10387777925 6.C.C.

SUMMARY OF OPERATIONS

Hay 27 10 52 AM '66

Page 1	<u>State Bridges #109</u>
DATE	DESCRIPTION
1-17-66	RURT
1-18-66	Dr. Noble Drlg. Co. spudded 1-19-66.
1-19-66	Not drlg. WOC on 13-3/8" csg. cmtd at 365'.
1-20-66	Dr. WOC 24 hrs.
1-31-66	Dr.
2-2-66	Not drlg. Fishing for DC's, shock sub and bit past 6 hrs.
2-8-66	WOC on 4980' 9-5/8" csg. cmtd on bottom. Cmt did not circ. WOC 8 hrs. Ran temp. survey. Top of cmt 1900'. Prep. to drill 8-3/4" hole.
2-9-66	Dr. WOC total 25 hrs. Tested 9-5/8" csg & BOP's W/1000#, OK.
3-1-66	Not drlg. Running DST #1 ABO 9200-9315.
3-7-66	Not drlg. Running DST #2 Penn 9980-10080'.
3-8-66	Not drlg. Circ. for samples 2 hrs. DST #2 Penn 9980-10080 (100'), 2 pkrs., no W.C., 5/8 x 1" chk, open total 2 hrs. 5 mins. Gas to surf. in 15 mins, flwd 44 BNO, 0 wtr, in 2 hrs. on 1/4" surf. chk. FSP-290#. Rev. out 16 BNO - SFP-290#. Rev. out 16 BNO - SFP-290#. IBHFP-369. FBHFP-1876. 2 hr. final BHSFIP 3191#. Hydro in-4918, out 4944#. BHT-141°. 1 hr IBHSIP-3307#.
3-9-66	Not drlg. Ran BHC-GR-Sonic-Caliper-IES & Micro log to 10198' past 16 hrs. Prep. to cond. hole for DST.
3-10-66	Not drlg. Running DST #3 Penn.
3-22-66	Not drlg. Stuck past 8 hrs. Started making trip - stuck bit @10622'. Top of DC's 10018'. Prep. to run free point indicator.
3-25-66	Not drlg. Finished going in hole W/Bowen O.S. W/4-7/8" grapple. Caught fish @10692'. Worked fish loose, rec. all fish. Laid down all DC's. Then picked up 21 6-3/4" O. D. Spiral DC's. Started drlg. ahead. Circ. 3 hrs. Pull out of hole. Strapped pipe out of hole. Corrected hole depth from 11394' to 11374'. Ran IES-BHC-Sonic and GR logs in 8 hrs. from 11190-11371'. Ran bit back to bottom. Circ. past 1 hr. Log top of Miss. 11238'.

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SUMMARY OF OPERATIONS HAY 27 10 52 AM '66

Page 2	<u>State Bridges #109</u>
DATE	DESCRIPTION
4-3-66	WOR. 13-3/8 @365, 9-5/8 @4980.
4-10-66	(82) 12,470 TD 1m, 8-3/4" hole. 2½° @ 12,460. 9.3-70-4.2. Prep to run OH logs.
4-11-66	(83) 12,470 TD lm, 8-3/4 hole, ND. 9.4-72-5.8 Schl ran GR-S-Cal & IES logs from 11,100-12,457 Schl measure in 7 hrs ran DP open ended 12,000, pull DP, ran 8-3/4 bit to 12,470, circ 3 hrs, pull bit, now going in hole w/ DST #4, prep to DST Dev from 12,373-12,470.
4-12-66	12,470 TD lm. 8-3/4 hole. 9.4-70-6.0 DST #4 Dev 12,373- 12,470 (97') tested by Johnston Testers 2 pkrs 5/8x1 cks, 2000 WC tool open 1 hr 5 min, open w/weak blow, cont. through- out test, rec in DP 2000' WC + 200' gas cut mud + 300' s1 salty wtr, SFP -0, BHFP I 1000#, F 1155#, 2 hr FBSSIP 4995#, HH in 6168# out 6052#, BHT 178°, 30 min IBHSIP 4866#.
	Ran DP open ended to 12,470, cir 4 hrs HOWCO spotted 50 sx T1N cement plug from 12,470-12,290. Job comp @ 12:05 am, 4/13/66. Then spotted 50 sx T1N plug @ 10,500-10,320. Job comp @ 1:00 am 4/13/66. Pull DP - Prep to run bit and cond hole before running liner.
4-13-66	WOC on 5474' 7" O.D. 23# S95 liner cemented @ 10,366 by Howco w/725 sx TILW + 400 sx TIN cement plug down 4:30 a.m. 4-14-66 reversed out 5 sx of cement, top of liner 4890 used Brown Well Ser 6 slip hanger, ran 8-3/4" bit on 3 DC's & 4½" DP to 10,345 drilled cement to 10,370 circ & cond hole 4 hrs, layed down 5400' of 4½" drill pipe, then ran liner.
4-14-66	Ran 8-3/4" bit on 4½" DP to 4890', Circ. hole clean - tested top of liner with 1500# for 30 minutes, okay. Layed down DP, clean pits, released Noble Drilling Co. rig @12:00 midnight 4-14-66, prep to move out rotary tools.
4-18-66	12,470 TD, 10,276 PBTD, WC Perfs 10,029-10,049. Finished running RTTS pkr on 2-3/8" tbg to 10,000, swab 48 BLO then flowed & clean to test tanks, 125 BNO in 14 hrs, then on 6 hr production test, flowed 60 BNO, no water in 6 hrs on $32/64$ ck, TP-100-125, S/O 1% BS, GOR 2029/1, Grav. 42 @60°.
4-19-66	12,470 TD, 10,276 PBTD, WC Perfs (10,029-10,049') F 85 BNO in 5 hrs. on 32/64" ck, TP 100#, then Cardinal Chemical Co. acidized perfs (10,029-10,049') with 1000 gal. 15% NE acid, using 8 RCN ball sealers, BDTP 5000#, TTP 4000#, rate 5.0 BPM, ISIP 2200#, 5 min. SIP on vac., job complete 12:45 P.M.

