1-26-7

TEXAS NATIONAL PETROLEUM CO.
FOUR CORNERS AREA

WORKOVER REPORT

RINCON UNIT #57

SOUTH BLANCO-DAKOTA

November 11, 1957
D. E. A. Johnson

7" Casing at:	7554 KB
Bridge Plug at:	7461 KB
Old cleanout depth:	7380 KB
Perforated:	7192-7234, 7300-7361'

CHRONOLOGICAL HISTORY

DATE	C.O. DEPTH	REMARKS
10/10/57	7380	Moved in and started rigging up pulling unit.
10/11	7380	Finished rigging up. Removed tubing head, flanged up BOP and started pulling tubing.
10/12	7440	Finished pulling tubing and started back with 6-1/8" bit and one 4-1/8" drill collar. Found sand bridge at 7410 - nothing above that depth. Cleaned out to 7440 ft. Had trouble drilling up old bridge plug rubber so came out to frac.
10/13	7440	Waiting on Dowell 6 hours because of muddy roads. Started frac at 7:00 A.M. Spearheaded with 500 gallons mud acid. Filled hole with water. Formation broke down 2600-2100 psi. After 25,000 gallons 25,000# sand, dropped 150 rubber coated, nylon sealer balls. Tried to follow balls with 200 gallons mud acid, but foamed too badly to pump. After 32,000 gallons 32,000# sand in, perforations balled off and pressure built up to 3900 psi. Had to flow well back twice to free perforations. Resumed pumping at 2900 psi at 35 BPM. After the freeze-up, did not add any more sand or ball sealers. Pumped 43,000 gallons water and overflushed with 100 barrels water. Resume: Fraced with 500 gallons mud acid, 75,000 gallons water 32,000# 20-40 sand, 150 balls in one stage. Formation breakdown pressure 2600-2100 psi., minimum injection pressure 2300 psi, maximum 3900 psi, average 2600 psi, average injection rate 41 BPM. Job completed 10:15 A.M. Shut well in until 12:15 P.M. Well unloaded 3 hours after opened up. Rigged up and started running tubing.
10/14	7015	Running tubing and blowing well with supply gas. Cleaned out to 7015 with well making considerable frac water and some distillate, no sand. Gauged 920 MCF through 4" blooie line.
10/15	7413	Hit solid sand at 7310 (top of lower perforations). Cleaned out to 7413 KB with well making sand, water and distillate. Gauged 1080 MCF through 4" blooie line. Formation continued to unload considerable sand after cleaning out hole to 7413. Let well clean up over night with tubing at 7413.
10/16	7413	Landed 242 joints (7341.89') 2-3/8" 4.70# J-55 EUE tubing at 7350 KB, with cross pin, saw tooth collar on bottom. Rig released 6:00 P.M. Gauged 1180 MCF/D. Shut well in over night to build up pressure.
10/17	7413	Shut in 22 hours. Casing pressure 2200 psi, tubing 1000 psi. Flow Data:

Time open	Casing pressure	Tubing pressure
5 minutes		0
Fluid hit		600
30 minutes	1300	250
1 hour	700	150
1-1/2 hours	550	75
2 hours	500	65
2-1/2 hours	465	65

Well flowed large heads of water and some sand. Unable to gauge because of water heads.

WORKOVER REPORT
RINCON UNIT #57 (continued)

DATE	C. O. DEPTH	REMARKS
10/18/57	7413	Shut in 20 hours. Casing pressure 2050 psi, tubing pressure 1425 psi. After flowing 3 hours 15 minutes, casing pressure 425 psi, tubing pressure 50 psi, gauged 2400 MCF/D through 2". Initial fluid was about 50% distillate.
10/19	7413	Roads impassible.
10/20	7413	Shut in 48 hours. Casing pressure 2150 psi, tubing pressure 1950 psi. Master valve froze off while trying to flow well.
10/21	7413	Shut in.
10/22	7413	Shut in 92 hours. Casing pressure 2100 psi, tubing pressure 2100 psi. Opened well and fluid hit in 20 minutes. After 30 minutes, casing pressure 1625, tubing pressure 325. After 3-1/2 hours, casing pressure 475 psi, tubing pressure 125 psi. Gauged 2400 MCF/D.
10/23	7413	Shut in 21 hours. Casing pressure 2150 psi, tubing pressure 1850 psi. Fluid up in 5 minutes. After 30 minutes, casing pressure 1850 psi, tubing pressure 400 psi. After 3 hours casing pressure 420 psi, tubing pressure 75 psi. Gauged 2150 MCF/D through 2".
10/24	7413	Shut in 21-1/2 hours. Casing pressure 2100 psi, tubing pressure 1750 psi. After flowing 3-1/4 hours, casing pressure 425 psi, tubing pressure 75 psi. Gauged 2290 MCF/D through 2".
10/25	7413	Shut in 20 hours. Casing pressure 2150 psi, tubing pressure 1875 psi. Moving rig.
10/27	7413	Shut in 60 hours. Casing pressure 2175 psi, tubing pressure 2050 psi. After flowing 3 hours, casing pressure 475 psi, tubing pressure 75 psi. Gauged 2600 MCF/D through 2". The well flowed solid slugs of fluid intermittantly the first 20 minutes and then flowed a heavy mist the remainder of the three hours. Fluid was about 50% distillate.
10/28	7413	Shut in 18 hours. Casing pressure 2175 psi, tubing pressure 1900 psi. After 3-1/2 hours, casing pressure 400 psi, tubing pressure 75 psi and the well gauged 2210 MCF/D.
10/29	7413	Shut in 19-1/2 hours. Casing pressure 2150 psi, tubing pressure 1830 psi. After 3 hours, casing pressure 425 psi, tubing pressure 75 psi. Gauged 2400 MCF/D.
10/30	7413	After flowing 24 hours, casing pressure 300 psi, tubing pressure 50 psi. Gauged 1820 MCF/D through 2". Well was still flowing a very heavy mist, 50% distillate, estimated 10 to 15 bbls. of fluid per day.
10/31	7413	After flowing 48 hours, casing pressure 300 psi, tubing pressure 50 psi. Gauged 1650 MCF/D, flowing a heavy mist, 90 to 100% distillate. Shut well in for 7 day potential.
11/11	7413	Shut in 10-1/2 days. Casing pressure 2288 psi, tubing pressure 2260 psi. Flowed 3 hours through 3/4" choke. Casing pressure 534 psi, tubing pressure 166 psi. Measured flow 2161 MCF/D. Calculated actual open flow potential 2242 MCF/D. Estimated 15 bbls. fluid per day, 90 to 100% distillate.