DRILLING & COMPLETION HISTORY

CONSOLIDATED OIL & GAS, INC.

TRIBAL "C" NO. 9 - 7

Rio Arriba County, New Mexico
October 23, 1962

Location:		790' F/NL & 790' F/EL, Section 3, T26N-R3W, N. M. P. M.
Elevations:		6955' GL 6966' KB - all measurements from KB
Spud:		August 23, 1962
Drilling Completed: Well Completed:		September 6, 1962 October 6, 1962
Total Depth:		6002' Drilled 5948' PBTD
Casing:	Surface:	10 3/4" 32# set at 306' and cemented with 220 sx. regular 2% $CaCl_2$.
	Production:	7 5/8" 26.40# Range 2, S. T. & C. at 3875' cemented with 75 sx. regular, 171 cu. ft. Diacel "D", 100 sx. 50/50 Pozmix, 4% gel, 4% $CaCl_2$. 5 1/2" 15.5# J-55, Range 2, S. T. & C. liner set at 6000' top at 3778' cemented with 240 sx. 50/50 Pozmix, 4% gel.
	Tubing:	1 1/2" EUE 2.90# landed at 5730' in Baker packer. 1" EUE 1.80# landed at 3598'
Logs:		Lane Wells Radioactivity, Induction & Accoustic
Cores & Drillstem Tests:		None

Formation Tops: (Log)

Pictured Cliffs	3644'	(+3222)
Mesaverde		
Cliffhouse	5426'	(+1540)
Menefee	5488'	(+1478)
Pt. Lookout	5833'	(+1133)

Producing Perforations:

MV	PC
5844' - 5854'	3656' - 3662'
5860' - 5870'	3670' - 3676'
5876' - 5878'	3694' - 3718'
5892' - 5914'	
5924' - 5932'	

Treatment:	PC	Sand-water frac with 75,800 gal. water, 100,000 lbs. of sand.
	MV	Sand-water frac with 71,400 gal. water, 100,000 lbs. of sand.
Initial Potential:	MV	Flow volume thru 3/4" choke: 2250 MCFD
	PC	Flow volume thru 3/4" choke: 4312 MCFD Calculated Absolute Open Flow Potential: 4665 MCFD

WELL: Tribal "C" No. 9-7

790' F/NL & 790' F/EL, Sec. 7-T26N-R3W

FIELD: Tapicito Pictured Cliffs-Blanco Mesaverde

COUNTY: Rio Arriba STATE: New Mexico

ELEVATIONS: 6955' GL

6966' KB

8/21/62:

Moving in rotary rig.

8/22/62

Rigging up rotary rig.

8/23/62

Depth 152'. Drilled 152' of surface hole - 15". Dev. 1/4° at 103'. Spudded at 3 a.m. 8/23/62.

8/24/62

Ran ten joints of 10 3/4" 32# 8-round surface casing for 295' set at 306' KB. Cemented with 220 sx. regular 2% $CaCl_2$, plug down at 2:30 p.m. 8/23, cement circulated, nippled up, pressured up to 1000# for 30 minutes, pressure held. Present operation, drilling at 550', drilled 350'.

8/25/62

Depth 1536'. Drilled 986' of sand and shale. Drilling with Bit No. 2. Mud 8.9. Vis. 39. Water loss 9.1. Mud cake 1/32. PH 10. Dev. 1/2° at 700'.

8/26/62

Depth 2247'. Drilled 697' of sand and shale. Mud 9.4. Vis. 40. Water loss 7.8. Dev. 1/2° at 1540'. Present operation, tripping for Bit No. 4.

8/27/62

Depth 2650'. Drilled 403' of sand and shale. Drilling with Bit No. 5. Mud 9.5. Vis. 42. Water loss 8.6.

8/28/62

Drilling at 3015'. Drilled 365'. Drilling with Bit 6. Mud 9.6. Vis. 40. Dev. 3/4° at 2750'.

8/29/62

Depth 3387'. Drilled 372' of sand and shale. Present operation, drilling with Bit 7. Mud 9.6. Vis. 44. Water loss 8. Mud cake 1/32. PH 9.5. Dev. 3/4° at 3250'.

8/30/62

Depth 3710' Drilled 323' of sand and shale. Present operation, drilling with Bit No. 8. Mud 9.6. Vis. 55. Dev. 3/4° at 3550'.

8/31/62

Depth 3865'. Drilled 155' of sand and shale. Present operation, pulling out of hole to log. Mud 9.6. Vis. 80. Water loss 7.8. Mud cake 1/32. PH 9.2.

