

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

SUBMIT IN DUPLICATE*

(See other In-
structions on
reverse side)Form approved.
Budget Bureau No. 42-R355.5.

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1a. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ Other _____		5. LEASE DESIGNATION AND SERIAL NO. NM- 05791	
b. TYPE OF COMPLETION: NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIEF. RESVR. ☐ Other _____		6. IF INDIAN, ALLOTTEE OR TRIBE NAME --	
2. NAME OF OPERATOR Atlantic Richfield Company		7. UNIT AGREEMENT NAME --	
3. ADDRESS OF OPERATOR 501 Lincoln Tower Bldg., 1860 Lincoln St., Denver, Colo. 80295		8. FARM OR LEASE NAME Graham *C* WN Federal Com.	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)* At surface Unit 0 - SW SE - 1050' f/South & 1600' f/East lines Sec. 9 At top prod. interval reported below Approx. same At total depth Approx. same		9. WELL NO. 1-A	
14. PERMIT NO. Mr. McGrath		DATE ISSUED 5-2-77	
15. DATE SPUDDED 8/1/77		16. DATE T.D. REACHED 8/10/77	
17. DATE COMPL. (Ready to prod.) 11/15/77		18. ELEVATIONS (DF, RSB, RT, GR, ETC.)* 6048' GR, 6061 KB	
19. ELEV. CASINGHEAD 6048' GR		20. TOTAL DEPTH, MD & TVD 4720' MD	
21. PLUG, BACK T.D., MD & TVD 4684' MD		22. IF MULTIPLE COMPL., HOW MANY* Two	
23. INTERVALS DRILLED BY 0 - 4720'		24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* Mesaverde - Top 3891' MD Bottom 4643' MD	
25. WAS DIRECTIONAL SURVEY MADE No		26. TYPE ELECTRIC AND OTHER LOGS RUN DIFL, CDL/CN, GR-Bond	
27. WAS WELL CORED No		28. CASING RECORD (Report all strings set in well)	
29. LINER RECORD		30. TUBING RECORD	
31. PERFORATION RECORD (Interval, size and number) Mesaverde - 1 jet shot each at: 4643, 4640, 4625, 4622, 4598, 4595, 4585, 4583, 4571, 4568, 4552, 4547, 4544, 4541, 4538, 4535, 4426, 4423, 4369, 4366, 3902, 3896, 3891		32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC. DEPTH INTERVAL (MD) 3891' - 4643' 3891' - 4643' AMOUNT AND KIND OF MATERIAL USED 1500 gal 15% HCl Frac w/123,300 gal wtr w/ 113,000# sand	
33. PRODUCTION DATE FIRST PRODUCTION 11/4/77 PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump) Flow thru 2-1/16" tbg. WELL STATUS (Producing or shut-in) Shut in		34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) To be sold to El Paso Nat'l. Gas Co.	
35. LIST OF ATTACHMENTS Daily Well History; Schematic of Dual Compl'n.; Electric Logs; Form 9-330 f/Chacra Fm.		36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records	
SIGNED [Signature]		TITLE Operations Info. Ass't. DATE 1-3-78.	

*(See Instructions and Spaces for Additional Data on Reverse Side)

INSTRUCTIONS

General: This form is designed for submitting a complete and correct well completion report and log on all types of lands and leases to either a Federal agency or a State agency, or both, pursuant to applicable Federal and/or State laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from, the local Federal and/or State office. See instructions on items 22 and 24, and 33, below regarding separate reports for separate completions.

If not filed prior to the time this summary record is submitted, copies of all currently available logs (drillers, geologists, sample and core analysis, all types electric, etc.), formation and pressure tests, and directional surveys, should be attached hereto, to the extent required by applicable Federal and/or State laws and regulations. All attachments should be listed on this form, see item 35.

Item 4: If there are no applicable State requirements, locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local State or Federal office for specific instructions.

Item 18: Indicate which elevation is used as reference (where not otherwise shown) for depth measurements given in other spaces on this form and in any attachments.

Items 22 and 24: If this well is completed for separate production from more than one interval zone (multiple completion), so state in item 22, and in item 24 show the producing interval, or intervals, top(s), bottom(s) and name(s) (if any) for only the interval reported in item 33. Submit a separate report (page) on this form, adequately identified, for each additional interval to be separately produced, showing the additional data pertinent to such interval.

Item 29: "Sacks Cement": Attached supplemental records for this well should show the details of any multiple stage cementing and the location of the cementing tool.

Item 33: Submit a separate completion report on this form for each interval to be separately produced. (See instruction for items 22 and 24 above.)

