

# BROUGHER OIL, INC.

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BUNKER 'B' #1  
NE SW NW, Sec 19-25s-13w  
Stafford County, Kansas

## COMPLETION REPORT:

Commenced: 10/19/84

Completed: 10/27/84

RTD: 4380'

Surface Casing: 8 5/8" set at 396' with 300 sacks cement

Production Casing: 5 1/2" set at 4379' with 175 sacks cement

## DRILLING INFORMATION:

- 10/19/84 Moved in Mohawk Drilling Rig #7. Preparing to drill surface hole.
- 10/20/84 Drilled to 396'. Set 396' of used 8 5/8" surface casing. Cemented with 300 sacks cement. Cement did circulate. Waiting on cement to dry.
- 10/22/84 Drilling ahead at 3151'
- 10/23/84 Circulating for samples, going ahead at 3910'
- 10/24/84 Drilled to 4010', Ran DST #1 (3975-4010) LKC 'K' zone, REC: 10'SO&GCM, 60' GCDM, SIP: 1088/978, FP: 36-45/45-73, HP: 2146/2165, BHT: 103F  
Drilling ahead at 4032'.
- 10/25/84 Drilled to 4120', Ran DST #2 (4082-4120) CONGLOMERATE, REC: 360' GIP, 10' GCM, 30' HO&GCM, 30' O&GCM, SIP: 219/274, FP: 37-46/46-46, HP: 2125/2107, BHT: 100F  
Drilled to 4160'. Preparing for DST #3.
- 10/26/84 DST #3 (4115-4160) MISSISSIPPI, REC: 1200' GIP, 30' GCM, 30' O&GCM, 120' HO&GCM, SIP: 309/236, FP: 55-91/91-109, HP: 2184/2165, BHT: 107F  
Drilling ahead at 4250'
- 10/27/84 Drilled to 4380'. Logged well with Electra Log. After viewing the log and the results of DST'S #2 and #3 it was decided to set 5 1/2" casing and well attempt to complete the well in the Mississippi & Conglomerate formations. We will attempt completion in a week to 10 days.

## COMPLETION REPORT:

- 11/3/84 Moved in Mohawk Rig #5.
- 11/5/84 Swabbed the well down to 4000'. Electra Log perforated the KINDERHOOK from 4174-4180/3SPF. Checked for natural fill up, 25' MW. Treated well with 500 gls of double strength FE acid. Zone broke down at 1800#. Treated at 2 1/2 bbls per min at 1800#. Treated 2 1/2 bbls per min at 1000#. Total load 116 bbls. Swabbed 133 bbls, well dried out.