9/1/62

Ran 7 5/8" 26.40# Range 2, S.T. & C. 125 joints for 3901.64', plus guide shoe for 1.00' and float collar for 1.50', total pipe 3903.94' less above KB 29.00', pipe set at 3874.94' KB. Float collar at 3841' KB, one centralizer on shoe joint, one centralizer at 3480' KB. Cemented with 75 sx. regular, 171 cu. ft. Diacel "D", 100 sx. 50/50 Pozmix, 4% gel, 4% C.C., plug down at 6:20 p.m. 8/31/62. Bumped plug with 2000#. Good returns throughout job. Present operation, nippling up, WOC.

9/2/62

Pressured up to 1000# for 30 minutes. Blew 7 5/8" down to float, drilled float and shoe. Present operation, drilling at 4390', drilled 514' of sand and shale. Dev. 1° at 4000', drilling with Bit No. 10.

9/3/62

Depth 4878'. Drilled 408'. Present operation, tripping for Bit No. 12. Dev. 1° at 4400', 3/4° at 4800'.

9/4/62

Depth 5282'. Drilled 404' of sand and shale. Present operation, making trip for Bit No. 13. Dev. 3/4° at 5200'.

9/5/62

Drilling at 5623'. Drilled 341' of sand and shale. Bit No. 13 in hole. Dev. 1 1/2° at 5600'.

9/6/62

Depth 6002'. Drilled 379' of sand and shale. Present operation, pulling out of hole to log.

9/7/62

Present operation, running casing.

9/8/62

Ran 70 joints 5 1/2" 15.5# J-55, Range 2, S.T. & C. liner, total 2232 1/2' set at 6000'. Rop of liner at 3778' KB, 97' overlap. Cemented with 240 sx. 50/50 Pozmix, 4% gel. Bump plug with 1200#. Plug down at 9 a.m. 9/7/62. Moving out rotary rig.

9/9/62

Finished moving out rotary rig. Waiting on completion rig.

10/2/62

Moved in completion rig. Rigged up, picked up 2 7/8" tubing, ran to top of liner at 3778', no cement to this depth. Could not pressure up at this time due to pump not being on location, truck hauling pump broke down. Came out of hole with 2 7/8" tubing and 6 3/4" bit. Will pressure up as soon as pump arrives on location.

10/3/62

Set pump, pressured up to 1650#, pressure held. Ran 4 3/4" bit to 3878', 100' inside of liner. Pressured up to 1650#, pressure held. Ran 4 3/4" bit to 5943', circulated one hour. Pressured up with Western to 2500# for 10 minutes. Pressure held. Came out of hole with 2 7/8" tubing. Rigged up PGAC, logged and perforated.

Perforated two per foot - 5924'-5932', 5892'-5914', 5876'-5878', 5862'-5870', 5844'-5854', 104 holes in total in MV. Rig up Western (five pumps).

Breakdown, all pumps	700-200#	Breakdown & fill	70 bbls.
Maximum treat. press	700#	Treatment fluid	71,400 gals.
Minimum treat. press	200#	Overflush	None
Aver. treat. press	400#	Sand	100,000 lbs.
Final treat. press	700#	Injection Rate	60 BPM
Five minut shut in	0#	Rubber Balls	90
Instant shut in	0#	Frac Complete at 1:10 a.m. 10/3	

Rigged up PGAC. Set baker bridge plug at 3880' KB. Perforated two per foot - 3694'-3718', 3670'-3676', 3656'-3662'. Total of 72 holes in PC.

Breakdown, all pumps	1225-650#	Breakdown & fill	100 bbls.
Maximum treat. press	1800#	Treatment fluid	75,800 gals.
Minimum treat. press	500#	Overflush	None
Average treat. press	1000#	Sand	100,000 lbs.
Final treat. press	1600#	Injection rate	58 BPM
Instant shut in	425#	Rubber Balls	40
Five minute shut in	200#	Frac complete at 3:50 a.m. 10/3	

Present operation, nippling up.

10/4/62

Finished nippling up, started blowing down at 11 p.m. 10/3. Blew well down to 2550', started unloading at this depth at 2 p.m. Blew well to 3890' (bridge plug) on plug at 6 p.m. 10/3. Blew well two hours after reaching plug. Well clear of water and sand, well gauged 4352 MCFD. Started drilling on bridge plug at 8 p.m. Drilled top off plug at 11 p.m. Water from MV came up hole, pulled tubing back up hole, blew well back down to plug at 3890'. On plug at 3 a.m., from 3 a.m. to 6 a.m. blowing well. Present operation, drilling on plug at 3890', well making too much water and sand to be gauged at this time.

WELL: TRIBAL "C" NO. 9-7

10/5/62

Finished drilling plug loose at 3890'. Pushed on to PBTD of 5948'. Cleaned and blew well two hours, well clean of sand, still making heavy spray of water. Started laying down 2 7/8" completion string at 1 p.m. Rigged up PGAC, ran and set Baker Model D production packer at 5740' KB. Present operation, running 1 1/2" tubing, lacked 50 joints of being to Model D at 7 a.m. with 1 1/2" tubing. Well gauged 4300 MCFD at 7 a.m.

