

HARRY LEONARD "A" #13

DRILL STEM TESTS

- No. 1, 6-25-52 - 1 Hour Halliburton Drill Stem Test 6158-6270' with 5/8" choke at 6127' - Used 2 packers at 6158' and 6150' - Bombs at 6267' and 6131' - Tool opened 6:10 PM 6-25-52 - Very light blow 10 minutes and died - No gas or fluid to surface - Recovered 40' drilling mud - Hydrostatic in 3110# out 3045# - Flowing Pressure and 15 minute BHP 0#.
- No. 2, 6-28-52 - 2 Hour Halliburton Drill Stem Test 6390-6515' with 5/8" choke at 6356' - Used 2 packers at 6382' and 6390' - Bombs at 6362' and 6515' - Tool opened 9:10 PM 6-28-52 - Small amount gas to surface 45 minutes, no fluid to surface - Recovered 360' of slightly oil and gas cut mud, mud cut 1% with oil - Hydrostatic Pressure in 2990# out 2990# - Flowing Pressure initial 0# final 140# - 15 minute BHP 518#.
- No. 3, 6-30-52 - 2 Hour Johnston Drill Stem Test 6515-6640' with 5/8" choke at 6477' - Used 2 packers at 6510' and 6514' - Bombs at 6638' and 6625' - Tool opened 11:54 AM 6-30-52 - No gas or fluid to surface - Recovered 30' drilling mud - Hydrostatic Pressure 3450# - Flowing Pressure 0# - 15 minute BHP 232#.
- No. 4, 7-2-52 - 2 Hour 30 minute Halliburton Drill Stem Test 6640-6765' with 5/8" choke at 6609' - Used 2 packers at 6640' and 6632' - Bombs at 6762' and 6612' Tool opened 4:45 AM 7-2-52 - Small amount of gas to surface in 40 minutes, too small to measure - Recovered 345' oil and gas cut drilling mud, cut 2% oil - Hydrostatic Pressure in 3275# out 3250# - Flowing Pressure 145# - 15 minute BHP 195#.
- No. 5, 7-3-52 - 2 Hour Halliburton Drill Stem Test 6763-6884' with 5/8" choke at 6731' - Used 2 packers at 6754' and 6763' - Bombs at 6736' and 6888' - Tool opened 10:15 PM 7-3-52 - Gas to surface 11 minutes (24 hour rate 10,400 cu.ft.) No fluid to surface - Recovered 1045' oil and gas cut mud, cut 8% oil - Hydrostatic 3320# in 3320 out - Flowing Pressure initial 100# final 385# - 15 minute BHP 2430#.
- No. 6, 7-5-52 - 2 Hour Halliburton Drill Stem Test 6884-7005' with 5/8" choke at 6582' - Used 2 packers at 6876' and 6884' - Bombs at 7002' and 6858' - Tool opened 7:30 PM 7-5-52 - No gas or fluid to surface, light blow of air for 10 minutes, dead remainder of test - Recovered 60' oil and gas cut drilling mud, cut 2% oil - Hydrostatic Pressure 3350# - Flowing Pressure 0# - 15 minute BHP 170#.
- No. 7, 7-15-52 - 2 Hour Johnston Drill Stem Test 7640-7750' with 5/8" choke at 7619' - Used 2 packers at 7632' and 7640' - Bombs at 7746' and 7749' - Tool opened 11:20 PM 7-14-52 - Fair blow of air throughout test, no gas - Recovered 85' rotary drilling mud, slightly gas cut - Hydrostatic Pressure 4000# - Flowing Pressure 0# 15 minute BHP 0#.
- No. 8, 7-17-52 - 2 Hour Johnston Drill Stem Test 7750-7860' with 5/8" choke at 7729' - Used 2 packers at 7742' and 7750' - Bombs at 7856' and 7858' - Tool opened 2:20 AM 7-17-52 - Gas to surface 10 minutes (24 hour rate 48,000 cu.ft.) No fluid Recovered 800' fluid, gas cut mud with trace of oil - Hydrostatic Pressure 3650# - Flowing Pressure 675# - 15 minute BHP 2500#.
- No. 9, 7-20-52 - 2 Hour Johnston Drill Stem Test 7825-7945' with 5/8" choke at 7899 - Used 2 packers at 7821' and 7825' - Bombs at 7940 and 7942' - Tool opened 4:00 AM 7-20-52 - Gas to surface 20 minutes (24 hour rate 38,800 cu.ft.) No fluid Reversed out 6 bbls oil and gas cut mud, cut 4% oil - Hydrostatic Pressure 4125# Flowing Pressure 500# - 15 minute BHP 2850#.
- No. 10, 8-4-52 - 2 Hour Johnston Drill Stem Test 8650-8760' with 5/8" choke at 8625' - Used 2 packers at 8642' and 8650' - Bombs at 8756' and 8758' - Tool opened 3:40 AM 8-4-52 - Gas to surface 1½ hours, too small to measure - Reversed out 14.5 bbls oil and gas cut mud, cut 10% oil - Recovered 258' mud with sulphur odor - Hydrostatic Pressure 4500# - Flowing Pressure 375# - 15 minute BHP 1500#.
- No. 11, 9-13-52 - 2 Hour Johnston Drill Stem Test 10,268-10,300' with 5/8" choke at 10,246' - Used 2 packers at 10,263' and 10,268' - Bombs at 10,296' and 10,298' - Tool opened 1:40 PM 9-13-52 - No gas or fluid to surface - Light blow of air throughout test - Recovered 130' oil and gas cut mud, cut 15% oil, no water - Hydrostatic Pressure 5425# - Flowing Pressure 0# - 15 minute BHP 425#.
- No. 12, 9-17-52 - 2 Hour Johnston Drill Stem Test 10,430-10,460' with 5/8" Choke at 10,366' - Used 2 packers at 10,422' and 10,430' - Bombs at 10,458' and 10,460' - Tool opened 2:15 PM 9-17-52 - Gas to surface 1-1/4 hours, too small to measure and decreased gradually to end of test - Recovered 286' gas cut drilling mud with stain of oil on top fluid, no water - Hydrostatic Pressure 5225# - Flowing Pressure 100# 15 minute BHP 2475#.



