DRILLING & COMPLETION HISTORY

CONSOLIDATED OIL & GAS, INC.

TRIBAL "C" NO. 5 - 5

Rio Arriba County, New Mexico
October 22, 1962

Location:		990' F/SL, 790' F/WL, Section 5 T26N-R3W, N.M.P.M.
Elevations:		7101' GL 7112' KB - all measurements from KB
Spud:		August 12, 1962
Drilling Completed: Well Completed:		August 30, 1962 September 29, 1962
Total Depth:		6299' Drilled 6252' Plug Back
Casing:	Surface:	10 3/4" 32.75# set at 295' with 220 sx. regular 2% $CaCl_2$ cement.
	Production:	7 5/8" 26.40# set at 4036' with 195 sx. 50/50 Pozmix, 4% gel., 4% $CaCl_2$ and 75 sx. regular Diacel "D". 5 1/2" liner set at 6287' with 200 sx. 50/50 Pozmix, 4% gel. Top of liner at 3918'.
	Tubing: MV	1 1/2" EUE landed in Baker Model "D" packer at 5890'.
	PC	1" EUE landed at 3802'.
Logs:		Welex Radioactivity, Induction & Accoustic
Cores & Drillstem Tests:		None

Formation Tops: (Log)

Pictured Cliffs		
Formation	3819'	(+3293)
Sandstone 1	3822'	(+3290)
Sandstone 2	3874'	(+2378)
Mesaverde		
Cliffhouse	5600'	(+1512)
Menefee	5650'	(+1462)
Pt. Lookout	5973'	(+1139)
Mancos	6120'	(+ 992)

Producing Perforations:

MV	PC
5982'-6006'	3824'-3834'
6038'-6044'	3840'-3844'
6066'-6074'	3876'-3896'
6094'-6098'	

Treatment:	MV	Sand-water frac with 71500 gal. water and 100,000 lbs. sand.
	PC	Sand-water frac with 100,000 gal. water, 67,000 lbs. sand.
Initial Potential:	MV	Flow volume thru 3/4" choke: 3387 MCFD
	PC	Flow volume thru 3/4" choke: 4495 MCFD Calculated Absolute Open Flow Potential: 4904 MCFD.

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990' F/SL & 790' F/WL, Sec. 5-T26N-R3W

FIELD: Tapicito Pictured Cliffs-Blanco Mesaverde

COUNTY: Rio Arriba STATE: New Mexico

ELEVATIONS: 7101' GL

7112' KB

8/10/62

Building location.

8/12/62

Moved in rotary rig. Spud in at 4:30 a.m. 8/12/62. Present operation, drilling 15" surface hole, depth 58'.

8/13/62

TD 302', drilled 15" hole to 302', ran 10 joints of 10 3/4" 32.75# casing for 319.66', set at 294.75' KB. Cemented with 220 sx. regular 2% $CaCl_2$ cement. Plug down at 7 a.m. 8/13/62, good returns on cement. Present operation, WOC.

8/14/62

Rig down 24 hours, repairing main drum shaft.

8/15/62

Rig down 24 hours, repairing main drum shaft.

8/16/62

Depth 650'. Drilled 350' of sand and shale. Present operation, drilling with Bit 1.

8/17/62

Drilling at 1569'. Drilled 879' of sand and shale. Mud 9.1. Vis. 35. Dev. 1 1/2° at 1000', 1 1/2° at 1500'.

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8/18/62

Depth 2417'. Drilled 849' of sand and shale. Trip for Bit 4. Mud 9.2. Vis. 41. Dev. 1 1/2° at 2000'.

8/19/62

Depth 2831'. Drilled 414' of sand and shale. Making trip for Bit 5. Mud. 9.5. Vis. 40. Water loss 8. Dev. 1 3/4° at 2500'.

8/20/62

Depth 3112'. Drilled 281' of sand and shale. Drilling with Bit 6. Mud 9.5. Vis. 40. Dev. 1 1/2° at 3000'.

8/21/62

Depth 3383'. Drilled 281' of sand and shale. Mud 9.6. Vis. 48. Water loss 8.2. Present operation, going in hole with Bit 8.

8/22/62

Drilling at 3830'. Drilled 448' of sand and shale. Drilling with Bit 9. Mud 9.6. Vis. 56. Water loss 8.2. Dev. 1/4° at 3500'.

