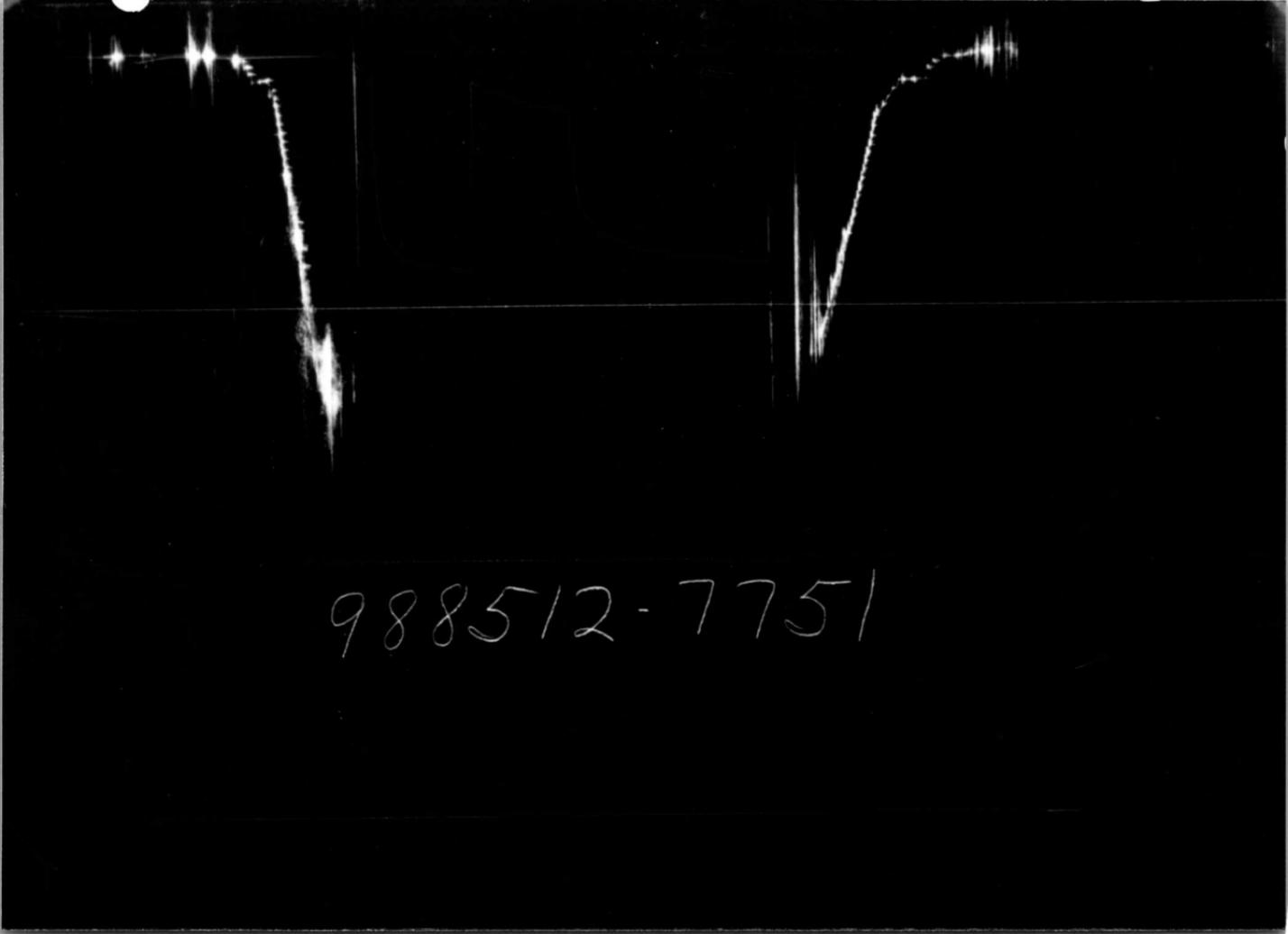
	O. D.	I. D.	LENGTH	DEPTH
Drill Pipe or Tubing	4"	3.340"	2270'	
Drill Collars				2236'
Reversing Sub	6.25"	2.75"	1'	
Water Cushion Valve				
Drill Pipe				
Drill Collars	6.25"	2.75"	181'	
Handling Sub & Choke Assembly				
Dual CIP Valve				
Dual CIP Sampler	5"	.87"	8'	2423'
Hydro-Spring Tester	5"	.75"	5'	2430'
Multiple CIP Sampler				
Extension Joint				
AP Running Case	5"	3.75"	4'	2431'
Hydraulic Jar	5"	1.75"	5'	
VR Safety Joint	5"	1"	2.80'	
Pressure Equalizing Crossover				
Packer Assembly	6.75"	1.53"	4½'	2446'
Distributor				
Packer Assembly	6.75"	1.53"	4½'	2451'
Flush Joint Anchor				
Pressure Equalizing Tube				
Blanked-Off B.T. Running Case				
Drill Collars				
Anchor Pipe Safety Joint				
Packer Assembly				
Distributor				
Packer Assembly				
Anchor Pipe Safety Joint				
Side Wall Anchor				
Drill Collars				
Flush Joint Anchor	5"	3.84"	18'	
Blanked-Off B.T. Running Case	5"	2.75"	5.50'	2472'
With Temp. recorder				2476'
Total Depth				



