

DEVIATION - TOTCO SURVEYS

Larry Leonard No. 9-E

	Off	1/2	Deg.		Off	1/4	DEG.
295'	"	3/4	"	7950'	"	1/2	"
595	"	3/4	"	7995	"	3/4	"
865	"	1/4	"	8060	"	3/4	"
1100	"	3/4	"	8085	"	1/4	"
1305	"	1-1/4	"	8166	"	1/4	"
1575	"	1-3/4	"	8200	"	3/4	"
1945	"	3	"	8275	"	3/4	"
2225	"	3	"	8330	"	3/4	"
2425	"	3	"	8395	"	1	"
2485	"	3	"	8515	"	1-1/2	"
2515	"	3	"	8550	"	1-1/4	"
2550	"	2-1/2	"	8584	"	1	"
2590	"	2-1/4	"	8670	"	1	"
2638	"	2	"	8715	"	1-1/2	"
2725	"	1-3/4	"	8810	"	1-3/4	"
2890	"	1-1/4	"	8868	"	1-3/4	"
3020	"	1	"	8900	"	4	"
3155	"	3/4	"	8930	"	4-1/2	"
3274	"	1/4	"	8943	"	4-1/2	"
3535	"	1/2	"	8953	"	4-1/2	"
3650	"	1/2	"	8963	"	4-1/4	"
3788	"	0	"	8983	"	3-1/2	"
3850	"	1/2	"	8998	"	3-1/4	"
3939	"	1/2	"	9032	"	3-1/4	"
3983	"	3/4	"	9047	"	3-1/4	"
4072	"	3/4	"	9069	"	3-1/2	"
4120	"	1/2	"	9100	"	3-1/2	"
4175	"	1/4	"	9126	"	3-1/2	"
4278	"	1/2	"	9167	"	3-1/4	"
4376	"	1/4	"	9191	"	2-3/4	"
4506	"	1/4	"	9221	"	2-3/4	"
4617	"	1/4	"	9253	"	2-1/2	"
4749	"	0	"	9307	"	2-1/2	"
4873	"	0	"	9340	"	2	"
4974	"	1/2	"	9388	"	2-1/4	"
5050	"	1	"	9428	"	2-1/4	"
5055	"	1	"	9468	"	2	"
5190	"	1/4	"	9508	"	1-3/4	"
5230	"	3/4	"	9540	"	2-3/4	"
5305	"	1/2	"	9580	"	1-1/2	"
5395	"	0	"	9628	"	1-1/4	"
5485	"	1/4	"	9660	"	3/4	"
5570	"	1/2	"	9703	"	1/4	"
5675	"	1/2	"	9777	"	3/4	"
5728	"	1/2	"	9828	"	1/4	"
5837	"	1/4	"	8975	"	3/4	"
5920	"	3/4	"	9907	"	1/4	"
6075	"	1/2	"	9940	"	1/4	"
6150	"	1	"	9975	"	1/2	"
6200	"	1	"	9997	"	1/2	"
6250	"	1	"	10028	"	1/4	"
6305	"	3/4	"	10079	"	1/2	"
6500	"	3/4	"	10180	"		
6586	"	1	"				
6635	"	2	"				
6710	"	1	"				
6835	"	3/4	"				
6895	"	3/4	"				
6945	"	1-1/4	"				
6997	"	1-1/4	"				
7095	"	1-1/4	"				
7155	"	1-1/4	"				
7210	"	1-1/2	"				
7268	"	3/4	"				
7338	"	1	"				
7380	"	1-1/2	"				
7435	"	1	"				
7499	"	3/4	"				
7658	"	1/4	"				
7720	"	1/4	"				
7765	"	1/4	"				