8/23/62

Depth 4035'. Drilled 205' of sand and shale. Present operation, circulating for logs. Mud 9.8. Vis. 75. Water loss 8.2. Mud cake 1/32. PH 8. Dev. 3/4° at 3500'.

8/24/62

Came out of hole, ran logs, rigged up, ran 7 5/8" casing. Ran 127 joints of 7 5/8" 26.40# for total 4033.54' set at 4036.04' KB. Float collar at 4002.44' KB, one centralizer on shoe joint, one centralizer at 3941' KB, one centralizer at 3680' KB, cemented with 195 sx. 50/50 Pozmix, 4% gel, 4% $CaCl_2$, 75 sx. regular 4% Diacel D. Plug down at 12:15 a.m., bumped plug with 1700#, released pressure, float held, good circulation throughout cement job. Nippled up to drill with gas.

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8/25/62

Present operation, blowing hole at 3700'. Pressured up on casing with 1500# for 30 minutes, held OK.

8/26/62

Finished blowing down to 4002' (float collar). Drilled float and guide shoe (4036'). Present operation, drilling at 4140' with Bit No. 12 (6 3/4"). Well dusting good.

8/27/62

Depth 4761'. Drilled 620' of sand and shale. Drilling with Bit No. 13. Dev. 1/2° at 4430'. Drilling with gas.

8/28/62

Depth 5402'. Dusting good. Drilled 641' of sand and shale. Drilling with Bit 14. Dev. 1/4° at 4900', 1/2° at 5400'.

8/29/62

Depth 6020'. Drilled 618' of sand and shale. Present operation, drilling with Bit 15. Dev. 1 3/4° at 5850'.

8/30/62

Logged well. Welex TD 6299'. Ran 73 joints 5 1/2" 15.5# J-55 for 2367.51', one Burns liner hanger 1.000', 2368.51'. 5 1/2" liner set at 6286.63' KB, top of 5 1/2" liner 3918.12' KB, overlap on liner 117.88'. Note: Could not get to Welex TD. Cemented with 200 sx. 50/50 Pozmix, 4% gel. Bump plug with 1400#, plug down at 10:35 p.m. 8/29/62.

8/31/62

Moving off rotary rig.

9/23/62

Moved in completion rig. Rigged up. Shut rig down at 12 a.m. 9/23/62.

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9/25/62

Finished pulling 2 7/8" tubing and 4 3/4" bit. Ran 4 3/4" bit back in, cleaned out to 6252'. 16' of cement on top of float collar. Rig up Western, pressured up to 2600# for ten minutes, pressure held. Came out of hole with 2 7/8" tubing. Rigged up Mercury Perforating Co. Ran corelation log. Perforated two per foot, 6094'-6098', 6066'-6074', 6038'-6044', 5982'-6006', total holes 84.

Rigged up Western for first stage frac.

Breakdown 1 pump	900#	Breakdown & fill	100 bbls.
Breakdown 5 pumps	400#	Treating fluid	71,500 gal.
Maximum pressure	900#	Sand	100,000 lbs.
Minimum pressure	200#	Rubber balls	50
Max. treat. pressure	600#	Injection rate	59.1 BPM
Min. treat. pressure	200#	Overflush	None
Aver. treat. pressure	400#		
Final treat. pressure	500#		
Instant shut in	0# on vac.		
5 minute shut in	0# on vac.		

Started rigging up at this point. Rigged up Mercury, set plug (5 1/2" mag.) at 3950' KB.

Perforated PC two per foot 3896'-3876', 3844'-3840', 3834'-3824', total holes 68.

Second stage frac:

Breakdown pressure	1500#	Breakdown and fill	100 bbls.
Breakdown 5 pumps	600#	Treating fluid	100,000 gal.
Maximum pressure	1500#	Sand	67,000 lbs.
Minimum pressure	400#	Overflush	None
Max. treat. pressure	600#	Rubber balls	40
Aver. treat. pressure	500#	Injection rate	60.8 BPM
Final treat. pressure	500# (4) pumps		
Instant shut in	200#		
five minute shut in	200#		

Frac completed at 5:30 a.m. 9/25/62. Present operation, rigging up to blow down with gas.

