

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 _____						
b. TYPE OF COMPLETION:		NEW WELL ☒	WORK OVER ☐	DEEP-EN ☐	PLUG BACK ☐	DIFF-RESVR. ☐	Other _____				
2. NAME OF OPERATOR Atlantic Richfield Company						5. LEASE DESIGNATION AND SERIAL NO. SF 078480					
3. ADDRESS OF OPERATOR 501 Lincoln Tower Bldg., 1860 Lincoln St., Denver, Colo. 80295						6. IF INDIAN, ALLOTTEE OR TRIBE NAME --					
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)* At surface 1650' FSL & 990' FEL (NE SE) (Unit I) Section 35 At top prod. interval reported below At total depth API #30-045-23216						7. UNIT AGREEMENT NAME --					
14. PERMIT NO. Mr. McGrath						DATE ISSUED 10-12-78					
15. DATE SPUDDED 11-26-78		16. DATE T.D. REACHED 12-4-78		17. DATE COMPL. (Ready to prod.) 1-12-79		18. ELEVATIONS (DF, RKB, RT, GR, ETC.)* 6133' GR, 6116' RKB		19. ELEV. CASINGHEAD 6133'			
20. TOTAL DEPTH, MD & TVD 4750'		21. PLUG, BACK T.D., MD & TVD 4653'		22. IF MULTIPLE COMPL., HOW MANY* 1		23. INTERVALS DRILLED BY --		ROTARY TOOLS 0 - 4750'			
24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)* 4460-4622' (Mesaverde perms)								25. WAS DIRECTIONAL SURVEY MADE No			
26. TYPE ELECTRIC AND OTHER LOGS RUN CDI/CN/GR; IEL; CBL								27. WAS WELL CORED No			
28. CASING RECORD (Report all strings set in well)											
CASINO SIZE		WEIGHT, LB./FT.		DEPTH SET (MD)		HOLE SIZE		CEMENTING RECORD		AMOUNT PULLED	
8-5/8" OD		24#		286' KB		12-1/4"		300 sx		None	
4-1/2" OD		11.6#		4749' KB		7-7/8"		730 sx (2 stages)		None	
29. LINER RECORD										30. TUBING RECORD	
SIZE		TOP (MD)		BOTTOM (MD)		SACKS CEMENT*		SCREEN (MD)		SIZE	
None										2-3/8"	
										4445'	
										None	
31. PERFORATION RECORD (Interval, size and number) 4622', 15', 11', 02'; 4597', 60', 54', 49', 41', 35', 26', 13', 07', 01'; 4494', 89', 82', 77', 69', 64', & 60', w/1 jet shot/ft, (21 shots) - Mesaverde Fm.										32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.	
										DEPTH INTERVAL (MD)	
										4460-4622' (OA)	
										4460-4622' (OA)	
										2000 gal 15% HCl	
										182,000 gal 2% KCl w/180,000#	
										20/40 sand.	
33.* PRODUCTION										WELL STATUS (Producing or shut-in)	
DATE FIRST PRODUCTION		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)						Shut-in			
Not Connected		Flowing thru 2-3/8" tubing									
DATE OF TEST		HOURS TESTED		CHOKE SIZE		PROD'N. FOR TEST PERIOD		OIL—BBL.		GAS—MCF.	
1-12-78		3 hrs		48/64"		--		--		1302 MCFD	
FLOW. TUBING PRESS.		CASING PRESSURE		CALCULATED 24-HOUR RATE		OIL—BBL.		GAS—MCF.		WATER—BBL.	
160#		480#		--		--		1302 MCFPD		--	
34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.) To be sold when connected.										TEST WITNESSED BY Rex Hitchcock	
35. LIST OF ATTACHMENTS 1 each of #26 above; Daily Well History.											
36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records											
SIGNED		B. R. Still				TITLE		Operations Info. Ass't.		DATE	
										1-17-78.	

