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NAPUE #1 OWWO NE NE SW. Sec 4-9s-21w Graham County, Kansas

COMPLETION REPORT:

Originally Commenced: 12/16/49 by Barnett Drilling Co. Originally Completed: 12/30/49 as D&A

OWWO Commenced: 1/15/85 OWWO Completed: 1/19/85

RTD: 3810'

Surface Casing: 8 5/8" set at 180' with unknown sacks cement Production Casing: $5\frac{1}{2}$ ' set at 3809' with 200 sacks cement. Alternate 2 Cementing: 1640' to Surface with 300 sacks cement.

ORIGINAL DRILLING INFORMATION:

12/16/49 Drilled to 3738 and ran DST #1 (3675-3738) ARBUCKLE, REC: 125' OCM, SIP: 1043-1078, FP: 70-87,87-112, HP: 2041-2970', BHT:110°F

Drilled to 3577 and ran DST #2 (3534-3577) LKC "J" - "K", MISRUN.

Drilled to 3575 and ran DST #3 (3532-3575) LKC "J" - "K", MISRUN.

OWWO DRILLING INFORMATION:

1/15/85 Moved in Mohawk Drilling Rig #8 and started Wash Down.

1/16/85 Wishing ahead at 1300'.

1/17/85 Washed hole to the bottom. Conditioned the hole. Preparing to drill 40' and log Lue well.

1/18/85 Drilled to a total depth of 3810'. Finished logging the well. Preparing for BST #1.

1/19/85 Tested top 6' of the Arbuckle from 3731-3742. REC: 125' VHOCM, SIP: 1043-1078, EP: 70-87/87-126, HP: 2041-1970. Attempted to test the LKC "F" - "G" ZONE but couldn't get a packer seat. Due to the results of DST #1 and after viewing the log, it was decided to run 52 casing. We will attempt to complete the well in 10 days to two weeks. Released Mohawk Drilling, Inc.

COMPLETION INFORMATION:

Moved in Mohawk Rig #4 and Welex ran a Bond Log and Correlation Log. Swabbed the hole 2/1/85 dry. Perforated ARBUCKLE from 3729-3732'. Had welder put bored out collar on casing. Ran swab and recovered 60' water. Slight Oil Cut.

- Ran swab and recovered 2' of oil cut water and drilling mud. Put on new cup and ran 2/2/85 swab again, dry. Waited on Howco. Rigged up Howco and acidized with 350 gls of 15% MCA acid. Load back 99 bbls. Swabbed 118 bbls fluid, slight show of oil. Fluid Tevel stayed at 1300' from surface.
- 2/4/85 Ran swab and checked fluid level, fluid at 1200'. Pulled swab and recovered 200' fluid, scum of oil on top. Waited on Welex. Rigged up Welex and set permanent plug at 3694'. Swabbed the hole down to 3200'. Rigged up Welex and perforated the FORT SCOTT from 3669-3681'. Finished swabbing hole down, good show of oil. 15" test recovered 40' of oil. Rigged up Howco and acidized with 750 gls of 15% Double Strngt FE acid. Load back 102 bbls. Swabbed 40 bbls fluid, started getting good show of o 17%. At 50 bbls 19% Oil, at 60 bbls 23% Oil. at 70 bbls 32% Oil and at 80 bbls 32% oil. 15 min test recovered 5 bbls fluid at 48% Oil.
- Ran swab, fluid at 1150', 200' of oil on top. The 2nd pull 7% Oil. Swabbed down. 2/5/85 1st swab 80 bbls fluid at 13% Oil 2nd swab 190 bbls fluid at 11% Oil 3rd swab 240 bbls fluid at 10.4% Oil 4th swab 260 bbls fluid at 6% Oil 5th swab 280 bbls fluid at 10.5% Oil 6th swab 300 bbls fluid at 9.5% Oil 7th swab 320 bbls fluid at 11% Oil Helped unload tubing and rods.
- Ran in Howco's packer and 2½" tubing. Set the packer at 3600'. Rigged up Welex and 2/6/85 ran travel survey. Formations communicated from the Arbuckle to the Marmaton. Set t packer at 3688' and tested the plug. Reset packer at 3630' and waited on cement. Rigged up Howco and cemented with 150 sacks 60/40 Pozmix, 2% Gel. 3% CC, stage ce Had trouble washing cement out of tubing, pulled 5 jts.
- Pulled tubing and Howco's packer. Ran in 4 7/8" bit and tubing. Drilled out 50' fir 2/7/85 cement with power tongs. Laid down tubing and bit. Swabbed the hole down to 3450'. Rigged up Welex and perforated from 3674-3681'. Finished swabbing the hole down. Perforated the Lower FORT SCOTT.
- 2/8/85 Ran swab and checked fluid level, 60' oil cut water. ran the swab, dry. Tested: 1st 30" 15' OCMW 2nd 30" 15' OCMW 3rd 30" 15' OCMW 4th 30" 10' OCMW 5th 30" 10' OCMW 1st 60" 8' OCMW