9/26/62

Finished laying blewy line. Nippled up. Started blowing down with

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9/26/62 Cont'd.

gas at 9 a.m. 9/25. Blew down to 1800' at 12 noon. Well started unloading water and sand and ran tubing on to top of liner at 3918'. Blew well from this depth 4 p.m. to 10 p.m. Well cleaned of water and sand, well gauged 3000 MCFD. Cleaned out to plug at 3950', on plug at 1 a.m. 9/26. Drilled top off of plug at 3:30 a.m. Well unloading a lot of water and sand, started back to drilling on plug at 5:50 a.m. Present operation, drilling on bridge plug.

9/27/62

Finished drilling bridge plug and cleaned out to PBTD of 6152'. Started laying down 2 7/8" tubing at 8:30 p.m. 8/27/62, out of hole at 3 a.m. Ran Model "D" on wire line set at 5890' KB. Basin sent wrong lub. equipment, waiting on proper equipment from 6 a.m. to 7 a.m. Gauged well, well making 5288 MCFD after blowing 23 hours, present operation, waiting on lub. equipment.

9/28/62

Gauged well at 9 a.m., well making 5288 MCFD. Waiting on lub. Equipment from 7 a.m. to 6:30 p.m. Started in hole with 1 1/2" tubing at 6:30 p.m. Set 1 1/2" tubing at 5887' KB, landed 1" tubing at 3802' KB. Finished job at 6 a.m. 9/28/62.

9/29/62

Ran MV tubing, 181 joints 1 1/2" EUE tubing for 5848.24' plus pup joints 28.76' plus 10' KB, tubing landed at 5887.00' KB. Ran PC tubing, 121 joints 1" EUE tubing plus 10' KB, tubing landed at 3802.40' KB. Shut well in for test.

9/30/62

Shut in for test.

10/1/62

Shut in for test.

10/2/62

Shut in for test.

OPEN FLOW TEST DATA

DATE October 12, 1962

Operator: Consolidated Oil & Gas, Inc.		Lease: Tribal C No. 5-5	
Location: 990' FSL, 790' FWL, Sec. 5, T26N, R3W		County: Rio Arriba	State: New Mexico
Formation: Mesaverde		Pool: Blanco	
Casing: Diameter: 5-1/2"	Set At: Feet: 3918-6286	Tubing: Diameter: 1-1/2"	Set At: Feet: 5887
Pay Zone: From: 5982	To: 6098	Total Depth: 6299	
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: 14	Shut-in Pressure, Tubing PSIG: 1221	+ 12 = PSIA: 1233	
Flowing Pressure: P PSIG: 235	- 12 = PSIA: 247		Working Pressure: P_w PSIG:	+ 12 = PSIA:	
Temperature: T °F: 48	n = .75		Fpv (From Tables): 1.034	Gravity: 0.70	

CHOKE VOLUME = Q = C x P_t x F_t x F_g x F_{pv}

Q = 14.1605 x 247 x 1.0117 x .9258 x 1.034 = 3387 MCF/D

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

Aof = $\left(\quad \right)^n$ =

Aof = _____ MCF D

TESTED BY John Walker

WITNESSED BY _____

W. H. Williams
Chief Engineer

WELL: TRIBAL "C" NO. 5-5

10/7/62

PC well tested, 4536 MCFD, dry through out test.

OPEN FLOW TEST DATA

DATE October 5, 1962

Operator: Consolidated Oil & Gas, Inc.		Lease: Tribal C No. 5-5	
Location: 990' FSL, 790' FWL, Sec. 5, T26N, R3W		County: Rio Arriba	State: New Mexico
Formation: Pictured Cliffs		Pool: Tapicito	
Casing: Diameter: 7-5/8"	Set At: Feet: 4306	Tubing: Diameter: 1"	Set At: Feet: 3802
Pay Zone: From: 3824	To: 3896	Total Depth: 6299	
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: 1033	- 12 = PSIA: 1045	Days Shut-in: 7	Shut-in Pressure, Tubing PSIG: 1033	+ 12 = PSIA: 1045	
Flowing Pressure: P PSIG: 312	- 12 = PSIA: 324		Working Pressure: P_w PSIG: 314	+ 12 = PSIA: 326	
Temperature: T °F: 46	n = .85		Fpv (From Tables): 1.045	Gravity: 0.7	

CHOKE VOLUME = Q = C x P_t x F_t x F_g x F_{pv}

Q = 14.1605 x 324 x 1.0127 x .9258 x 1.045 = 4495 MCF/D

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

Aof = $\left(\frac{1,092,025}{985,749} \right)^n$ x 4495 =

Aof = 4904 MCF D

TESTED BY Clyde Phillips

WITNESSED BY _____