

Report on Drill Stem Tests

State BTA Well #1

4-16-49

DST. #8 From 10770' to 10794' Packers set at 10762' & 10770', W/5/8" bottom & 1" Top Choke. Perforations 10771' to 10778'. with 2300' Water Blanket. Tool open at 2:07 P.M. with fair blow of air for 38 minutes & died. Tool open 1 hr. & 38 mins. Closed at 3:45 P.M. for 1/4 Hr. BUP. Recovered 210' free oil, Gravity 45.7, 2300' Water Blanket, oil & gas cut, 90' Drlg. mud, oil & gas cut. Oil on top of water blanket & mud below. Howco. Hydro. in 5850# out 5700# Flow pressure 1050#, 1/4 Hr. Build up pressure 2700#. Amerada Hydro. in 5800# out 5750#, Flow pressure 1040#, 1/4 hr. BUP. 2760#.

4-17-49

DST. #9 From 10794' to 10819' With 2 - 6 1/2" O.D. Packers set at 10786' & 10794'. With safety joint & circulating sub. 5/8" Bottom & 1" Top Choke Perforations 10795' to 10812' With 2300' water blanket. Tool open at 5:16 P.M. with fair blow of air, mud up in 20 minutes, oil up in 40 minutes. Switcher to tanks at 6:00 P.M. made 335.12 bbls. oil, 3/10% B.S. in 4 hrs. & 20 minutes. Gravity 46.4 Gas volume 58,394 cu. ft. per day. GOR 31. Drill pipe pressure 225#, Closed tool at 10:20 P.M. from 10:20 to 11:20 P.M. bled off 19.32 bbls. Left tool closed for 25 minutes, Build up. Tool open total of 5 hrs. & 5 minutes, Pulled packer loose @ 11:20 P.M. Tried to break circulating sub. with 2900# & failed. Pulled 4 stands drill pipe, tried again with 2900#. Recovered 9770' Free Oil, 690' Fresh water, Will not color coin, and hasn't any taste of salt. Howco. Hydro. in 5900# out 5700# Min. Flow 3900# Max. flow 4150#, 1/4 Hr. BUP. failed. Amerada Hydro. in 5840# out 5780#, Min. Flow 3275#, Max. flow 4230#, 1/4 hr. BUP. failed.

4-19-49

DST. #10 From 10819' to 10839' With 2 packers set at 10811' & 10819' W/5/8" Bottom & 1" Top Choke. Perforations 10820' to 10833' with 2300' Water Blanket. Tool opened at 1:40 P.M. Good blow of air immediately, mud in 25 mins. water in 26 mins., oil in 35 mins. Made 280.83 bbls. in 4 hrs. Gravity 46.2 Gas volume 42,506 cu ft. per day. GOR 25.3 Separator pressure 13#, Drill pipe pressure 25# Closed tool at 6:15 P.M. for 1/4 Hr. BUP. Recovered 9530' oil, 540' Water & 720' mud. Howco. Hydro in 5400# out 5400#, Initial flow pressure 2400# Final flow Pressure 4000# 1/4 hr. BUP. 4225# Amerada Hydro. in 5760# out 5860# Initial flow press. 2140# Final Flow pressure 3920#, 1/4 hr. BUP. Failed.

4-21-49

DST. #11 From 10840 to 10889' W/2 packers set at 10832' & 10840' W/5/8" Bott. & 1" Top Choke. Perforations 10841-42' & 10873' to 10886' W/2390' Water Blanket, Circulating Sub & Safety joint, Tool opened at 6:30 A.M. with strong blow of air, mud up in 2 hrs. water in 2 hrs & 5 mins. Oil in 2 hrs & 45 Mins. Turned to tanks @ 9:15 A.M. Made 67.62 bbls. oil, Gas Vol. 3,022 cu. ft. per day, GOR 7.3, Gty. 45.9 corrected, no separator or drill pipe pressure, just enough gas to dump separator, closed tool @ 1:15 P.M. for 1/4 hr. BUP. Tried to shear pin in circulation Sub. no results, pulled 25 stands full of oil, 2250' oil, Sheared pin in circulating Sub with between 1600# & 1800# pump pressure, displaced oil in drill pipe. Recovered 49.02 bbls. oil, 4/10% BS, no water and approximately 4 bbls. into pits, which was mud cut, 210' Oil & Gas cut drlg. mud. no water, which was below circulating sub. Howco Hydro in and out 5800#, Min. Flow 1150#, Max Flow press. 3800#, 1/4 hr. BUP. 4025# Amerada Hydro. in and out 5610', Min. Flow 1095#, Max. Flow 3855#, 1/4 hr. BUP. did not record clock ran out.

5-25-49

DST. #12, From 11200' to 11225' W/2-7/8" Drill pipe, 55 min. Test. with circulating sub and safety joint. 1-4 1/4" Howco Hookwall packer set at 11185' W/3/8" bottom & 1" Top Choke, perforations 11188' to 11212' with 2225' water blanket. Tool open at 3 A.M. with fair blow of air, died in 50 mins. and packer failed at 3:55 A.M. closed tool and recovered 270' drlg. mud and pin in circulating sub broke, lost 2225' water blanket, 1355' of extra fluid, including drlg. mud. Howco Hydro. in 5200# out 5100#, Min. Flow 3400# Max. Flow 4250#, No BUP. Amerada Hydro. in 5275# out 5085# Min. Flow 370#, Max. Flow 1290#

6-21-49

DST #13, From 11469' to 11506', 3 hrs. & 5 mins. test on 3 1/2" D.P. with packers set at 11465' & 11469' W/5/8" bottom & 1" Top Choke, W/Perf. 11470' to 11502' W/3510' Water blanket, tool opened at 1:25 P.M. with small blow air through out test, gradually decreasing to few bubbles at end of 3 hrs. Fluid on outside of D.P. dropped at rate of 1' per. mins. for 2 1/4 hrs. and stopped, Tool closed at 4:30 P.M. for 1/4 hr. BUP. recovered 5040' dry pipe, 2916' drlg. mud on top of water blanket 3510' water blanket & 40' drlg. mud above tool, Howco Hydro. in and out 5200#, (Howco chart showed tool had not opened) Amerada Hydro. in and out 5240#

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1. The first step in the process of the development of a new product is the identification of a market need. This is done by conducting market research, which involves gathering information about the target market and its needs. The next step is to develop a concept for the product, which is then refined through a series of iterations. Once the concept is finalized, the next step is to develop a prototype, which is used to test the product's feasibility and to gather feedback from potential customers. The final step is to launch the product into the market, which involves marketing and distribution efforts.

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