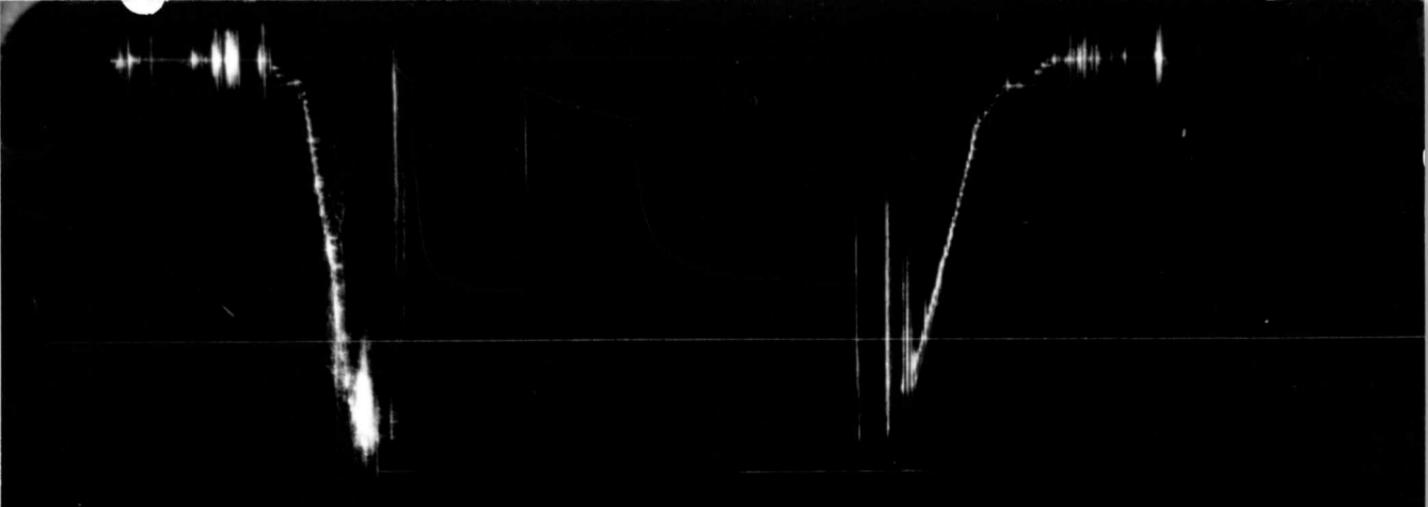
TEMPERATURE  
RECORDER  
CHART



10° each circle



988512-7751



988512-7752

FLUID SAMPLE DATA				Date	8-14-80	Ticket Number	988513
Sampler Pressure	390	P.S.I.G. at Surface		Kind of D.S.T.	OPEN HOLE	Halliburton Location	GREAT BEND
Recovery: Cu. Ft. Gas	NONE			Tester	GREG DREWS	Witness	FRANCIS WHISLER
cc. Oil	.120			Drilling Contractor	EMPHASIS OIL OPERATIONS		NM S
cc. Water	2.090			EQUIPMENT & HOLE DATA			
cc. Mud	.210			Formation Tested	Severy		
Tot. Liquid cc.	2.400			Elevation	1772'	K.B.	Ft.
WATER Gravity	1.135	° API @ _____ °F.		Net Productive Interval	-		
Gas/Oil Ratio			cu. ft./bbl.	All Depths Measured From	Kelly Bushing		
RESISTIVITY		CHLORIDE CONTENT		Total Depth	2600'		
Recovery Water	_____ @ _____ °F.	_____ ppm		Main Hole/Casing Size	7 7/8"		
Recovery Mud	_____ @ _____ °F.	_____ ppm		Drill Collar Length	181.00'	I.D.	2.25"
Recovery Mud Filtrate	_____ @ _____ °F.	_____ ppm		Drill Pipe Length	2363'	I.D.	3.340"
Mud Pit Sample	_____ @ _____ °F.	32,000 ppm		Packer Depth(s)	2547' - 2552'		
Mud Pit Sample Filtrate	_____ @ _____ °F.	_____ ppm		Depth Tester Valve	2531'		
Mud Weight	9.6	vis	51 sec.				
Cushion	TYPE NONE	AMOUNT	Depth Back Pres. Valve	NONE	Surface Choke	NONE	Bottom Choke .75"
Recovered	120'	Feet of	drilling mud				
Recovered	780'	Feet of	muddy water				
Recovered	480'	Feet of	water - 1.135 <sup>0</sup>				
Recovered		Feet of					
Recovered		Feet of					
Remarks SEE PRODUCTION TEST DATA SHEET...							
TEMPERATURE		Gauge No. 7752	Gauge No. 7751	Gauge No.	TIME		
		Depth: 2532' Ft.	Depth: 2596' Ft.	Depth: _____ Ft.	(00:00-24:00 hrs.)		
Est. _____ °F.		12 Hour Clock	12 Hour Clock	Hour Clock	Tool Opened 1502		
2595' @		Blanked Off NO	Blanked Off YES	Blanked Off	Opened Bypass 1907		
Actual 92 °F.		Pressures		Pressures		Pressures	
	Field	Office	Field	Office	Field	Office	Reported
Initial Hydrostatic	-	1345.2	1390	1383.3			Minutes
First Period	Flow Initial	94.5	220	252.0			Minutes
	Flow Final	339.0	380	374.0	5	6	
	Closed in	796.6	807	828.7	60	60	
Second Period	Flow Initial	372.2	380	407.0			