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

N/more

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					
FORMATION	TOP	BOTTOM	DESCRIPTION, CONTENTS, ETC.	NAME	MEAS. DEPTH
					TRUE VERT. DEPTH
No cores and no drill stem tests.				Pictured Cliffs Chacra Cliff House (MW) Menefee (MW) Pt. Lookout (MW) Upper Mancos	2202' 3098' 3815' 3967' 4453' 4650'

12/23/78	4653	PB - Prep to GIH & CO sd. Fin in to btm perfs w/tbg, sptd 3 bbls 15% HCl across perfs & pld pkr to 4250' & set. Tst pkr 1000#, OK. Acidize Mesaverde perfs 4460-4622' w/2000 gals 15% HCl w/42 ball sealers. Avg press 2100# @ 4-1/2 BPM. Gd ball action. Balled off. Max press 3800#. Rel pkr & lowered to knock off balls. POH w/ 2-3/8" tbg & pkr. Conn frac head & Western Co. SW frac dn 4-1/2 csg w/2% KCl wtr, 2#/1000 gals friction reducer & 30#/1000 gal fld loss add & using 20/40 mesh sd: 40,000 gals pad 2800#; 36,000 gals wtr, 1/2# sd/gal, 18,000# sd @ 2800#; 31,000 gals wtr, 1# sd/gal, 31,000# sd @ 2600#; 30,000 gals wtr, 1-1/2# sd/gal, 45,000# sd @ 2750#; 43,000 gals wtr, 2# sd/gal, 86,000# sd @ 2800#; 2700 gals flush @ 2950#. Total 140,000 gals wtr & 180,000# sd. Avg rate 42 BPM, avg press 2700#. ISI 700#, 15 min SIP 700#. JC 6:30 p.m. Closed BOP & SDON.
12/24/78	4653	PB - Prep to SD a/c Sunday. Well flwg to pit to clean up. WIH w/ 2-3/8" tbg, opn ended to top sd @ 4464'. Conn NOWSCO & Allied Serv. CO w/N2 & foam to PB 4656'. Pld 7 jts tbg. Land tbg in OCT Type T-16 tbg head; 1 jt 2-3/8" EUE 8R 4.7# J-55 new (31.25'); 1 Bkr "F" 2-3/8" box & pin (1.81 ID) land nple (0.70'); 141 jts 2-3/8" EUE 8R 4.7# J-55 (4400.98'); total tbg 4432.93'; RKB to THF THF 12.00'; Btmd @ 4444.93'. Left well flwg to pit, maing lots of wtr. SD rig til 12/26/78.
12/25/78	4653	PB - PU SD f/Xmas.
12/26/78	4653	PB - Prep to swb. SD f/Xmas
12/27/78	4653	PB - Prep to cont swbg. Tbg dead @ 7:30 a.m. 12/26/78. Well opn to pit. CP 1350#, TP 0#. RU swb. Found FL @ 1000' F/surf. Swbd 9 hrs. Rec'd approx 130 BW w/sli tr oil. Last swb run f/4200'. FCP 110#. Tbg dead. SDON. \$206,030
12/28/78	4653	PB - Cont to check until well cleans up. At 7:30 a.m. 12/27/78, csg gauge froze off. TP 550#. Blew tbg press dn. 1st swb run, hit fld 1500' f/surf. Swbd until 11 a.m. Well KO flwg. Flwg lots of wtr, sml show of oil. Rel PU 1 p.m. 12/27/78. Flw too wet to meas. Left flwg to pit O/N.
12/29/78	4653	PB - To cont cleaning up. 2" orifice well tstr meas 700 MCFPD, still very wet. Left well flwg to pit, CP 300#, TP 10#.
12/30/78	4653	PB - Well SI, waiting on N.M. AOF tst (min 7 days). Orifice well tst meas 847 MCFD, fine spray wtr, sml show oil, CP 275#, TP 15#. SI 11:00 a.m. 12/29/78.
12/31-1/15	4653	PB - Well SI, waiting on AOF tst.
1/16/79	4653	PB - COMPLETED SI GAS WELL 1/12/79, Mesaverde fm. SITP 1082# & SICP 1084# (14 days SI). Flwd 3 hrs thru 48/64" ch, 1258 MCFD. FTP 160# & FCP 480#. CAOF, 1302 MCFD f/Mesaverde perfs 4460-4622'OA. LPP 4622'.

