

FARMINGTON DISTRICT OFF'

NMOCB

37. SUMMARY OF POROUS ZONES: (Show all important zones of porosity and contents thereof; cored intervals; and all drill-stem, tests, including depth interval tested, cushion used, time tool open, flowing and shut-in pressures, and recoveries):				38. GEOLOGIC MARKERS		
FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	MEAS. DEPTH	TOP TRUE VERT. DEPTH
			San Juan 28-7 Unit 98M			
				Ojo Alamo	1960	
				Kirtland	2205	
				Fruitland fma	2454	
				Pictured Cliffs	2880	
				Lewis	3018	
				Chacra	3795	
				Cliffhouse	4564	
				Menefee	4587	
				Point Lookout	5152	
				Mancos	5510	
				Gallup	6318	
				Greenhorn	7104	
				Graneros	7163	
				Dakota	7215	

CONOCO INC.
SAN JUAN 28-7 UNIT #98M
API #30-039-25980
Sec. 29, T27N-R7W, UNIT LETTER "F"
2380' FNL & 2055' FWL

- 12/21/98 MIRU, Key rig 5, spot equipment, ND WH, NUBOP.
- 12/22/98 Tally, PU & TIH w/2 3/8" tbg & 3 7/8" bit, tag cement @ 7346' (63' above FC), DO cmt to FC @ 7409', DO FC & cont DO cmt to FS @ 7450', circ clean w/1% KCL, load 4 1/2" X & " annulus w/2 bbls 1% KCL test annulus to 500# OK, test 4 1/2" csg to 4000# OK, TOO H w/2 3/8" tbg & bit.
- 12/23/98 RU Schlumberger WL, run TDT/CCL from 7450' - 2000', RD WL, NU Frac valve & "Y".
- 12/28/98 Worked on rig while down waiting for BJ frac crew
- 12/29/98 RU Blue Jet WL, run CBL/CCL from 7450' - 2400', TOC @2850', perf Dakota w/31 holes from 7217' - 7430' as follows: 7217, 25', 29', 37', 39', 81', 84', 87', 95', 7319', 26', 29', 32', 35', 53', 55', 57', 65', 68', 71', 74', 77', 91', 93', 95', 99', 7401', 13', 15', 28', 7430', perforated w/2000# on csg broke down while perforating, RD WL, RU BJ acid pump, acidize DK w/500 G 15% HCL w/46 ball sealers @ 9 BPM, max 3950#, avg 2000#, ISIP balled off, good ball action, RD BJ, RU WL, RIH w/JB ret 46 balls 28 hits, RD
- 12/30/98 300# csg, BD csg to pit, RU BJ, frac DK w/60,480G 15# XL gel w/86,000# 20/40 Ottawa & 30,000# 20/40 SDC @ 40 BPM, Max 4000#, avg 3300#, ISIP 2750#, Max sand conc 3#/gal, RD BJ, RU Blue Jet WL, RIH set 4 1/2" Hbton comp BP @ 5410', test BP to 4000# OK, Perf Point Lookout from 5087' - 5353' w/31 holes as follows: 5087', 89', 97', 99', 5157', 61', 65', 69', 77', 80', 83', 5207', 09', 19', 22', 25', 28', 31', 51', 53', 63', 65', 73', 5303', 08', 23', 28', 31', 44', 51', 5353', perforated w/2000# on csg did not break down, attempt to BD w/rig pump to 4000#, no success, RIH w/WL dump bailer, spot 15G 15% HCL across perms from 5219' - 5087', POOH w/WL bailer, BD perms w/rig pump @ 2600#, RU BJ, acidize Point Lookout w/500G 15% HCL w/50 ball sealers @ 12 BPM, Max 4000#, avg 2800#, ISIP balled off, good ball action, RD BJ, RIH w/WL JB ret 49 balls, 29 hits, RD WL, RU BJ Frac Point Lookout w/70,000# 20/40 AZ & 30,000# 20/40 SDC @ 45 BPM, Max 2750#, Avg 2150#, ISIP 450#, Max sand conc 3#/gal, RD BJ, RU WL, RIH set comp BP @ 5000'.
- Note: developed leak in 4" chicsan during 1# stage of DK frac, BJ crew safely displaced casing volume, shut down & replaced leaking part. Resumed job on 1# stage without incident. Near miss report filed in Farmington office.
- 12/31/98 TIH w/WL setting tool overshot on 2 3/8" tbg, tag sand @ 4990' (10' of fill over BP) circ off sand to top of setting tool, latch tool & TOO H w/same, RIH & perf Menefee w/24 shots from 4842' - 4959' w/24 holes as follows: 4842', 44', 46', 48', 50', 73', 75', 77', 79', 81', 83', 85', 87', 4925', 27', 29', 31', 33', 43', 45', 47', 49', 57', 4959', perforated w/2000# on csg, broke down during perforating, RD WL, RU BJ acidize Menefee w/500 G 15% HCL w/36 ball sealers @ 13 BPM, Max 3460#, Avg 2250#, ISIP ball off, good ball action, RD BJ, RIH w/WL JB ret 36 balls 24 hits, RD WL, RU BJ Frac Menefee w/46,872G 15# XL gel w/51,000# 20/40 AZ & 24,000# 20/40 SDC @ 36 BPM Max 3850#, Avg 3100#, ISIP 1915# Max sand conc 3#/gal screened out on 3# stage left 120# of 20/40 SDC in csg, RD BJ, ND frac valve & "Y".
- 1/4/99 0# csg, RU gas compressors & 6" blewby line, TIH w/3 7/8" metal muncher & 2 3/8" tbg tag fill @ 4679' (321' over BP), CO w/gas to 4970', circ clean, PU tbg to 4679'

