

DRILLING & COMPLETION HISTORY  
CONSOLIDATED OIL & GAS, INC.  
JICARILLA NO. 4-8  
Rio Arriba County, New Mexico  
September 27, 1963

Location: 1550' F/NL, 890' F/WL, Section 8,  
T26N-R5W, NMPM

Elevations: 6958' GL  
6970' KB - all measurements from KB

Spud: May 25, 1963

Drilling Completed: July 13, 1963  
Well Completed: July 25, 1963

Total Depth: 6127'

Casing: Surface: 9 5/8" set at 293' with 225 sx regular 2% CaCl<sub>2</sub> cement

Production: 7" 23# set at 3726.94' with 164 sx 50-50 Diamix "A"

4 1/2" 10.50# set at 6126.35' with 174 sx 2-1 Diamix "A"  
and 130 sx 50-50 Diamix "A"

Tubing: 1 1/2" EUE set in Model "D" packer @ 5568'  
1" EUE set @ 3471'

Logs: Lane Wells - Gamma Ray-Neutron

Cores & Drillstem  
Tests: None

Formation Tops (Log):

Pictured Cliffs:	3522 (+3448)
Cliff House:	5244 (+1726)
Point Lookout:	5752 (+1218)

Producing Perforations:

MV	PC
5656-5666	3530-3554
5760-5768	3568-3600
5784-5798	
5806-5824	

Treatment: MV Sandwater frac with 79,600 gals water and 90,000# sand

PC Sandwater frac with 82,700 gals water and 100,000# sand

Initial Potential: MV - Flow volume thru 3/4" choke: 461 MCFD  
PC - Flow volume thru 3/4" choke: 1811 MCFD  
Calculated absolute open flow: 8095 MCFD



WELL: JICARILLA NO. 4-8  
1550' F/NL, 890' F/WL, Sec. 8, T26N-R5W  
FIELD: Blanco Mesaverde, Tapicito Pictured Cliffs  
COUNTY: Rio Arriba STATE: New Mexico  
ELEVATIONS: 6958' GL  
6970' KB

5/26/63

Finished rigging up. Spudded in at 9 p.m. 5-25-63. Drilling at 293'. 13 3/4" hole. 1 1/2" Dev. at 100', 1 1/2" at 250'. Preparing to set surface.

5/27/63

Ran 10 joints 9 5/8" surface casing, set at 293' from KB. Cemented with 225 sx. regular 2% calcium chloride. Plug down at 10:30 a.m. 5-26-63. Good return on cement. Nipped up, pressured up to 1000#. Drilled out. Present operation drilling at 1000'. Drilled 707' with Bit No. 1. Mud weight 8.9, Visc. 36, water loss 9.4, 1/4" Dev. at 500' and 1/4" Dev. at 950'.

5/28/63

Depth 2020'. Drilled 1020' sand and shale. Present operation drilling with Bit 2. Mud weight 9.0, Visc. 32, water loss 9.4. 1 1/4" Dev. at 1521'. 3/4" Dev. at 1922'.

5/29/63

Depth 2915'. Drilled 895' sand and shale. Present operation drilling with Bit 3. Mud weight 9.0, Visc. 35, water loss 9.4, 3/4" Dev. at 2600'.

5/30/63

Depth 3310'. Drilled 395' sand and shale. Mud weight 9.0, Visc. 35, water loss 11.4, 1/4" Dev. at 3210'. Present operation making trip for Bit 5.

5/31/63

Depth 3633'. Drilled 323' sand and shale. Present operation making trip for Bit 6. Mud weight 9.0, Visc. 40, water loss 10. 1/4" Dev. at 3600'.

6/1/63

Depth 3750'. Drilled 117' sand and shale. Present operation waiting on logging tool to log thru drill pipe. Tried to run open hole log, could not get below 2675'. Went back in hole with drill pipe. Will log thru drill pipe.

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6/2/63

Logged well thru drill pipe. Rigged up and ran 103 joints 7" 23# ST&C casing, total 3728.94. Set @ 3726.94 KB. Float collar @ 3699' KB. One centralizer on shoe joint, one centralizer @ 3413' KB. Cemented with 100 sx. 50-50 Diamix "A", tailed in with 64 sx 50-50 Diamix "A" 2% calcium chloride. Plug down at 3:45 p.m. 6-1-63. Good returns throughout cement job. Bumped plug with 1500#, held okay. Present operation blowing well down @ 2300'.