- 11/6/84 Checked overnight fill up. 300# of gas pressure and 1000' of fluid. Total swabbed down 23 bbls of oil and 3 bbls of load water. Tested for 3 hours and the zone made 3/4 bbs per hour at 100% Oil. Broke swab equipment down and Halliburton arrived on location to frac the well. The frac was a 21,000 gal cross-link sand gell frac. After the frac, shut the casing and shut down for the day.
- 11/7/84 Had approximately 2003 of pressure left on the frac valve. Started swabbing down the KINDERHOOK frac load. Well started to kick back fluid at 500' from top. Swabbed back 100 bbls of frac water, slight show of gas and no oil. After 30 mins the well kicked back 800' fluid, had a good gas blow. Tried to continue swabbing but the gas was bothering the rig motor. Unable to get a test on the zone.
- 11/8/84 Checked overnight fill up, 300# of gas pressure and fluid was 800' from top. Pulled 25 bbls of oil before hitting frac water. Tested 1st 60 min test was 45 bbls/Hr at 60% Oil, fluid level held 1500' from bottom. 2nd 60 min test was 20 bbls /Hr at 60% oil with good gas blow. Pulled the swab from 4050' and tested the well for 2 hours. Zone made 20 bbls per hour at 60% Oil and 40% Frac water with a good gas blow.
- 11/9/84 Checked overnight fill up, 300# of gas pressure and 3000' of fluid in the well. Swabbed the well down and started testing. Well still made 20 bbls total fluid per hour at 65% Oil and 35% Frac water with a good gas blow. Vacuum truck #11 loaded 85 bbls of oil out of swab tank which still left 60 bbls of oil in the tank. Tested the zone all day, on the last 2 hours the zone made 20 bbls total fluid per hour at 80% oil. The Water was starting to get salty, could be formation water. Checked the sand fill up. Fill up total depth now is 4300'. Unloaded the tubing and rods.
- 11/12/84 Checked the fill up, 2000' of fluid and 200# of gas pressure. The 1st 400' was 100% Oil. Ran in the tubing and rods. Rigged down and moved off of location. Ran into well: 16'x1 1/2" Polish rod, 1-4'x3/4", 1-2'x3/4" rod sub on pump, 167x 3/4" rods, 2x1 1/2x12' BHD pump, 5'x1" gas anchor, 134x2 3/8" 8 RND EUE Tubing, 1x2 3/8" 8 RND Seating nipple, 15'x2 3/8" 8 RND EUE mud anchor. Moved off location.
- 2/25/85 Moved in Mohawk Rig #5. Pulled out tubing wet because of parted pump. Pulled from well tubing, seating nipple, mud anchor.
- 2/26/85 Rigged up 5 1/2' casing swab and tested the Kinderhook. Zone made 2 bbls total fluid per hour at 100% Oil. Electra Log perforated the MISSISSIPPI from 4125-4140/2SPF. Perforated the CONGLOMERATE from 4094-4100/2SPF. Set cast iron permanent plug at 4160'. Halliburton treated the zones together with 100 gls of double strenght FE acid at a rate of 9 bbls per min, no pressure. Zone went on instant vacuum. Swabbed back 75 bbls of 126 bbls load. Shut down for the day, had trace of oil.
- 2/27/85 Tested the zones all day. Zone made 3 bbls fluid per hour at 30% oil and 70% load water. Got ready for 1000 bbl frac job.
- 2/28/85 Fraced the well with 200 sacks of 20/40 and 250 sacks of 10/20 sand.
- 3/1/85 Opened Halliburton's frac valve, well was on a vacuum. Tagged fluid 800' from top. Swabbed back a total of 150 ffls of fluid into pits when the well went on oil. Swabbed back a total of 250 bbls of 1000 bbls frac. Zone made 36 bbls fluid/hour at 23% oil and 77% frac water.

- 3/2/85 Opened orbit valve and bled off 200# of gas pressure. Checked fluid level, 1800' of fluid in the well. The 1st 800' was 100% Oil. Tested the zone all day. Total fluid back 500 bbls of 1000 bbls frac. Last hour test showed zone making 36 bbls total fluid per hour at 27% oil. Water was still frac water. Zone still held 300' of fluid at the end of the last hour test. Gas pressure was building. Checked sand fill up, had 20' of sand fill up on top of the plug.
- 3/4/85 Opened orbit valve, well had 200# of gas pressure. Checked fluid level, 2000' fluid in the well. Made 3-400 pulls, every pull was 100% oil. Rigged up sand pump. Cleaned out 20' frac sand and formation down to cast iron plug. Started running in tubing to put well into production.
- 3/5/85 Ran in tubing and rods to well. Cleaned up around location. Rigged down and moved off of location. Ran into well: 16x1 1/4" polish rod with liner, 1-2' 1-4' and 2-6' x 3/4" rod subs, 1-2 3/4" rod sub on pump, 163x3/4" rods, 2x1 1/2x12' BHD pump, 5'x1' gas anchor, 1-4, 1-6x2 3/8" 8 Rnd EUE tubing subs, 131x 2 3/8" 8 Rnd EUE tubing, 1x2 8 Rnd seating nipple, 15x2 3/8" 8 Rnd EUE mud anchor. Spaced tubing 2' off of plug.
- 12/4/86 Moved in Mohawk Rig #4. Tried to unseat the pump, no go. Started stripping the rods and tubing out of the hole. Pulled 80 rds and 65 jts of 2" tubing. Pulled 4 or 5 more rods and 3 or 4 more jts of tubing at a time.
- 12/5/86 Finished stripping the rods and tubing out. Found a split 3' long in the tubing. Dumped 80 bbls of water in the hole. Made up NL Acme's sand line drill and knocked the plug down the hole 165'. Started the tubing in the hole.
- 12/6/86 Finished going in the hole with the tubing. Went to the Garner Lease and picked up 4 jts of 2" tubing and 5 x 3/4" rods. Ran in 136 jts of tubing and respaced the tubing. Ran in 2x1 1/2x12' pump, rods, and 7 extra rods with no subs. Hooked up the well and rigged down. Cleaned up the location. Moved off location.
- 6/3/87 Moved in Mohawk Rig #4 and long stroked the well. Threw out one bad rod & replaced the pump. Pulled & painted tubing & found leak on 136th jt. Replaced the bad jt & ran everything back in. Rigged down and moved off location.