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- 1/5/99 140# tbg, 240# csg, BD tbg to pit, TIH from 4679' to tag fill @ 4950', CO w/gas comps to BP @ 5000', DO BP & cont in hole tag fill @ 5218', (192' of fill over next BP @ 5410'), CO w/gas to next BP circ clean, PU tbg to 4679'.
- 1/6/99 Tbg 500#, Csg 710#, BD csg to pit, kill tbg w/5 bbls 1% KCL, TIH from 4679' to tag fill @ 5385', (25' of fill), CO w/gas to BP @ 5410', circ clean, stay on bottom well producing sand cut fluid, pump soap sweep every hr while circ from BP, PU tbg to 5100' turn over to drywatch.
- 1/7/99 Well flowing 10# up 2" to pit, 385#csg, NU 1/2" choke for test, well logged off w/fluid, remove choke, TIH w/tbg from 5100' tag fill @ 5395' (15' of fill), CO w/gas & soap sweeps to BP @ 5410', PU tbg to 5100' turn over to drywatch for night.
- 1/8/99 Flowed well overnight w/drywatch, MV test as follows" 1/2" choke Tbg 30#, Csg 380#, 20 BWPD, 2 BOPD, 198 MCFD, test witnessed by Victor Barrios w/Key Energy, remove choke & BD tbg to pit, TIH from 5100' to tag fill @ 5395', (15' of fill over BP), CO w/gas to BP, DO BP & cont in hole to 5500' circ clean w/gas & soap sweeps. PU tbg to 5100', turn well over to drywatch .
- 1/11/99 Drywatched flow over weekend, 30# tbg, 300# csg, kill tbg w/5 bbls 1% KCL, TIH from 5100' to tag fill @ 7275', (175' of fill over PBTD @ 7450'), CO w/gas & soap sweeps to 7450', circ clean, PU tbg to 7077', RU to flow to pit, turn over to drywatch.
- 1/12/99 Well flowed overnight, test DK w/1/2" choke as follows: 80# tbg, 370# csg, 10 BWPD, 3 BOPD, 528 MCFD test witnessed by Victor Barrios w/Key Energy, remove choke, kill tbg w/5 bbls 1% KCL, TIH from 7077' tag fill @ 7415' (35' of fill) CO w/gas & soap sweeps to PBTD @ 7450', circ clean, TOOH w/metal muncher & tbg, TIH w/1/2 muleshoe, SN & 2 3/8" tbg to 7077', turn over to drywatch,
- 1/13/99 Well flowed overnight thru 2" to pit @ 40#, kill tbg wq/5 bbls 1% KCL, TIH from 7077' tag fill @ 7435' (15' of fill) no perms covered (DK 7217 - 7430') circ clean to PBTD @ 7450', PU & land tbg @ 7346' KB w/232 jts J-55 new 2 3/8" tbg, rev circ well w/gas to kick off tubing, NDBOP, NUWH, RDMO Final Report