6/3/63

Depth 3833'. Drilled 83' sand and shale. Present operation blowing hole 360' off bottom. Well was dusting good while drill pipe started torquing up. Pulled up 1000'. Pipe out of hole, broke circulation. Present operation blowing back to bottom with gas.

6/4/63

Depth 3833'. Cannot get hole to dry up. Well will make some dust, some mud balls and light spray of moisture at times. Preparing to load hole with water. Will clean out to 3833'. Will run Baker full bore packer. Will set in shoe joint and squeeze.

6/5/63

Cleaned out to 3833' TD. Loaded hole with water and circulated hole clean. Came out of hole, put Baker full bore packer on. Ran to 3705' KB and set in 7" shoe joint. Pressured up on back side of packer to 1700#. Held okay. Pumped fluid down drill pipe, hole taking fluid at 4 bbls per minute. Released packer, came up hole, reset packer at 3551' KB. Pressured up on back side of packer to 1500#. Held okay. Pumped water down drill pipe rate of 4 bbls per minute at 1100#. Stopped pumps for 5 minutes. Pressure stopped from 1100# to 800# in 5 minutes. Pressure still falling. Started squeeze. Squeezed 35 sx regular cement 2% calcium chloride into formation. Left 20 sx in casing. Maximum squeeze pressure 2100#. Job completed at 10 p.m. 6-4-63. Came out of hole with packer. Pressured up on casing to 1500#. Held okay. Started blowing hole down. Present operation blowing hole down at 3400'.

6/6/63

Depth 3887'. Drilled 49'. Blew well down with gas to top of cement at 3572'. Drilled firm cement to 3833'. Well dusted good to this depth. Drilled on to 3873' with 50% returns. At 3873' well stopped dusting. Drilled on to 3887' without any dust. Present operation pulling out of hole to check drill pipe for mud rings.

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6/7/63

Depth 3944'. Drilled 57'. Well had intermittent sand part of the time. Came out of hole, put on Baker full bore packer - ran and set at 3620' from KB. Rigged up BJ - pressured up on down drill pipe. Formation broke down at 1500#. Pumped in 5 bbls per minute at 1200#. Let well set 10 minutes. Pressure held at 1000#. Pumped cement in. Cleared tool by 1 1/2" tubing. Let well set 10 minutes - pumped 1/4 bbls, no increase. Let well set 15 minutes. No increase. Let well set 25 minutes, pressured up to 1900#. Let well set 12 minutes, pressure dropped to 1750#. Pumped up to 2500#. Left well for 15 minutes. No decrease in pressure. Well squeezed at 5 a.m. with 40 sx regular 2% calcium chloride into formation. 35 sx left in open hole casing. Start drilling out at 2 p.m. today.

5/8/63

Waiting on cement. Blew and dried hole up. Top of cement @ 3662'. 3662' - 3685' - wet spotted cement. 3685' - 3810' - dust - good. Hit 2" stream of water @ 3810'. Blew hole 4 hours. Water has gone from 2" stream to 1/4" stream in 4 hours. Present operation blowing hole.

5/9/63

Drilled from 3810' to 3825', well would not dust. Picked drill pipe up into 7", loaded hole with water. Went back to bottom (3825'). Hole clean. Came out of hole, put Baker packer on, ran to 3710' and set. (in shoe joint). Pressured up on back side to 2,000# for 30 minutes held okay. Pumped down drill pipe rate of 4 BPM @ 1400#. Stopped pump. Pressure fell from 1400# to 1000# immediately and held. Release pressure, release packer, came up hole to 3600' and set. Pressured up on back side to 1500#. Pumped down drill pipe at rate of 4 BPM @ 1300#. Start squeeze. Squeezed with 75 sx. regular 2% calcium chloride reached standing pressure of 2500# left 50' up in 7". Pumped 65 sx in below casing point. Released packer, came out of hole. Present operation blowing down at 3400'. Squeeze completed @ 12 midnight.