37. SUMMARY OF POROUS ZONES				38. GEOLOGIC MARKERS	
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				NAME	MEAS. DEPTH
FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.		
				Pictured Cliffs	2209'
				Chacra	3157'
				Mesaverde:	3883'
				Cliff House	3979'
				Menefee	4516'
				Point Lookout	4672'
				Mancos	

8/2/77	262	Circ w/rig pmp. WO BJ cmt trk repairs. 3/4" @ 262'. Spud 12-1/4" hole 8 p.m., 8/1/77. Ran 6 jts. 245.53', 8-5/8" OD 24# K-55 8 rd ST&C set @ 259.53' KB. RU B-J to cmt, misd 6 sx and missing auger broke. Elevation 6048' GL, 6061' KB. \$9,916
8/3/77	731	Drig sd and shale. 1/2" @ 573'. 65 RPM, 35M#. Bit #2, Smith, DT, in @ 262', 469' in 3 hrs. Cmt 8-5/8" csg w/200 sx Class "B" w/2% CaCl. Cmt circ'd. PD 7:45 a.m., 8/2/77. WOC. Nipped up, install BOP. Test csg & BOP @ 950#, held O.K. Start drlg cmt @ 2 a.m., 8/3, new hole @ 3 a.m., 8/3/77. \$15,180
8/4/77	2370	Drig sd and shale. 3/4" @ 920' & 1235'. 1/2" @ 1500', 1827' & 2138'. 65 RPM, 30M#. Mud 8.4#, Vis 27. Bit #2, Smith, DT, in @ 262', out @ 1338', 1076' in 11-1/4 hrs. Bit #3, Smith, DT, 1338' & drlg, 1032' in 12-1/4 hrs. \$29,599
8/5/77	3132	Drig, sd & sh. 1/2" @ 2389', 1/2" @ 2700', 1/2" @ 3060'. 75 RPM, 24M#. Mud 9#, vis 35, Ph 8. B#3, Sm, DT, 1338-2384', 1046' in 12-1/2 hrs. B#4, Sm, DGTN, 2384-3062', 678' in 15 hrs. B#5, Sm, SDT, in @ 3062' & drlg, 70' in 3-1/4 hrs. \$36,955
8/6/77	3490	Drig sd & sh 1/2 @ 3368 60 RPM, 25M#. Mud: 9#, 32 vis, 24 WL, Ph 8. B#5, Smith, SDT, 3062-3368', 306' in 14-1/4 hrs. B#6, Smith, S-84F, in @ 3368' & drlg, 122' in 8-1/2 hrs. \$41,077
8/7/77	3890	Drig sd & sh 1/2 @ 3787 60 RPM, 25M#. Mud: 9.2#, 38 vis, 6 WL, Ph 8.3. D#6. Smith, S-84F, in @ 3368' & drlg, 522' in 32 hrs. \$46,062
8/8/77	4285	Drig sd & sh 60 RPM, 30 M#. Mud: 9.2#, vis 38, WL 8, 2/32 FC, 1.5% sand, Ph 8. B#6, Smith, S84F, 8n @ 3368' & drlg, 917' in 54-3/4 hrs. \$50,508
8/9/77	4640	Missing mud & LCM. 1/2" @ 4319'. 60 RPM, 35M#. Mud: 9.3#, vis 43, WL 8.0, FC 2/32, Sd 1%, Ph 8.0. B#6, Sm, S84F, in @ 3368' & drlg, 1272' in 75 hrs. \$54,475
8/10/77	4720	Trip f/logs, sd & sh. 60 RPM, 35M#. Mud 8.9#, vis 50, WL 8.9, FC 2/32, Sd 1%, Ph 8.5. B#6, Sm, S84F, 3368-4689', 1321' in 80 hrs. B#7, Sm, DGTN, 4689-4720', 31' in 1-3/4 hrs. \$63,215
8/11/77	4720	Circ to cmt 2nd stage. Ran comp dens log & comp neut log, 4720-2150', dual ind focused log, 4725-268'. Ran 109 jts LT&C, 13 jts ST&C, 5-1/2" 15.5# K-55 8rd (4706') set @ 4719' KB, 23 recip scrat, 8 cent. Bkr GS, diff fill collar, HOMO DV stage collar @ 3354.71'. Cmt 1st stage w/250 sx 50-50 Poz w/12-1/2 gilsonite/sx & 50 sx CIB. PD 4:50 am 8/11/77. Log tops: Chacra 3157', Cliff House 3883', Menefee 3979', Pt. Lookout 4516', Mancos 4672'. PD 4:50 8/11/77. \$71,415
