

FEDERAL-R. N. LOGG #1
COMPLETION DATA

TOTAL DEPTH: 15,854' - Reached March 22, 1954.

3-25-54 Completed velocity survey, ES and Micro-log. No mud report.

3-26-54 Schlumberger encountered tight hole at 13,100' on to 70' - Went in hole with bit, commenced reaming at 15,600', at 15,737' lost circulation, lost 350 bbls. mud. Loaded mud heavily with fibrous material, circulated 5 hrs at 15,744'. On bottom at 15,854' at 3:03 AM. To start out of hole at 8:30 AM and run Schlumberger gamma ray and neutron and dip meter.

3-27-54 Will finish dip meter survey and run gamma ray and neutron log. Mud wt 12.1# - Visc 52 & 56. Water loss 6.6 - 2/32" cake - PH 13.

3-28-54 Spotted 100 sbs cement at 15,850', 75 sbs at 12,625', 100 sbs at 9050'. Pulled up to 8000' and reversed out. Preparing to condition mud.

3-29-54 Perforated at 7530' w/3 shots - Running retainer, to be set at 7548' - Mud wt in 10.5#, out 10.8# - Visc 35 in, 38 out.

3-30-54 Perforated at 7530' w/3 shots, set retainer at 7510', broke formation at 1600# w/mud, held 100# after breaking down. Squeezed w/200 sbs, max press 3400# after 15 min staging. Plug down 6:10 PM, rev out 15 sbs. Perforated at 7470' w/3 shots, set retainer at 7456', broke formation at 1600# w/mud, fell to zero after break down. Squeezed w/200 sbs, Max press 3600# after 40 min staging. Plug down 3:20 AM 3-31-54. Rev out 20 sbs. WOC.

3-31-54 WOC 12 hrs - Drilled to retainer, checked lower retainer at 7518' but did not drill. Perforate from 7500' to 7504' with 4 jet shots per foot. Running tubing, packer and holddown.

4-1-54 Ran 243 jts. 2-3/8" OD 4.75 E-80 tbg. 7436' - Set at 7497'. Packer at 7472'. Perforations 7454' to 7497' - Scrubbed dry. No fluid coming in tubing.

4-2-54 Treated through casing perforations from 7500' - 7504' with 2000 gal 15° API oil w/1 3/4# sand per gal. Broke form w/45 bbls crude oil - Max P 3400#, back to 3000#. 3900# with 2 pumps @ 2 1/2 bbls/min. Pumped in sand-oil a/r of 0.98 bbls/min, Max P 6300#. 2.75 bbls/min. Max flush P 6000# - final flush P 3400#. Static P after treatment 3400#. Job completed @ 2:42 PM 15k bbls lead oil to be recovered. Shut in 1 hour after treatment, flowed weakly until 4:30 AM. Rec. 63 bbls. lead oil in tank & estimated 8 bbls in pit. Commenced scrubbing @ 4:30 AM - scrubbing @ 5000'. Last run showed 1/2 water, 1 1/2 BS & trace sand.

4-3-54 Fluid test rate with fluid top at 7000' - Scrubbing once per hr, rec 1.18 bbls fluid per hr, 58% salt water & 41% lead oil w/trace of gas. Pulled tubing and packer, ran drill pipe open ended, spotted 30 sbs reg cement at 7512', back flowed, pickup up to 7450# and reversed out, washed out 12 to 15 sbs. Waited 6 hrs & found top of cen at 7481', pulled out of hole, prep to perforate at 7426' w/3 holes, above proposed test interval, 7456' to 7460'.

4-4-54

Perf at 7426' w/3 shots, set Baker Model E ret at 7393', sq w/100 sks. Broke formation w/mud at 3000#, back to 2900#, held at 800#. Max sq press 3100# after 20 min of slow pumping and 7½ min of slow staging. WOC 16 hrs, drilled out, found cement to 7431', checked top of cem below at 7466', circulating prep to come out of hole and perforate 7456' to 7460' w/4 jet shots per ft.

4-5-54

Perforated w/4 jet shots/ft from 7456' to 7460' - Ran 2½2 joints #30 tubing, 7406', set at 7456' w/packer at 7437'. Tubing perforations 7453' to 7456' - Swabbed dry 11:00 PM 4th, the fluid entering tubing - Prep to 2nd stage.

4-6-54

Swabbed dry - Nothing came in tubing. Treated w/2000 gal 2½ gr oil containing 4000# sand. Pumped in w/oil, broke from 3400# to 3300# at rate of 2-1/2 bbls per run, press went from 4200# to 3800#. Commenced taking sand into formation at 4400#, fell to 3600#, then commenced plugging in casing perforations. Completely shut off when 25 bbls sand and oil were in formation. Unseated packer, reversed out to 7457', packer failed to re-set, pulled it out of hole. Found hold down damaged, safety joint between hold down and packer cracked. Re-ran packer, displaced w/water, set packer, commenced swabbing at 1:00 AM. Swabbing at 6900', rec all of spot water plus 10 bbls lead oil. Show of gas. Swabbing continuously.