6/10/63

Finished blowing hole down to 3606' - top of cement. Dried hole up. Started drilling cement from 3606' to 3944' - total depth of old hole - dusted good. Drilled new hole from 3944' to 4015'. Well dusting good. Something seems to be restricting gas flow through bit. Present operation coming out of hole to check bit. Hole dusting when trip was started.

6/11/63

Came out of hole. Drill pipe had some moisture and lots of cement cuttings. Going back in hole, started hitting bridges from 3402' to 4015'. No indication of moisture. Started drilling at 4015'. Well dusting good from 4015' to 4110' (95').

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5/11/63 (con't)

Well stopped dusting. Have been blowing hole for three hours. Had visible spray of moisture at end of blooe line. Gas pressure normal. No torque or drag on drill pipe.

6/12/63

Depth 4175'. Drilled 65' shale. Drilling with Bit 9. Mud weight 9, Visc. 43, water loss 9.6. Running 16 drill collars. 5 hours blowing hole, 7 1/4 hours drilling, 5 hours conditioning hole and mud. 5 3/4 hours trip running bit.

6/13/63

Depth 4383'. Drilled 208' in 19 hours. Mud weight 9, Visc. 37, water loss 10.2, 3/4" Dev. at 4275'. In hole with Bit 10.

6/14/63

Depth 4600'. Drilled 217' shale. Present operation tripping for Bit 12. Mud weight 9.0, Visc. 41, water loss 10.8.

6/15/63

Depth 4878'. Drilled 278' shale. Present operation drilling with Bit 13. Mud weight 8.9, Visc. 38, water loss 10.4. 19 1/2 hours drilling - 4 1/2 hours trip.

6/16/63

Depth 5019'. Drilled 191' shale. Present operation making trip for Bit 15. Mud weight 8.8, Visc. 37, water loss 10.4, 3/4" Dev. at 4887'. 11 1/2 hours drilling. Lost 60 bbls mud at 4912'.

5/17/63

Depth 5153'. Drilled 133' sand and shale. 13 hours drilling. Present operation drilling ahead with Bit 16. Mud weight 9.4, Visc. 40, water loss 10.2. 1" Dev. at 5020'. Lost approximately 50 bbls mud from 5041 to 5060'. Lost approximately 60 bbls mud from 5120' to 5145'. Drilling ahead with full returns.

5/18/63

Depth 5249'. Drilled 96' of sand and shale. Present operation tripping for Bit 19. Mud weight 8.9, Visc. 42, water loss 10.

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6/19/63

Depth 5407'. Drilled 158'. Visc. 39, mud weight 8.9, water loss 10.5. Injecting gas in mud. 1/4" Dev. at 5350'. 15 1/2 hours drilling. 6 1/2 hours trip. 1/2 hour survey. 1 1/2 hours rig repair. No loss of mud in past 24 hrs.

6/20/63

Depth 5540, drilled 133' shale. Present operation drilling with Bit 22. Mud weight 9, Visc. 38, water loss 10.4. No loss of mud in 24 hours.

6/21/63

Depth 5701'. Drilled 161' sand and shale. Drilling with Bit 24. Mud weight 8.9, Visc. 41, water loss 10.2.

6/22/63

Depth 5860'. Drilled 159' shale and sand. Present operation drilling with Bit 25. Mud weight 8.8, Visc. 42, water loss 9.6. Lost 150 bbls mud at 5817'. 7 hours lost circulation and stuck drill pipe. 13 1/2 hours drilling and 3 1/2 hours trip.

6/23/63

Depth 5893'. Drilled 33' sand and shale. Present operation installing torque converter. Mud weight 8.8, Visc. 43, water loss 9.5. Lost approximately 200 bbls mud at 5893', while waiting on torque converter. 15 hours circulating time. Have full returns.

6/24/63

Finished repairing torque converter. Worked and pulled up to 2000#. Could not get loose. Good circulation. Rigged up Dialog, ran free point. Indicated free to bit. Attempted to back off and loosen collars, could not. Reran free point. Still indicated free to bit. Attempted to back off 2 collars, could not. Dialog truck broke down. Rigged up Kelly while waiting on McCullough. Spotted 15 gallons of DDT. Worked pipe up to 200,000#. Could not get loose. Rigged up McCullough free point, indicated free to bit. Attempted to break off and leave 4 collars, could not. Present operation attempting to shoot another shot in 4 collars. Mud weight 8.9, Visc. 41, water loss 9.6.