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DRILL STEM TESTS CONTINUED

No. 13, 9-18-52 - 2 Hour Johnston Drill Stem Test 10,460-10,490' with 5/8" choke at 10,437' - Used 2 Packers at 10,452' and 10,460' - Bombs at 10,486' and 10,488' Tool opened 7:55 AM 9-18-52 - No gas to surface - Medium blow of air throughout test - Recovered 200' drilling mud with gas odor, no water - Hydrostatic Pressure 5250# - Flowing Pressure 0# - 15 minute BHP 375#.

No. 14, 9-20-52 - 2 Hour Johnston Drill Stem Test 10,490-10,540' with 5/8" choke at 10,467' - Used 2 packers at 10,482' and 10,490' - Bombs at 10,536' and 10,538' Tool opened 1:35PM 9-20-52 - No gas to surface, medium blow of air 1-1/2 hours, dead 30 minutes - Recovered 323' fluid, drilling mud, no shows - Sulphur odor - Hydrostatic Pressure 5250# - Flowing Pressure 100# - 15 minute BHP 2500#.

No. 15, 9-22-52 - 2 Hour Johnston Drill Stem Test 10,540-10,590' with 5/8" choke at 10,517' - Used 2 packers 10,532' and 10,540' - Bombs at 10,586' and 10,588' - Tool opened 1:30 AM 9-22-52 - No gas to surface, good blow of air, decreased at end of test - Recovered 3510' sulphur water, no oil show - Hydrostatic Pressure 5375# - Flowing Pressure 1625# - 15 minute BHP 3200#.

DEVIATION - TOTCO SURVEYS

<u>DEPTH</u>	<u>DEG.OFF</u>	<u>DEPTH</u>	<u>DEG.OFF</u>	<u>DEPTH</u>	<u>DEG.OFF</u>
525'	1/2	6070	1	8733	1-3/4
725	1-1/4	6139	1	8759	2-1/4
890	1/2	6205	1-1/2	8805	2-1/4
1105	3/4	6310	1	8880	2-1/2
1310	1-1/4	6363	1-1/4	9010	3-1/2
1550	3	6510	1-1/4	9024	1-1/2
1620	2-1/4	6590	1-3/4	9045	3-1/4
1710	2	6704	1-3/4	9060	3-1/2
1800	1-3/4	6880	2	9080	3-3/4
1910	1-1/2	6938	2	9096	3-3/4
2025	1-1/2	7000	1-1/4	9126	4
2300	2-1/4	7055	2	9144	3-3/4
2660	1-3/4	7166	3/4	9158	3-3/4
2714	1-3/4	7175	1-1/4	9197	3-1/2
2810	1-3/4	7225	1-1/4	9210	3-3/4
2870	1-3/4	7289	1-3/4	9224	3-1/2
3010	1-1/2	7330	1-3/4	9253	3-1/4
3165	1-1/2	7376	1-3/4	9292	3-1/4
3655	1-1/4	7425	1-1/4	9330	3
3866	1-3/4	7485	1-1/4	9354	2-3/4
3952	2	7530	1-1/4	9410	2-3/4
4000	2	7570	1-1/4	9477	2-3/4
4155	1-1/2	7635	2	9603	2-1/2
4188	2	7728	2	9645	2-1/4
4252	1-3/4	7840	1-1/4	9688	2-1/4
4325	1-3/4	7885	1-3/4	9738	1-3/4
4402	1-3/4	7910	2-1/4	9860	1-1/2
4475	1-3/4	7940	2	9905	1-3/4
4558	1-1/2	7980	1-3/4	9965	2
4646	1-3/4	8030	2	10,025	2-1/4
5210	1-1/2	8058	1-3/4	10,050	2-1/2
5255	1-1/2	8150	2	10,080	2-1/2
5320	1-1/4	8190	2	10,108	2-1/4
5375	1-1/4	8250	1-3/4	10,135	2
5460	1-1/2	8315	2	10,160	2
5515	1-1/4	8378	2-1/4	10,190	2-1/4
5595	1-1/4	8415	2	10,225	2-1/2
5800	1-1/4	8450	2	10,299	2-1/2
5870	1	8540	2	10,340	2-1/2
6022	1	8590	2-1/4	10,380	2-1/2
		8635	2		

FORMATIONS CONTINUED

<u>DEPTH</u>	<u>FORMATION</u>	<u>DEPTH</u>	<u>FORMATION</u>
10,290	Shale and Lime	10,439	Lime and Shale
10,312	Lime, Shale and Sand	10,570	Lime
10,329	Lime and Shale	10,590	Lime and Chert
10,342	Lime, Sand and Shale	8100	Plugged back depth