4-7-54

Recovered 30.36 bbls. fluid since yesterday morning by swabbing. Since 2:00 PM 6th, pump was run once per hr. From 10:00 PM 6th to 7:00 7th, 8 hrs recovered at total of 4.14 bbls fluid, 2.20 bbls oil, 1.94 bbls water (47% water). Last run was 70% water with light blow of gas. Still lack 18 bbls. lead oil.

4-8-54

Spotted 30 sks reg cem at 7463', perforated at 7252' w/3 shots, set BSWCO DN retainer at 7234', broke down at 2200 to 700# - Sq w/100 sks. Max press 2500# after 35 min staging. Total elapsed time 1 hr 35 min. Plug down 11:15 PM 7th. Perforated at 7188' with 3 shots, set retainer at 7146', broke formation at 1900#, now squeezing w/100 sks.

4-9-54

Squeezed perforations at 7188' w/100 sks - Max press 2500# after 62 min of staging. Plug down 8:15 AM 3-8-54. Drilled out, after 16 hrs WOC to retainer at 7234'. Found top of cement 5' below retainer at 7146'. Perforated 7216' to 7226' w/4 jet shots per foot. Preparing to run tubing packer & holddown.

4-10-54

Ran tubing - packer @ 7201' - tbq. perfs 7216' - 7219'. Spotted water-set packer - swabbed dry - no fluid entering well bore. Treated w/3000 gal sand - oil w/1½ sand per gal. Broke at 2700# w/oil, back to 2400#. Max ind P 5700# - avg rate 4½ bbls. per min. Flush rate 4.9 bbls/min @ 5700#. Total load to recover: 160 bbls. After treatment, standing P 1400#. Job complete @ 1:05 AM 10th. Opened well @ 3:00 AM and by 4:00 AM had flowed back 49½ bbls. From 4 AM to 5 AM flowed 11 bbls - TP 25%. From 5 AM to 6 AM flowed 7 bbls - TP 15%. Total load recovered: 67½ bbls - still flowing - no change.

- 4-11-54 Recovered all lead oil @ 1:30 AM lith. Fluid level 6800-7000, while running swab every 30 min. Last run, waited 50 min. Found fluid level @ 6400'. From 1:30 AM to 6:50 AM recovered 6.55 bbls oil, Grty 32.4, plus 65 to 70% water. Swabbing.
- 4-12-54 Swabbed 23 hrs, running swab once per hr. Fluid top 6000' - Recovered 48.18 bbls fluid. 37.14 bbls water, 11.04 bbls oil (77% salty water). Bled down tank, found that lead oil had not been recovered. Still lack 8 bbls. of having lead back.
- 4-13-54 Final swab test - 6:30 AM to 9:30 AM. 3 hrs 0.34 bbls oil plus 6.54 bbls water (94.5% water). Pulled tubing, spotted 30 sks cem at 7234', plug down 5:07 PM. Perf at 6130' w/3 shots, set retainer at 6124', squeeze w/100 sks cem. Broke at 1900#, down to 400# w/mud. Max squeeze press 2200#. Total time 3 hrs 15 min. Dropped bridge ball, seated w/2800#. Plug down 1:25 AM 4-13-54. Rev out 1-1/2 sks. Perf at 6082' w/3 shots, set retainer at 6042', broke formation at 2100#, now squeezing 2/100 sks.
- 4-14-54 Formation broke from 2100# back to 1300# with mud. Block squeezed through 3 perforations at 6082'. Squeeze w/100 sks. Max press 2500#, held. WOC 16 hrs. Drilled retainer at 6042', found cement 12' below retainer, went out of cement at 6088' - Perforated 6112' to 6118' w/4 Schlumberger shots per foot.
- 4-15-54 Ran tubing, set at 6108', perforations in tubing 6105' to 6108'. Swabbed spot water, fluid broke in on 1st swab run to bottom. 12 hrs test, running swab two to three times per hr. Rec 84.12 bbls fluid, 9.64 bbls oil, 74.48 bbls salt water. Water percentage 88.54%. Gr of oil 35.4, salt content 84,000 PPM.
- 4-16-54 Stopped swabbing 2 hrs, fluid rose to 2500' from surface. Pulled tubing attempted to run HOWCO retrievable retainer, would not go below 7 stands, pulled out, ran 8-5/8" bit to bottom, circulated, pulled bit, ran HOWCO retrievable retainer to TD 6122', spotted 35 bbls oil, pulled up to 6088', set retainer, broke formation at 3000# w/oil, mixed 75 sks cement, with diesel oil, now squeezing thru casing perforations 6112' to 6118', pressure up to 3000# after 34 min of staging. Back flow when released. All cement below retainer.
- 4-17-54 After a total of 49 min staging, press 3500#, did not back flow. Rev out trace diesel oil cement. Pulled tubing and retrievable retainer, ran 8 5/8" bit, waited 12 hrs on cement, washed out to 6122', PSTD. Had 11' soft cement in bottom.
- 4-18-54 Ran & set tubing at 6114', packer at 6093', swabbed dry - Acidized w/250 gals HCl, broke at 3500# to 1800#, held at 1300#. Swabbed down; fluid level at 5700' - Swab run at 1:00 AM, fluid at 5900', swab run at 2:00 AM found fluid 5800', recovered 100% water. 3:00 AM swab run found fluid at 5900', 75% water, 25% oil. 4:00 AM swab run fluid level at 5500', turned in tank, recovered 3-1/2 bbls fluid, 75% water. Swab runs at 4:30, 5:45 & 6:45 AM found fluid level at 6000' - No recovery. Prep to fracture.