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6/25/63

Depth 5893'. Top of fish 5696'. Left 5 collars in hole. Came out of hole, put bumper sub and jars on, went back in, screwed into fish, jarred down some fish, moved fish approximately 18". Tried to jar up to get fish loose, could not. Attempted to unscrew from fish, could not. Rigged up McCullough, attempted to back off first collar below jars, could not. Ran free point. Free point indicated free below top collar. Attempted to back off just below jars and bumper sub. Pipe backed off above jars and bumper sub. Present operation preparing to screw back in jars.

6/26/63

Screwed back into jars. Ran the largest charge that would go through jars and bumper sub. Torqued up seven turns. Backed off at 5696'. Came out of hole with jars and bumper sub. Went back in hole with Bit. Went to bottom, conditioned hole and added some oil to mud system. 5 collars left in hole, came out of hole with bit. Picked up 2 joints of 6" washover pipe, went to top of fish. Present operation, preparing to wash over fish. Mud weight 8.7, visc. 70, water loss 5.2.

6/27/63

Attempted to wash over top of fish 5696'. Could not get wash over shoe to start over fish. Came out of hole, checked shoe. Shoe was swelled and had tried to go over fish. Apparently drill collars swelled on top after heavy charge was used to break off. Went back in hole with cut right shoe and 2 joints of washover pipe. Milled and washed over from 5696' to 5700'. Shoe stopped going. Came out of hole, shoe indicated that fish had been up inside of washover pipe. Put on new shoe, went back in to fish. Present operation preparing to start milling and washing. Mud weight 8.8, visc. 61, water loss 5.2, 1/32 wall cake. 8% oil. No trouble on trip.

6/28/63

Started back to milling at 5700'. Milled to 5708' with cut right shoe. Came out of hole with cut right shoe. Ran 5 joints of washover pipe with conventional shoe. Washover pipe and shoe went back to 5708'. Started washing over. Washed 18". Shoe torqued up. Came out of hole, had left 2 broken pieces of shoe in hole. Went back in hole with cut right shoe. Could not get over fish. Came out of hole, ran impression block, impression block indicated junk on top of fish. Waiting on orders from Huron.

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6/29/63

Present operation waiting on cement. Cemented well from 5700' to 5505' with 35 sx. regular cement, 18% 20-40 sand. Job completed @ 6:30 p.m. 6-28-63. Preparing to go in hole with drill pipe to check top of cement.

6/30/63

Tagged top of cement. Cemented @ 5533'. Ran slope test @ 5533', 3/4". Started to dress top of cement plug, 1st 10' soft, 2nd 10' drilling 1 min. per foot. Total cement drilled 20'. Drilled to 5553'. Contaminated mud, made mud to visc. to pump, started losing some mud. Present operation pulled up to 1800', started conditioning mud. Now @ 2500' treating cement out of mud. Total mud loss, approximately 50 bbls.

7/1/63

Finished treating cement out of mud. Drilled and cleaned out cement plug from 5553' to 5700', top of fish. Conditioned mud. Plug drilled all the way at a rate of 1 to 1 1/2 min. per foot. Spotted new plug, 35 sx. regular 10% sand, 2% calcium chloride. Spearheaded 17 bbls of lime water ahead of plug. Tailed in with 3 bbls lime water. Plug spotted @ 6 a.m. 7-1-63. Present operation, WOC.

7/2/63

WOC. Trip to top of cement. Present operation on top of cement, ready to drill.

7/3/63

Top of cement at 5475'. Dressed cement off from 5475' to 5652'. Cement drilled at 1 1/2 mins per foot with 20,000# weight. Came out of hole, ran whip stock tool to 5652'. Broke circulation, drilled approximately 1 foot. Bit torqued up about 1 1/2 rounds. Could not make any hole. Came out of hole with whip stock and bit. All 3 cones off bit. Whip stock tool had a bad crimped place about 3 feet from bottom. Present operation going in hole with 6 1/4" bit to condition hole to top of cement plug while repairing whip stock tool. Plans are, when necessary repairs are made, to go in hole with whip stock and 3 7/8" bit rather than 4 3/4" bit as was ran the first time.