	Flow Final	781.7	797	809.9	60	60	
	Closed in	796.6	807	826.7	120	119	
Third Period	Flow Initial						
	Flow Final						
	Closed in						
Final Hydrostatic	-	1296.6	1341	1324.0			

Legal Location: NM-SE-NE - 18 - 20S - 10W  
 Sec. - Twp. - Rng. - 6  
 Well No. 2  
 Test No. 2  
 Tested Interval 2552' - 2600'  
 Field Area CHASE - SILICA  
 Meas. From Tester Valve  
 County RICE  
 State KANSAS  
 Lease Owner/Company Name SOHIO PETROLEUM COMPANY

MANTEL  
 6  
 2552' - 2600'  
 SOHIO PETROLEUM COMPANY



Gauge No.		7752		Depth		2532'		Clock No.		14237		12 hour		Ticket No.		988513	
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.	Time Defl. .000"	$\text{Log } \frac{t + \theta}{\theta}$	PSIG Temp. Corr.
0	.000	94.5	.000	339.0	.000	372.2	.000	.000	781.7	.000	796.6						
1	.0065	209.2	.0267	759.9	.067	566.4	.801										
2	.0130	229.3	.0533	773.8	.134	671.6											
3	.0195	250.4	.0800	781.7	.201	722.2											
4	.0260	264.5	.1067	785.7	.268	751.9											
5	.0325	319.9	.1333	788.7	.335	768.8											
6	.0390	339.0	.1600	789.6	.402	781.7											
7			.1867	791.6													
8			.2133	792.6													
9			.2400	793.6													
10			.2667	794.6													
11			.2933	795.6													
12			.3200	796.6													
13			.3467	796.6													
14			.3733	796.6													
15			.4000	796.6													
Gauge No.		7751		Depth		2596'		Clock No.		14235		hour		12			
0	.000	252.0	.000	374.0	.000	407.0	.000	.000	809.9	.000	826.7						
1	.0065	379.0	.0265	792.0	.0667	603.9	.793										
2	.0130	396.0	.0529	806.9	.1333	707.9											
3	.0195	421.0	.0794	813.8	.2000	755.4											
4	.0260	443.0	.1059	817.8	.2667	784.1											
5	.0325	362.0	.1323	820.7	.3334	799.0											
6	.0390	374.0	.1588	821.7	.4000	809.9											
7			.1853	823.7													
8			.2117	824.7													
9			.2382	825.7													
10			.2647	826.7													
11			.2911	826.7													
12			.3176	826.7													
13			.3441	827.7													
14			.3705	828.7													
15			.3970	828.7													
Reading Interval		1		4		10										Minutes	
REMARKS:																	