1st 30" 5' OCMW 2nd 30" 10' OCMW

3rd 30" 10' OCMW 4th 30" 10' OCMW

5th 30" 10' OCMW

Rigged up Welex and perforated Upper FORT SCOTT form 3668-3674, twice at 3 shot Ran swab and recovered 25' HOCW. Ran swab again and recovered 15' HOCW. Test 1st 15" 25' fluid at 50% Oil

2nd 15" 25' fluid at 60% Oil

2/9/85 Ran swab and checked fluid level, fluid at 3275'. Recovered 375' Clean Gassy Oil and 50' HOCW. Tested:

1st 30" 20' fluid at 80% Oil 2nd 30" 20' fluid at 83% Oil

3rd 30" 20' fluid at 83% Oil 4th 30" 20' fluid at 83% Oil

1st 60" 40' fluid at 100% Oil

- Rigged up Welex and perforated LKC "K" ZONE from 3558-3560', and LKC "G" ZONE from 3456-3460, and LKC "F" ZONE from 3446-3450'. Ran in Howco's retrievable bridge plug, packer and tubing. Set retrievable bridge plug at 3688' and the packer at 3627.

 Isolated the FT SCOTT. Rigged up HOWCO and acidized the FT SCOTT with 250 gls of 15% FE Acid. Tried to swab, wouldn't go past 1400', tearing the cups.
- Picked up MV Cups fro swab at Plainville. Ran swab and checked fluid level, fluid at 750', 500' of oil on top. Swabbed the hole down. Swabbed 25.92 bbls fluid. Last pull 100% Oil. Swab tested for 60" and recovered 6.68 bbls fluid at 100% Oil. Reset the plug at 3600' and the Packer at 3518' over the LKC "K" ZONE. Swabbed hole dry. Rigged up Howco and acidized with 250 gls of 15% MCA acid. Load back 28 bbls. Swabbed 21.71 bbls, Tast pull 30% Oil. Reset plug at 3510 and the packer at 3425' over the "G" & "F" Zones. Rigged up Howco and acidized "F" & "G" ZONES with 500 gls of 15% MCA. Load back 34 bbls. Swabbed 23.34 bbls.
- Ran swab and checked fluid level, fluid at 1450'. Swabbed the hole down. Swabbed 11.69 bbls fluid at 100% Oil. 1st 15" rec 300' of oil. Rigged up Howco and reacidized with 2500 gls of 15% NE acid. Reset the plug at 3585' and the packer at 3518'. Rigged up Howco and reacidized the LKC "K" ZONE with 1250 gls of 15% NE acid. Pulled the tubing, packer and plug. Rigged up casing swab. Load back 138 bbls. Swabbed down after 2½ hrs swabbed 86.35 bbls fluid. Last pull 60% Oil. Tested:

 1st 15" 3.76 bbls fluid at 97% Oil
 2nd 15" 3.76 bbls fluid at 97% Oil
 3rd 15" 3.76 bbls fluid at 97% Oil
 4th 15" 3.76 bbls fluid at 97% Oil
- 2/13/85 Ran swab and checked fluid level, fluid at 1650'. Pulled 250', 100% Oil. Ran in tubing and Howco's retriebable bridge plug to 1770'. Pressure checked plug. Dumped 2 sacks of sand on plug. Laid down tubing. Rigged up Welex and perforated at 1640', 4 SPF. Ran in Howco's packer and tubing. Set the packer at 1590'. Rigged up Howco and cemented with 300 gls of FLO-CHECK, 300 sacks HOWCO LIGHT and 50 sacks of 60/40. Cement circulated to surface.
- Pulled tubing and packer. Ran in tubing with 4 7/8" bit. Drilled out 45' firm cement and 20' stringers of cement. Circulated sand off the plug. Pulled tubing and bit. Ran intubing with retrievable bridge plug. Pulled tubing and Howco's retrievable bridge plug.
- 2/15/85 Tore down swab. Ran in mud anchor, seating nipple, 119 jts of $2\frac{1}{2}$ " tubing and 8' tubing sub. Spaced tubing 3' off bottom. Ran in $2\frac{1}{2}x1\frac{1}{2}x12$ ' Pump with 2' sub on pump, 146 new 3/4" rods, 6' sub and 16' polish rod. Spaced pump 1' off bottom.
- 2/16/85 Rigged down and moved off of location.
- Moved in Express Well Service and changed pumps. Rods had alot of parrafin on them. Pulled out 2"xl½"xl2' BHD and ran back 2½x2xl2' RWT BHD. New pump came from Schepmann #1 well.
- 7/5/85 Moved in Mohawk Rig #2 and pulled rods and tubing, Picked up 5½" drilling tools.
- 7/9/85 Drilled and drove plug form 3694' to 3780'. Rigged up Welex and set cement retainer at 3710'. Steamed the tubing.
- 7/10/85 Rigged up and ran 2½" tubing to 3710'. Howco squeezed with 50 sacks of Allied-9 and 25 sacks of common cement. Pulled the tubing and rigged up to swab.
- 3 Swabbed the hole down to otp of cment retainer. Tested approximately 3 bbls of fluid per hr at 25% Oil. Picked up drilling tools and drilled on the retainer.

- 7/12/85 Finished drilling up cement retainer at 3710'. Drilled out cement and cleaned out to 3780'. Rigged up Welex and perforated ARBUCKLE from 3729-3732'. Rigged up and ran in 2½'' tubing with Howco's retrievable bridge plug and RTTS packer. Set the plug at 3743 and the packer at 3670'.
- 7/13/85 Spotted acid on perforations from 3729' to 3732'. Treated by Howco with 300 gls of 15% Double Strength FE acid. Shut well in over the weekend.
- 7/17/85 Rigged up tubing swab and started swabbing. Fluid level 1500' from surface. Swabbed down 11.60 bbls and tested:
 1st 60" 3.48 bbls fluid at 15%
 2nd 60" 2.90 bbls fluid at 15%
 3rd 60" 2.32 bbls fluid at 15%
 4th 60" 2.74 bbls fluid at 16%
 5th 60" 1.16 bbls fluid at 15%
 6th 60" 1.74 bbls fluid at 15%

Retreated with 1500 gls of 15% Double Strength FE acid, 69 bbls. Started swabbing. Swabbed down to 1500'. Pulled from 2100' for 2 hrs. Could not get below 2100', sho of oil.

- Released the packer at 3579'. Retrieved the bridge plug at 3747'. Pulled tubing and reran. Set the packer at 3609'. Squeezed by Halliburton with 150 sacks. Circulate down another jt and cleared tubing. Picked up to 3579' and pressured up 250#. Squeezed the ARBUCKLE.
- 7/19/85 Released the RTTS packer and pulled 116 jts of 2 7/8" tubing. Strung up 5" tools. Ran the bailer and commenced drilling cement. Cut 28' of cement.
- 7/20/85 Drilled from 3667 to 3709'. Cleaned up on top of cement.
- 7/22/85 Finsihed drilling out the rest of the cement from 3709' to 3728'. Cleaned out and got ready to run tubing.
- Ran Halliburton's Hydro Jet on 2 7/8" tubing to 3740". Ran Welex depth check. Set hydro jet at 3735". Cut 2 slots up to 3732". Moved Hydro Jet up to 3672". Cut 4" up the pipe. Stopped at 3668". Cleaned up, pumped 150 gls of acid and flushed with N/2 The well blowed down. Pulled the tubing. Used 100 gls fo acid on slots from 3/35 to 3732". Used 150 gls of acid on slots from 3672-3668. (ARBUCKLE and LKC "K" ZONTO
- Ran the bailer, lacked approximately 80' of getting to bottom. Ran in with tools stir up sand. Ran the bailer again, bailer still empty. Ran NL Acme's sand pump. The sand pump loaded 3 times and then made 3 dry runs with sand pump. Laid down the sand pump. Ran Halliburton's RTTS with over-shot for bridge plug on the tubing. Ran to top of sand. Circulated to top of bridge plug. Pulled up to 3702' and set RTTS. Swabbed the tubing dry. Left well open overnight.
- Ran the swab, had approximately 250' of fluid with a slight show of oil. Halliburton acidized with 500 gls of 15% double strength FE acid into ARBUCKLE. Swabbed down approximately 2500'. Approximately 6 bbls over load, all water. Shut down, pull the tubing and packer.
- 7/26/85 Ran Halliburton's bridge plug with RTTS packer on 2 7/8" tubing. Set bridge plug at 3707'. Pulled 1 jt of tubing. Spotted acid on bottom. Set RTTS at 3640. Treated LKC "K" ZONE with 500 gls of 15% Double Strength FE acid and let sit for 30 minutes Swabbed back 29.24 bbls on swab down. Tested:
 1st 30" 4.31 bbls fluid at 10% 0il 2nd 30" 2.90 bbls fluid at 14% 0il 3rd 30" 2.32 bbls fluid at 16% 0il 4th 30" 1.00 bbls fluid at 16% 0il 1st 60" 1.99 bbls fluid at 18.6% 0il