7/4/63

Conditioned hole, came out of hole with bit. Attempted to run whip stock tool. Whip stock tool would not go below 2000'. Came out of hole, ran drill pipe to 5652'. (top of cement plug.) Spotted 24 sx regular cement 10% sand, 2% calcium chloride. Ran 17 bbls of lime water ahead of cement with 3 bbls of lime water behind cement. Job completed at 3 a.m. 7-4-63. WOC. Will set Eastman whip stock.

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7/5/63

After 12 hours, went in hole. tagged top of cement. Found top of cement at 5634'. Came out of hole, strapping drill pipe. Drill pipe measurements correct. (NOTE: This is only 18' of fillup. 24 sx. should have filled up 120'.) Went back in hole with 6 1/4" bit to dress off top of cement plug. Bit started torquing up immediately. Apparently junk on top of plug. Present operation coming out of hole to run a finger basket in attempt to recover junk. Mud weight 8.8, visc. 72, water loss 10.

7/6/63

Ran finger basket, core 2' of hole. Came out of hole. Recovered 1 cone and pin. Ran back in hole with 6 1/4" bit to dress off top of plug. Found to have junk still in hole. Came out of hole, ran finger basket, core 2' of hole. Came out of hole, recovered 1 full cone and pin and half a cone. Went back in hole with 6 1/4" bit, dressed 6' off of plug, drilling on plug 2 min per foot. Circulating and conditioning hole. Present operation coming out of hole to run whip stock. Top of cement plug @ 5649'. Mud weight 8.4, visc. 60, water loss 6.4.

7/7/63

Finished coming out of hole, waited approximately 4 1/2 hours for sub to be repaired. Put on whip stock tool, went in hole, had 6' of fillup. Could not set whip stock. Tried to wash to bottom. Sheared pin in whip stock tool. Came back out of hole with whip stock, ran bit to bottom. Could not break circulation. Pulled 30 stands, broke circulation, conditioned mud on way back in hole. Washed 6' of fillup out and drilled 3 more ft. off plug to dress Kelly out. Circulated and conditioned hole. Preparing to come out of hole to run whip stock. Mud weight 8.4, visc. 60, top of cement at 5652'.

7/8/63

Came out of hole with bit. Went in hole with whip stock and 4 3/4" bit. Set whip stock at 5654'. Drilled off whip stock at 5654' to 5666'. Came out of hole with whip stock. Went back in hole with hole opener. Opened hole on down to 5666'. Ran survey. 4 1/2" kick off. Pulled hole opener, put on 6 1/4" bit with string reamer. Went in hole, reamed 6 1/4" hole 5654' to 5666', no trouble. Present operation drilling ahead with bit 26 at 5667'. Will make approximately 30' of hole, then will take survey if everything is okay. Came out of hole to put on drill collars to drill ahead. Mud weight 8.5, visc. 74, water loss 9.6.

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7/9/63

Drilled to 5704', ran survey, dev. 5 1/4°. Came out of hole, picked up four 4 1/8" drill collars, went back in, drilled from 5667' to 5838', drilled 171'. Present operation - making trip for Bit 27, lost approximately 20 bbls. mud from 5834' to 5838'.

7/10/63

Depth 5926'. Drilled 88' sand and shale. Made trip at 5926', had one cone off bit. Ran junk basket to recover cone. Present operation coming out of hole with junk basket. 4 1/4° dev. at 5838'. Lost approximately 30 bbls mud at 5925'. Mud weight 8.8, visc. 80, water loss 9.

7/11/63

Came out of hole with basket, did not have cone. Went back in hole with basket, came, recovered cone. Went back in with new bit. Present operation - depth 5991'. Drilled 65'. Preparing to come out of hole to log. Mud weight 8.5, visc. 77, no loss of mud in last 24 hours.

7/12/63

Came out of hole with drill pipe, logged MV and PC. Went back in hole with drill pipe. Depth 6050'. Drilled 63' shale. Present operation tripping for Bit 31. 8 1/4 hours rotary time. Mud weight 8.5, Visc. 77, water loss 7.2, 2 1/2° Dev. at 6013'.