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## SUMMARY OF OPERATIONS

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## State Bridges #109

DATE	DESCRIPTION
4-19-66 (Continued)	4-19-66, then 48 BLO (all) + 24 BAW (all) + 133 BNO in 12 hrs. on 18/64" ck, then on 6 hr. test F 72 BNO in 6 hrs on 15/64" ck. TP 500#, GOR 1340/1, gravity 42 @ $60^{\circ}$ S/O clean, prep to move up and perforate Glorieta zone.
4-20-66	Killed WC perfs w/load oil, pulled tbg & pkr Schlumberger rigged up and perf 7" liner in the Glorieta @6043, 45, 47, 49, 55, 61, 63, 82, 87, 97, 6105 & 05 w/l JSP/F total 12 holes, ran Howco ret BP & RTTS pkr on 2-3/8 tbg. set BP @ 6604, RTTS pkr @ 6015. From Glor perfs swab 23 BLO + 200 BSW in 14 hrs, 2900' FIH, last hour swab 15 bbls S/O 100% SW, prep to squeeze perfs.
4 <b>-21-</b> 66	12,470 TD, 10,276 PBTD, Glorieta Perfs (6,043-6,105') Dis- place oil to water, spotted sand on BP at 6,604' reset RTTS packer at 5,714', Howco attempted to squeeze Glorieta perfs with 150 sx. TIN cement, final pressure 4100# would not hold - cleared perfs. job comp. at 12:05 P.M. 4-21-66. WOC 6 hrs. Howco attempted to squeeze perfs with 250 sx TIN cement. Final pressure 4800# would not hold - cleared perfs. Job complete 7:00 P.M. 4-21-66. WOC 10 hrs., prep to squeeze.
4-22-66	TD 12,470, PBTD 10,276. Howco squeezed perfs w/100 sx TIN cement. Max press 6200#, Job comp @ 10:30 am 4/22/66, pull tbg & RTTS pkr, ran 6½ bit 2 - 4-3/4 DC's on tbg, drill cement from 5873-6114 in 6 hrs. Circ hole clean, tested perfs w/2000# 30 min ok - displace wtr to oil - prep to pull bit. WOC total 12 hrs before drlg cement.
4-27-66	Sw 9 BNO + 20 BSW/5 hrs, 1000' FIH, 1 hr sw 4 bbls, S/O 70% wtr, reset RTTS pkr @5950. BJ Serv vis-squeezed Glor perfs 6043-6105 w/100 sx Incor cement. Cement contained 2% CaCl, squeeze press 1600# to 3400# to 4600#, rate 3/4 BPM. Job compl @4:00 pm 4/27/66. WOC past 16 hrs.
5-6-66	Pulled #1 tubing string - ran $6-1/4 \ge 4-1/2$ W/O shoe on 4 - 4-1/2 DC & 2-3/8" 8RT tubing to 10,050'. D/O packer & pushed to 10,276' in $6-1/2$ hours. Laying down 2-3/8' tubing past 3 hours.
5-8-66	Upper Penn perfs (10117-10168') Finished laying down 2-3/8" 8 RT tubing DC & shoe. Schlumberger set Guiberson type A perm. packer in 7" liner at 10,079 Ran #1 tubing string, SN at 10,076, dual packer 9,978 - triple tubing anchor at

SUMMARY OF OPERATIONS HAY Z? IU 52 AM '66

State Bridges #109

DATE	DESCRIPTION
5-8-66 (Continued)	6,152 - Ran #2 tubing string landed in dual packer at 9,978, SN at 9,977 - Ran #3 tubing string landed in triple anchor at 6,152' - Rem. BOP - Installed triple tree. WC zone (10,029- 49) Sw & F1 42 BLO plus 78 BNO in 11 hours on $18/64"$ choke, TP 75,100#, SI 22 hrs, TP 500#. Then Schlumberger perf. Upper Penn zone through #1 tubing string at 10,117, 19, 21, 23, 26, 28, 31, 35, 38, 42, 45, 48, 50, 52, 54, 56, 61, 63, 65, 68. 1 jt. sh/interval, total of 20 holes. Swab 14 BLO then f1 30 BLO + 121 BNO in 13 hours on $24/64"$ choke, TP 150#, last hour F1 12 BNO - S/O clean.
5-9-66	WC perfs (10,029-10,049) S. I. TP 500, Allow 210, Top allow 210 Upper Penn (10,117-10,168) Flowed 78 BNO in 6 hours on 24/64" ck. GOR 1739, Gravity 40° at 60°, TP 225, Allow 294, Top allow 294. Released DA & SP. U. 10:00 A.M. 5/9/66. Re- lease to Prod. Foreman. Completion date Upper Penn 4:30 F.M. 5/8/66

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