8/12/77	4720	WOC. Cemented 2nd stage w/450 sx HOMO Lite w/10# gilsonite/sk tail w/50 sx Class "B" neat. PD 10:05 a.m., 8/11/77. Set OCT C-21 slip w/65,500#. RR 11:30 a.m., 8/11/77. \$116,843
8/13/77	4720	TD - WO Compln 8/13, 14, 15 \$116,843
8/16-10/29	4720	TD - WO completion. \$116,843
10/30/77	4720	TD - SD a/c Sunday. MI & RU Farmington Well Serv. \$116,843
10/31/77	4720	TD - Prep rep csg. (When HORT, bent top of 5-1/2" csg), RU, PU tbq & bit. SD a/c Sunday. \$116,843
11/01/77	4720	TD - Prep tst csg. PU 5-1/2" csg spear on 1 jt 2-7/8" tbq. Grapples too ti in csg, LD spear. Cut off 6" damaged csg. Wld 5-1/2" lift sub on csg. Pld 100M+, could not free slips. Cut off lift sub, bevel & weld csg crack f/inside. Grind weld smooth. Wld 6" pc on csg f/tbg head primary seal. Ran csg scraper on 1 jt 2-7/8" tbq thru rep'd csg. RU tbq head, BOP. Ran magnet on 1 jt 2-7/8" tbq or swb line. Made 3 trips, rec'd pc of bucket used to cover csg & brkn pc (2-1/2" x 3") f/csg. SDON. \$119,573
11/02/77	4720	TD - Prep circ hole w/KCl wtr, POH & log. Hook up BJ & tst csg to 2500# f/30 min., held OK. Run 4-3/4" bit & csg scraper on 2-7/8" tbq. Drld 25' cmt & DV tool. Ran tbq on to PB depth (4684' tbq tally). SDON. \$129,043
11/03/77	4684	PB - Prep to acidize. Displ hole w/KCl wtr. POH w/bit, scraper & tbq. RU 60 Intl. Ran cmt bond w/var dens, GR collar correl logs. Trouble w/var dens camera, got working & ran log. Dev film ruined by light. Did not rerun log. WL PB - 4684'. Correl w/Dresser log - 15'. Perf Mesaverde 4643', 4640', 4637', 4622', 4598', 4595', 4585', 4583', 4571', 4568', 4552', 4547', 4544', 4541', 4538', 4535', 4426', 4423', 4369', 4366', 3902', 3896', & 3891', 1 jet shot & closed BOP. SDON. \$133,446
11/04/77	4684	PB - Prep CO sd w/H2 foam. Run Bkr 5-1/2" pkr on 2-7/8" tbq, spot ac over MV perfs 3891-4643', pld 26 jts, set pkr @ 3852'. Ac'd MV w/1500 gal 15% HCl w/30 ball sealers, AIR 6 BPM, M# 1900#, gd ball action. POH w/tbg & pkr. Frac dn 5-1/2" csg w/2% KCl "slick" wtr w/2# frict reducer & 30# fld loss additive/ 1000 gal: 25,000 gal pad @ 1500#, 25,000 gal w/1/2#/gal @ 1,500#; 25,000 gal w/1#/gal @ 1500#; 25,000 gal w/1-1/2#/gal @ 1400#; 19,000 gal w/2#/gal @ 2100 4300 gal flush; total 123,300 gal wtr & 113,000# 20-40 sd. Started sanding out @ 2#/gal. AIR 46 BPM, Avg press 1600#, Max press 2100#, ISD 400#, 15 min 0#. Ran 146 jts 2-7/8" tbq, tag sd @ 4508', pld tbq above perfs. Closed BOP & SDON. \$154,097