7/13/63

TD. 6127'. Liner ran and cemented. Ran 75 joints 4 1/2" 10.50# casing, (2490.36'). Burns Hanger (4.60'). Total of 2494.94' set at 6126.35' KB. Top of liner at 3631.38' KB. Float collar at 6092.55' KB. Cemented with 174 ex 2-1 Diamix "A". Tailed in with 130 ex 50-50 Diamix "A". Plug down at 6 a.m. 7-13-63, bumped plug with 800#. Note: Lost circulation just as pump down plug was released.

7/14/63

Ran temperature survey. Top of cement 4000'. 4000' to 4800' light to scattered. 4800' on down good cement. Moved out rotary.

7/15/63

Waiting on completion rig.

7/16/63

Waiting on completion rig.

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7/17/63

Waiting on completion rig.

7/18/63

Waiting on completion rig.

7/19/63

Will move in completion rig today. Have frac tanks full.

7/20/63

Moved in completion rig, rigged up and backed off 7" casing @ 106'. Replaced bad pipe, went back in, screwed into pipe, nipples up well. Present operation going in hole with 6 1/4" bit to clean out to top of liner.

7/21/63

Ran 6 1/4" bit to top of liner (3631). Displaced mud with water. Pressured up. Top of liner taking fluid @ 1500#. Came out of hole with 6 1/4" bit. Ran Baker Model full bore packer to 3515' KB and set. Pump in tubing @ 1200# rate of 1 BPM. Pressured up on back side to 2000#, pressure held. Start squeezing, pumped 15 ex. into top of liner. Well squeezed. Reversed excess cement out. Maximum squeeze pressure 2800#. Squeeze complete @ 8:45 p.m. Present operation going in hole to drill out and clean out to top of liner.

7/22/63

Found 95' cement on top of liner. Drilled out to 3631', top of liner. Came out of hole, put on 3 7/8" bit. Going in hole, could not get in liner. Came out of hole, going in hole with 3 7/8" tapered mill. Had tight place to 4185'. Mill stopped at this depth. Present operation pulling out of hole. Will try to get 3 5/8" gun to go. If gun will go, will perforate.

7/23/63

Went in with 3 3/4", no trouble getting in liner. Hit something @ 4821', pushed on to 5931'. Circulated and cleaned up hole. Rig up Western Co., pressured up to 2700#. Held okay. Rig up Lane Wells, ran correlation log. Perforated 2 per ft. 5666-5666, 5768-5760, 5798-5784, 5824-5806. Rig up Western Co. 5 pumps.

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7/23/63 (con't)

## First stage Mesaverde

B. D. 1 pump	400#	B. D. and fill	60 bbls
All pumps on	1800#	Treatment fluid	79,600 gals
Maximum treatment pres.	3000#	Over flush	none
Minimum treatment pres.	1800#	lbs of sand in formation	90,000# 20-40
Average treatment pres.	2000#	rubber balls	30
Final treatment pres.	3000#	Injection rate	45 BPM
Instant shut in pressure	1000#	Job complete @	9:08 p.m. 7-22-63
20 min shut in on vacuum			
Well screened out just as flush started.			

Rig up Lane Wells - set 4 1/2" magnet plug @ 3713' KB. Perforated PC 3600-3568, 3554-3530.

## Second stage Pictured Cliffs

B. D. 1 pump	1100# - 700#	B. D. and fill	60 bbls
All pumps	900#	Treatment fluid	82,700 gals
Maximum treatment pres	2000#	Over Flush	none
Minimum treatment pres	800#	lbs of sand, 100,000#	20-40
Average treatment pres	1400#	rubber balls	60
Final treatment pres.	2000#	Injection rate	56 BPM
Instant shut in pressure	800#	Job complete @	12:10 a.m. 7-23-63
5 min shut in pressure	700#		

7/24/63

Present operation laying down completion string. Blew and cleaned well on to bottom for 4 hours. Well making 5210 MCF.

7/25/63

Ran 172 joints 1 1/2" tubing, 36' of sub. Set at 5566.01', DK. Ran 110 joints of 1" tubing at 3471.75', PC. Set Model "D" packer.

7/26/63

Left both zones shut in until 12 p.m. PC 600/600. MV 0. Rigged up and started swabbing Mesaverde. Found fluid level at 1600'. Swabbed well down to 3600'. Well started making a little gas. Shut well down. Will check pressure this a.m.