9

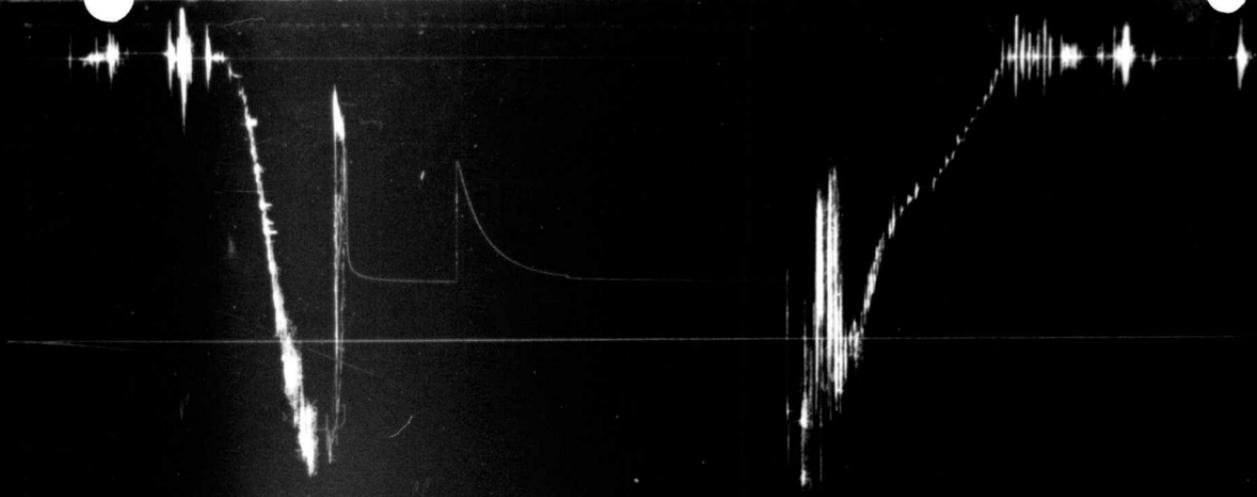
	O. D.	I. D.	LENGTH	DEPTH
Drill Pipe <del>or Sub</del> .....	4.00"	3.340"	2363.00'	
Drill Collars .....	6.25"	2.75"	1.00'	2337'
Reversing Sub .....				
Water Cushion Valve .....				
Drill Pipe .....	6.25"	2.25"	181.00'	
Drill Collars .....				
Handling Sub & Choke Assembly .....				
Dual CIP Valve .....	5.00"	.87"	8.00'	2524'
Dual CIP Sampler .....	5.00"	.75"	5.00'	2531'
Hydro-Spring Tester .....				
Multiple CIP Sampler .....				
Extension Joint .....				
AP Running Case .....	5.00"	3.75"	4.00'	2532'
Hydraulic Jar .....	5.00"	1.75"	5.00'	
VR Safety Joint .....	5.00"	1.00"	2.80'	
Pressure Equalizing Crossover .....				
Packer Assembly .....	6.75"	1.53"	4.50'	2547'
Distributor .....				
Packer Assembly .....	6.75"	1.53"	4.50'	2552'
Flush Joint Anchor .....	5.00"	3.84"	5.00'	
Pressure Equalizing Tube .....				
Blanked-Off B.T. Running Case .....				
<b>DRILL PIPE AND</b> *Drill Collars <b>SUBS</b> .....	4.00"	3.34"	34.00'	
Anchor Pipe Safety Joint .....				
Packer Assembly .....				
Distributor .....				
Packer Assembly .....				
Anchor Pipe Safety Joint .....				
Side Wall Anchor .....				
Drill Collars .....				
Flush Joint Anchor .....	5.00"	3.84"	2.00'	
Blanked-Off B.T. Running Case .....	5.00"	2.75"	5.50'	2596'
w/temp case .....				2600'
Total Depth .....				

TEMPERATURE  
RECORDER  
CHART

# 988513

← 92°

10° each circle



9.88513 - 7752 #



988513-7751