- 4-19-54 Treated with 3000 gals sand oil, 1# sand per gal. Overall injection rate 4.2 bbls per min. Broke down with oil at 4550# at rate of 2.4 bbls per min. Injected sand oil at max of 5700#, injection rate 4.0 bbls per min. Flushed at 4200# final pressure. Standing press 1250# - Opened up for 15 hr test. Flowed 169.83 bbls fluid - 17.94 bbls water, 151.89 bbls load oil (10.6%). Lack 7 bbls load - Flowing 5 bbls fluid per hr, 20% BS, 20% water. Gas insufficient to measure.
- 4-20-54 Well died at 8:00 PM 4-19 - Started swabbing at 8:30 PM - During 24 hrs from 6:00 AM 4-19 to 6:00 AM 4-20 recovered 109.32 bbls fluid. 52.62 bbls water and 55.70 bbls oil, (water percentage 49.48%). Swabbing 1 time per hr from bottom, fluid top 5800'. Recovering 0.69 bbls fluid per hr - 25% salt water. Total oil recovered to date: 207.52 bbls, total new oil 48.52 bbls.
- 4-21-54 Acidized w/1000 gals, started taking acid at 1000#, max flush press 1900#. No break in pressure, gradual increase only. Flowed back 12-1/4 bbls flush oil, & died. Swabbed acid water, then took 12 hr swab test. Swabbing continuously, recovered 152 bbls fluid, 74 bbls oil, 78 bbls water, fluid level 1500' to 2000' from surface. Unable to lower. Water percentage last 4 hrs 25%. Good blow of gas.
- 4-22-54 Shut in 4 hrs 45 min, TP went to 225# - Opened up 1/2" choke 15 min, TP dropped to 25# - Opened wide open an additional 15 min, died. Swabbed at 2:00 PM. 16 hr test from 2:00 PM 4-21-54 to 6:00 AM 4-22-54, running swab once every 45 min. Fluid level 1500', running swab to 3000' REC: 130 bbls total fluid. 72.88 bbls water, 47.82 bbls oil. 60.73% water. Good blow of gas behind each swab run for 10 min.
- 4-23-54 24 hr swab test. 170 bbls fluid, 83.30 bbls oil, 86.70 bbls water. 12 hrs 6:00 PM to 6:00 AM 107 bbls fluid - 52.43 bbls oil, 54.57 bbls water, 51%. Fluid level 2000' from surface. Running swab to 3500' each 30 min. Cr 29.2 at 60 deg. Chlorides 176,000 PPM.
- 4-24-54 Swabbed 15 hrs, ran swab 2 times per hr - Fluid level 1800', pulling swab from 3000'. Rec 90 bbls fluid, 50 bbls oil, 40 bbls water. Ran BHP gauge, shut well in at 9:10 PM, after 7 hrs BHP at 6109' was 1919#, building up 19# per hr.
- 4-25-54 Ended BHP test at 3:10 PM 24th. Pres at 6109' was 2060# after 19 hrs shut in. No tubing pressure. Plugged tubing. Perforated tubing one joint above packer, circulated mud out of annulus with water.
- 4-26-54 Pulled 2-3/8" tubing, ran 175 jts 2-7/8" OD 6.40# J-55 tubing, 5480', set at 5501'. Perf nipple 5480' to 5471' - Started rigging down.
- 4-27-54 Rigging down rotary tools. Treater is in, one tank on location and flow line strung.
- 4-28-54 Rigging down rotary. Est pump equipment installation may be complete by May 5th or 6th.