11/05/77	4684	PB - Prep to swb. Hook up Howsco. CO 176' sd to 4684'. Pld 26 jts tbgs. Kicked off w/N ₂ , flwd 1 hr & died. RU & swbd 4 hrs, KO, left flwg to pit. Died 0'nite. this a.m. TP 0#, CP 675#.	\$158,011
11/06/77	4684	PB - Flwg to pit to clean up. Yest am CP 675#, TP 0#, well head. Pld swb twice & kicked off. Left opn to pit, making lots wtr, meas w/2" orifice well tester @ 937 MCFPD.	\$158,811
11/07/77	4684	PB - Flwg to pit to clean up.	\$159,211
11/08/77	4684	PB - Prep set Mod "D" pkr w/expendable plug. Yest a.m. 175# CP, tbgs opn to pit. Hook up dbl line f/csg to pit. Killed tbgs w/KCl wtr. Lower tbgs & tag sd @ 4679', 5' fill. POH w/2-7/8" tbgs. Closed BOP. SDON.	\$160,036
11/09/77	4684	PB - Prep to run retbl sq tool & brk dn perfs. RU GO Int'l, drum turned while rigging up. Backlashed line, 4 hrs straighten & respool line. Set Bkr Mod "D" Prod pkr w/expendable plug @ 3875' (CBL Meas). Dumped 10' sd on top of pkr. Filled hole w/wtr, tst pkr to 2500# f/20 min, held OK. Perf 4 holes 3222-23' (CBL Meas). RD GO Int'l. Closed BOP. SDON.	\$164,558
11/10/77	4684	PB - Prep POH. Ran Howco RTTS pkr, on 2-7/8" tbgs, set pkr @ 3069'. Press csg to 800#, pr dn tbgs to brk perfs @ 3222-23'. Brk @ 3400#, est rate 3-1/2 EPM, Mx 100 sx Cl "B" neat. Pmp 87 sx in perfs, staged. Final 3000#, circ tbgs clean. No cmt circ'd. Pld 1 std, set pkr @ 3007'. Press tbgs to 800#. JC 2:00 p.m. SDON.	\$168,106
11/11/77	4684	PB - Cont to drill out cmt. POH w/Howco RTTS pkr & tbgs. Ran 4-3/4" bit & 5-1/2" csg scraper. Top cmt @ 3102'. Drld 106' hd cmt, SDON.	\$170,228
11/12/77	4684	PB - Prep run tbgs, CO & KO. Drld 15' cmt, ran bit & scraper to 3865', top sd @ pkr. Pld 22 stds, tst csg to 2000# f/15 min, OK, Circ hole w/KCl wtr. Spot 500 gal 15% HCl. POH w/tbgs, bit & scraper. Perf'd Chacra 3196-92' & 3168-62' (D-A meas) w/1 JSPP, 12' holes. RU Dowell. Frac Chacra 3162-3196' OA dn 5-1/2" csg w/24,000# 20-40 sd & 28,100 gal 2% KCl wtr w/2# friction reducer/1000 gal & 16# fld loss add'lve/1000 gal in 1st 2/3 of frac: Brk dn @ 2000#; 5000 gal pad @ 1700#; 4000 gal w/1/2"/gal sd @ 1600#; 4000 gal w/1"/gal sd @ 1500#; 12,000 gal w/1.5"/gal sd @ 1450-1400#; 3100 gal flush @ 1400-1700#; IR 24 GPM; ISD 1100#, 10 min 900#, job comp 3:30 pm 11/11/77. SDON.	\$179,703
11/13/77	4684	PB - Flwg to pit to clean up. Removed BOP. Inst dual tbgs hanger spool, inst 2-7/8" tbgs to top sd @ 3730', CO 145' sd w/N ₂ & foam to pkr @ 3875'. Killed tbgs. Pld tbgs to 3054'. KO w/N ₂ , left flwg to pit, vy vy wet.	\$182,543
11/14/77	4684	PB - Flwg to pit, 1/2" stream wtr. Prep att meas gas, POH, run dual strings.	\$182,543
11/15/77	4684	PB - Prep CO w/N ₂ & sting into pkr. Chacra flwg to pit 0'nite. Pitot tube 367-391 MCFPD, est wtr 10-15 BPD. POH w/2-7/8" tbgs & LD. PU 2-1/16" compln tbgs w/prodn tube & seal assy. Ran to top sd @ 3845'. SDON.	\$202,199
11/16/77	4684	PB - SI f/state potential. Ran 2-1/16" IJ long string & hung above sd. Ran 96 jts 1.90" IJ (3,168.70' tbgs), & landed in 2-1/16" bore split donut. Hook up NOWSCO & CO sd on top of Mod "D" pkr. Attempted to sting in pkr, could not get thru pkr bore. Hook up NOWSCO again & CO pkr bore. Lower tbgs & KO plug f/Mod "D" pkr. Left well blow dn 1-1/2 hrs. Landed 2-1/16" OD 3.25# N-80 tbgs w/seal assy @ 3892.42'KB. Landed 1.90" IB 2.76 CW-55 tbgs @ 3177.20. Kill Mv. NU tree. SI 4:30 pm, 11/15/77 f/state potential.	\$206,309
11/17-12/5/77	4684	PB - SI f/state potential.	
12/06/77	4684	PB - SI f/pkr leakage test.	\$206,309
12/07/77	4684	PB - Calculating today - pkr leakage test complete.	\$206,309
12/08/77	4684	PB - COMPLETED DUAL GAS WELL 12/07/77. Chacra test: SICP 976#, SITP 976#. 3 hr flw tst on 3/4" ch, 890 MCFD, 3 hr FCP 231#, TP 114#. Prover temp 52°, 3/4" plate. Chacra perfs 3162-3196'OA. Mesaverde test: 20 day pkr, SITP 905#, 3 hr flw tst on 3/4" ch, 1020 MCFD, 3 hr pkr, TP 200#. Prover temp 55°, 3/4" plate. Mesaverde perfs 3891-4643'OA.	\$206,309