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7/27/63

Mesaverde pressure 500# after 12 hour shut in. Pictured Cliffs pressure 900# after 3 hours. Blew and cleaned Mesaverde, gas volume too small to measure. Ran 3 hour test on Pictured Cliffs thru 3/4" choke. Final tubing pressure 100#, casing pressure 630#.

7/28/63

Blew and cleaned Mesaverde for 7 hours. Well unloading water, gas volume too small to measure. Will run test Monday.

7/29/63

Well shut in. Will attempt to test Mesaverde today.

7/30/63

Mesaverde - 780 tubing pressure. Pictured Cliffs - 1000 tubing, 1000 casing.

7/31/63

Mesaverde - ran three hour test through 3/4" choke. Final flowing pressure 20#. Heavy spray of water throughout test.

8/1/63

Shut in for test.

8/2/63

Will test Pictured Cliffs today.

8/3/63

Ran 3 hour test on Pictured Cliffs through 3/4" choke. Final tubing pressure 123#, casing pressure 916#. Pressure before test PC 1008 tubing, 1008 casing, MV 1283.

## OPEN FLOW TEST DATA

DATE August 2, 1963

Operator Consolidated Oil & Gas, Inc.		Lease Jicarilla No. 4-8	
Location 1550' FNL & 890' FWL, Sec. 8-26N-5W		County Rio Arriba	State New Mexico
Formation Pictured Cliffs		Pool Tapicito	
Casing Diameter 7"	Set At Feet 3727	Tubing Diameter 1"	Set At Feet 3472
Pay Zone: From 3530	To 3600	Total Depth 6127	
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 1008	- 12 = PSIA 1020	Days Shut-in 7	Shut-in Pressure, Tubing, PSIG 1008	- 12 = PSIA 1020
Flowing Pressure: P 123	- 12 = PSIA 135	Working Pressure: P <sub>w</sub> 916	- 12 = PSIA 928			
Temperature: T 54	°F	F <sub>pv</sub> (From Tables) 1.017	Gravity 0.70 (est.)			

CHOKE VOLUME:  $Q = C \times P_1 \times F_1 \times F_g \times F_{pv}$ 

$$Q = 14,1605 \times 135 \times 1.0058 \times .9258 \times 1.017 = 1811 \text{ MCF/D}$$

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

$$Aof = \left( \frac{1020^2}{1020 - 928} \right)^n = \frac{1,040,400}{179,216} = 5.805^{.85} = 4.47$$

$$Aof = 8095 \text{ MCF D}$$

TESTED BY John Walker

WITNESSED BY Clyde Phillips

*W. H. Williams*  
W. H. Williams, Chief Engineer

## OPEN FLOW TEST DATA

DATE August 9, 1963

Operator Consolidated Oil & Gas, Inc.		Lease Jicarilla No. 4-8	
Location 1550' FNL, 890' FWL, Sec. 8-26N-5W		County Rio Arriba	State New Mexico
Formation Mesaverde		Pool Blanco	
Casing Diameter 5-1/2"	Set At Feet 6126	Tubing Diameter 1-1/2"	Set At Feet 5566
Pay Zone: From 5666	To 5824	Total Depth 6127	
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 1293	- 12 = PSIA 1305	Days Shut-in 7	Shut-in Pressure, Tubing, PSIG 1293	- 12 = PSIA 1305
Flowing Pressure: P 22	- 12 = PSIA 34	Working Pressure: P <sub>w</sub> 916	- 12 = PSIA 928			
Temperature: T 39	°F	F <sub>pv</sub> (From Tables) 1.013	Gravity 0.70 (est.)			

CHOKE VOLUME:  $Q = C \times P_1 \times F_1 \times F_g \times F_{pv}$ 

$$Q = 14,1605 \times 34 \times 1.0208 \times .9258 \times 1.013 = 461 \text{ MCF/D}$$

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

$$Aof = \left( \frac{1305^2}{1305 - 928} \right)^n$$

$$Aof = \text{MCF D}$$

TESTED BY John Walker

WITNESSED BY Clyde Phillips

*W. H. Williams*  
W. H. Williams, Chief Engineer