- Ran tubing swab. Picked fluid up at approximately 1900' down, had 50' of oil on top of fluid. Retrieved bridge plug at 3707'. Pulled up to 3582' and set bridge plug. Spotted acid on bottom. Set RTTS at 3547'. Treated LKC "K" ZONE from 3558-3560 with 1500 gls of 15% SGA acid. Retrieved bridge plug at 3582' and set at 3492'. Spotted acid at 3465'. Set RTTS at 3428'. Treated LKC "F" from 3446-3450 and LKC "G" from 3456-3460' with 3500 gls of 15% SGA acid with 24 perforating balls, 1500# maximum pressure. 7½ bbls per min form 1200 to 1500#. Let sit for 60 mins. Swabbed 89.80 bbls fo all acid water.
- 7/29/85 Ran tubing swab. Picked fluid up at approximately 1000'. Had black water top of fluid. Released the packer and tretrieved the bridge plug at 3585'. Pulled tubing and broke down 5" tools. Commenced swabbing. Picked fluid up approximately 1000' with a trace of oil on top of lfuid. Swabbed 130.80 bbls of total fluid.
- 7/30/85 Overnight fillup 2650'. Had trace of oil on top of fluid. Ran Halliburton's bridge plug and RTTS packer. Set bridge plug at 3490' and RTTS packer at 3440' (over "F" & "'G" ZONES). Unable to swab down tubing. Hooked onto bridge plug and lowered it.

 Swabbed down to approximately 3200' and lost swab in the hole. Rented fishing socket from NL acme. Ran the socket and was unable to get swab due to the over size of the coupling.
- Overnight fillup approximately 1200'. Swabbed down and ran in with fishing tool. retrieved the lost swab and tested:
 1st 60" 1.50 bbls fluid
 2nd 60" 1 bbls fluid.
 3rd 60" ½ bbl fluid with a trace of oil
 Retrieved the retrievable bridge plug and set at 3495'. Pressure tested the plug,
 3000# on the tubing and 500# on the back side. Released the packer and spotted 2 sacks of sand on top of plug. Pulled the packer up to 3400' and set. Pro-rate 2 bbls per min at 500#. Cemented LKC "F" & "G" with 200 sacks of 60/40 Pozmix and 2% gel.
 Circulated clean. Washed up top ofRPB. Pulled 4 jts of tubing.
- Released the packer and retrieved the retrievable bridge plug at 3496'. Pulled tubing packer and retrievable bridge plug. Ran in 15' mud anchor, 1' seating nipple, 120 jts of 2 7/8" tubing and landed on 8' pup jt. Spaced tubing 2' off bottm. Ran in 2½x1'x12' BHD pump, 146x3.4" rods and 1-4' pony rod top of string. Respaced polish rod. Spaced rods 10" off bottm. Hung the well on. Well blowed good. Set rig at half mast.
- 8/2/85 Finished rigging down and moved off location.
- 4/27/87 Moved in Mohawk Rig #4 and pulled rods, pump and tubing. Seating cups and no go ring had unscrewed from the pump. Gurthrie steamed 83 jts tubing. Ran everything back in and rigged down. Moved off location.