10/6/62

DK, ran 176 joints 1 1/2" EUE 2.90# for 5695.45' plug 1 1/2" subs 23.48', tubing landed at 5730' KB. On bottom of 1 1/2" tubing, one Baker two-seal locator assembly on bottom of seal assembly. One 1 1/2" x 4" pump joint. Perforated one 1 1/2 x 6' with bridge plug. PC Ran 114 joints 1 " EUE 10 round 1.80# for 3587.30', corrected 1.07 zero, tubing landed at 3598.37' KB. One jet collar at 3095.78', one jet collar at 3347.55' KB. Tubing landed at 5 p.m. 10/5/62. Shut well in.

10/7/62

Well shut in for test.

10/8/62

Well shut in for test.

OPEN FLOW TEST DATA

DATE October 24, 1962

Operator: Consolidated Oil & Gas, Inc.		Lease: Tribal "C" No. 9-7	
Location: 790' F/NL, 790' F/EL, Sec. 7-T26N-R3W		County: Rio Arriba	State: New Mexico
Formation: Pictured Cliffs		Pool: Tapicito	
Casing: Diameter: 7 5/8"	Set At: Feet: 3875'	Tubing: Diameter: 1" EUE	Set At: Feet: 3598'
Pay Zone: From: 3656'	To: 3718'	Total Depth: 6002'	
Stimulation Method: Sand-water frac		Flow Through Casing: X	Flow Through Tubing:

Choke Size, Inches: 0.75		Choke Constant: C: 14.1605			
Shut-in Pressure, Casing, PSIG: 1050	+ 12 = PSIA: 1062	Days Shut-in: 7	Shut-in Pressure, Tubing PSIG: 1050	+ 12 = PSIA: 1062
Flowing Pressure: P PSIG: 300	+ 12 = PSIA: 312		Working Pressure: P_w PSIG: 302	+ 12 = PSIA: 314
Temperature: T °F: 46°	n = 0.85		Fpv (From Tables): 1.040	Gravity: 0.70

CHOKE VOLUME = $Q = C \times P_t \times F_t \times F_g \times F_{pv}$

$Q = 14.1605 \times 312 \times 1.0137 \times .9258 \times 1.040 =$ 4312 MCF/D

OPEN FLOW = $Aof = Q \left(\frac{P_c^2}{P_c^2 - P_w^2} \right)^n$

$Aof = \left(\frac{1052^2}{1052^2 - 314^2} \right)^n = \frac{1,102,500}{1052^2 - 98,596} = \frac{1,102,500}{1,003,904} = 1.0982^{.65} = 1.082$

Aof = 4665 MCF D

TESTED BY Clyde Phillips

WITNESSED BY _____

A. D. Williams
Chief Engineer

OPEN FLOW TEST DATA

DATE October 12, 1962

Operator: Consolidated Oil & Gas, Inc.		Lease: Tribal "C" No. 9-7	
Location: 790' FNL, 790' FEL, Sec. 7, T26N, R3W		County: Rio Arriba	State: New Mexico
Formation: Mesaverde		Pool: Blanco	
Casing: Diameter: 5-1/2" liner	Set At: Feet: 3778 to 6000	Tubing: Diameter: 1-1/2"	Set At: Feet: 5730
Pay Zone: From: 5844	To: 5932	Total Depth: 6002	
Stimulation Method: Sand Water Frac		Flow Through Casing:	Flow Through Tubing: X

Choke Size, Inches: 0.75		Choke Constant: C: 14.1605			
Shut-in Pressure, Casing, PSIG:	+ 12 = PSIA:	Days Shut-in: 7	Shut-in Pressure, Tubing PSIG: 1195	+ 12 = PSIA: 1207
Flowing Pressure: P PSIG: 154	+ 12 = PSIA: 166		Working Pressure: P_w PSIG:	+ 12 = PSIA:
Temperature: T °F: 49	n = .75		Fpv (From Tables): 1.022	Gravity: 0.70

CHOKE VOLUME = $Q = C \times P_t \times F_t \times F_g \times F_{pv}$

$Q = 14.1605 \times 166 \times 1.0108 \times .9258 \times 1.022 =$ 2250 MCF/D

OPEN FLOW = $Aof = Q \left(\frac{P_c^2}{P_c^2 - P_w^2} \right)^n$

$Aof = \left(\frac{\quad}{\quad} \right)^n =$

Aof = _____ MCF D

TESTED BY Clyde Phillips

WITNESSED BY _____

A. D. Williams