DRILL STEM TESTS - H. LEONARD

- No. 1 - 2-14-52 - 1 Hour Johnston DST 6155-6280' w/5/8" ch. #9-E
packers at 6148' and 6155' - Bombs at 6276' and 6278' - Tool at 6128' - Used 2
2-14-52 - Gas to surface 45 minutes, too small to measure - Tool opened at 5:50 A.M.
test - Recovered 300' fluid, oil and gas cut mud, cut 25% oil - Hydrostatic Pressure 2900# - Flowing Pressure 0# - 15 Minute BHP 450#.
- No. 2 - 2-15-52 - 1 Hour Johnston DST 6280-6397' with 5/8" ch.
packers at 6275' and 6280' - Bombs at 6393' and 6395' - Tool open.
2-15-52 - Small blow air throughout test, no gas - Recovered 451', - Used 2
show - Hydrostatic Pressure 2875# - Flowing Pressure and 15 Min.: 45 p.m., no
drostatic
- No. 3 - 2-17-52 - 1 Hour Johnston DST 6397-6528' w/5/8" choke at 6501' - Used 2
packers at 6389' and 6528' - Bombs at 6391' and 6395' - Tool open.
2-17-52 - Gas to surface 44 minutes, too small to measure - Recovered
all oil and gas cut drilling mud - cut 25% oil - Hydrostatic Pressure
Flowing Pressure 200# - 15 Minute BHP 450#.
- No. 4 - 2-19-52 - 1 Hour Johnston DST 6528-6642' w/5/8" choke at 6501'
packers at 6517' and 6528' - Bombs at 6638' and 6640' - Tool opened 1
2-19-52 - No gas, very small blow of air for 30 minutes - Recovered 25
mud with trace of oil - Hydrostatic Pressure 3075# - Flowing Pressure 0#.
- No. 5 - 2-20-52 - 1 Hour Johnston DST 6642-6780' w/5/8" choke at 6618' -
packers at 6642' and 6634' - Bombs at 6776' and 6778' - Tool opened 2:15 p.
2-20-52 - Gas to surface 12 minutes - 24 hour rate 56,000 cu.ft. - No fluid
surface - Recovered 200' fluid - Oil and gas cut mud, cut 10% oil - Hydrostatic
Pressure 3250# - Flowing Pressure 500# - 15 Minute BHP 2500#.
- No. 6 - 2-22-52 - 1 Hour Johnston DST 6780-6897' w/5/8" choke at 6760' - Used 2
packers at 6775' and 6780' - Bombs at 6893' and 6895' - Tool opened 6:50 a.m.
2-22-52 - Gas to surface 10 minutes - 24 hour rate 38,800 cu.ft. - No fluid to
surface - Reversed out 261' fluid, gas cut mud with trace of oil - Hydrostatic
Pressure 3420# - Flowing Pressure 200# - 15 Minute BHP 1780#.
- No. 7 - 2-24-52 - 1 Hour Johnston DST 6897-7000' w/5/8" choke at 6873' - Used 2
packers at 6888' and 6897' - Bombs at 6996' and 6998' - Tool opened 2:00 a.m.
2-24-52 - No gas or fluid to surface - Small blow of air for 20 minutes and dead
remainder of test - Recovered 30' drilling mud, no show - Hydrostatic Pressure
3450# - Flowing Pressure and 15 Minute BHP 0#.
- No. 8 - 3-4-52 - 1 Hour Johnston DST 7645-7770' w/5/8" choke at 7618' - Used 2
packers at 7640' and 7645' - Bombs at 7766' and 7768' - Tool opened 8:45 p.m.
3-4-52 - No gas to surface - Weak blow of air for 30 minutes and dead remainder
of test - Recovered 30' drilling mud, no show oil or gas - Hydrostatic Pressure
3825# - Flowing Pressure and 15 Minute BHP 0#.
- No. 9 - 3-7-52 - 1 Hour Johnston DST 7770-7889' w/5/8" choke at 7747' - Used 2
packers at 7762' and 7770' - Bombs at 7885' and 7887' - Tool opened at 7:00 p.m.
3-7-52 - Gas to surface in 15 minutes - 24 hour rate 56,000 cu.ft. - No fluid -
Reverse circulated out 5 bbls fluid, 3 bbls drilling mud, 2 bbls oil and gas
cut mud, 1% or slight show of oil - Hydrostatic Pressure 4025# - Flowing Pressure
725# - 15 Minute BHP 2600#.
- No. 10 - 3-24-52 - 1 Hour Johnston DST 8670-8770' w/5/8" choke at 8642' - Used 2
packers at 8662' and 8670' - Bombs at 8765' and 8768' - Tool opened at 10:00 p.m.
3-24-52 - No gas or fluid to surface - Medium blow of air throughout test -
Recovered 300' oil and gas cut mud - cut 40% oil, no water - Hydrostatic Pressure
4575# - Flowing Pressure 500# - 15 Minute BHP 2650#.
- No. 11, 3-26-52 - 1 Hour Johnston DST 8770-8814' w/5/8" choke at 8750' - Used 2
packers at 8762' and 8770' - Bombs at 8810' and 8812' - Tool opened 3:15 a.m.
3-26-52 - No gas or fluid to surface - Medium blow of air throughout test -
Recovered 660' fluid, 450' drilling mud, 210' water, sulphur small - Hydrostatic
Pressure 4525# - Flowing Pressure 350# - 15 Minute BHP 3200#.
- No. 12 - 4-28-52 - Misrun.
- No. 13 - 4-29-52 - 1 Hour Johnston DST 10,078-10,125' w/5/8" choke at 10,054' -
Used 2 packers at 10,069' and 10,078' - Bombs at 10,021' and 10,023' - Tool
opened 10:00 a.m. 4-29-52 - No gas to surface, weak blow of air for 5 minutes
and dead remainder of test - Recovered 15' drilling mud, no show oil, gas or
water - Hydrostatic Pressure 4925# - Flowing Pressure and 15 Minute BHP 0#.

THE HISTORY OF THE

REIGN OF KING CHARLES THE FIRST
IN WHICH ARE CONTAINED
THE MOST IMPORTANT AND INTERESTING
CIRCUMSTANCES OF HIS REIGN
FROM THE BEGINNING OF HIS REIGN
UNTIL HIS DEATH

BY
JOHN BURNET
BISHOP OF SALISBURY

LONDON
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1724

IN TWO VOLUMES.
THE FIRST

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THE SECOND
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No. 14 - 5-2-52 - 1 Hour Johnston DST 10,160-10,265' w/5/8" choke at 10,136' - Used 2 packers at 10,150' and 10,160' - Bombs at 10,161' and 10,163' - Tool opened 2:45 a.m. 5-2-52 - Gas to surface 35 minutes, too small to measure - Small blow throughout test - No fluid to surface - Recovered 9810' fluid, 1000' drilling mud, 8810' 42.0 gravity clean oil - No water - Hydrostatic Pressure 5125# - Flowing Pressure 1700-3200# - 15 Minute BHP 4225#.

No. 15 - 5-3-52 - 1 Hour 30 minute Johnston DST 10,265-10,300' w/5/8" choke at 10,242' - Used 2 packers 10,255' and 10,265' - Bombs at 10,295' and 10,298' - Tool opened 4:00 p.m. 5-3-52 - Gas to surface 12 minutes, too small to measure - Decreased at end of test - Reversed out 18 bbls oil and gas cut mud, cut 25% oil - 15 bbls clean oil, no water - Hydrostatic Pressure 5250# - Flowing Pressure 125-650# - 15 Minute BHP 3050#.