11/27/78	292	WOC. Spud 12-1/4" hole @ 7:30 pm 11/26/78. TD-surf hole 292'. At 1:15 am 11/27 RU & ran 7 jts (271') 8-5/8" 24# K-55 csg @ 286'. RU Hallib & pmpd 20 bbls gel wtr. Cmtd w/300 sx Cl "B" 2% CaCl. PD 4:15 am 11/27/78. Circ 20 sx cmt to pit. Cent @ 265', 207', 132', & 54'. BP @ 245'. 1/4° @ 292'. 75 RPM, all wt. B#1, 12-1/4", Hughes, OSC-1G, made 292' in 5-3/4 hrs.
11/28/78	650	Drlg sd & sh. Press tstd BOP & surf csg to 1000# f/30 min, held OK. Drlg @ 60'/hr. 1/4° @ 630'. 60 RPM, 30M#. Mud: 8.8#, vis 28. (B#2).
11/29/78	1935	Drlg sd & sh. Drlg @ 35'/hr. 1/2° @ 1066', 1349' & 1695'. 60 RPM, 30M#. Mud: 8.9#, vis 28. (B#2).
11/30/78	2790	Drlg sd & sh. 3/4° @ 2324' & 2702'. 60 RPM, 30M#. Mud: 8.8#, vis 28. (B#2).
12/1/78	3300	Drlg sd & sh. Drlg 20'/hr. 3/4° @ 3047'. 60 RPM, 30M#. Mud: 9.2#, vis 36, WL 8, Ph 8.5. B#2, 7-7/8", Sec., S86F, made 2755' in 59-3/4 hrs. (B#3).
12/2/78	3760	Drlg sd & sh. Drlg @ 20'/hr. 3/4° @ 3362', 1° @ 3708'. 60 RPM, 30M#. Mud: 9.1#, vis 33, WL 9.6, FC 2/32, Ph 9.0, Pv 14, Yld 5, Gels 2/3, solids 7%. (B#3).
12/3/78	4290	Drlg sd & sh. 1° @ 4207'. 50 RPM, 35M#. Mud: 9.3#, vis 33, WL 8.0, FC 2/32, Ph 8.0, Pv 5, Yld 0, Gels 2/2, solids 6%. (B#3).
12/4/78	4700	Drlg sd & sh. 60 RPM, 35M#. Mud: 9.5#, vis 50, WL 10, FC 2/32, Ph 8, Pv 8, Yld 8, Gels 0/0, solids 6%. (B#3).
12/5/78	4750	Logging w/neutron tool. On 1st logging trip tool stopped @ 2207'. RIH, cond mud & POH. Ran induction log f/4742' to surf csg. Had to spud thru bridge @ 444' & 460'. Ran neutron tools. Spudded thru @ 396', 516', 545', 576', & 598' & went on to btm. 1/2° @ 4750'. 60 RPM, 35M#. Mud: 9.7#, vis 68, WL 7, FC 2/32, Ph 9.0, Pv 33, Yld 13, Gels 2/6. B#3, 7-7/8", Sm., F-2, made 1703' in 86-1/2 hrs.
12/6/78	4750	Rigging dn. Fin CNL-CDL-caliper logging to 4742'. Ran & cmtd 4-1/2" OD csg 11.6# N-80 Rge 3 OT&C landed @ 4749'. Cmtd in 2 stages w/FC @ 4699', DV tool @ 2338'. Cmtd 1st stage w/380 sx 50/50 Pozmix w/12.5# gilsonite/sx + 2% gel, foll w/100 sx Cl "B" neat cmt. Cmtd 2nd stage w/350 sx HOWCO lite w/10# gilsonite per sx, foll by 100 sx Cl "B" neat cmt. Gd circ during both stages. Closed DV tool @ 1:30 a.m. Landed csg & cut off slips @ 3 a.m. ND BOP. RR 6:00 a.m. 12/6/78.
12/7/78	4750	TD - MORT.
12/8/78	4750	TD - WO completion.
12/9-15/78	4750	TD - WO completion.
12/16/78	4750	TD - Prep to MI compl unit.
12/17/78	4750	TD - Prep to SD a/c Sunday. MI & RU Farmington Well Serv 12/16/78. NU well-head & BOP. SD a/c Sunday. Road snowpacked & very slick.
12/18/78	4750	TD - Prep to PU bit & tbg & drl DV tool. Rig SD a/c Sunday.
12/19/78	4750	TD - Prep to circ hole w/KCl wtr. Tally & PU 2-3/8" EUE tbg & RIH w/ 3-7/8" bit & 4-1/2" csg scraper on 2-3/8" tbg. DO DV tool @ 2338' & CO to 4656'. POH w/1 dbl. SDON.
12/20/78	4653	PB - Prep to frac (SD hauling wtr). Circ hole w/2% KCl wtr. POH w/ 2-3/8" tbg, bit & csg scraper. RU D-A, ran GR & CBL w/var dens f/PBTD 4653-2850' & 2350-2100'. Cmt bond avg 1-15% free pipe f/4653-top of cmt @ 2900'. Cmt f/2350-2100' (around & above DV tool) was vy erratic. Hook up Allied Serv. Tst csg to 2500# f/15 min, held OK. D-A perf'd 1 JS @ (D-A CNL-CDL log meas) 4622', 15', 11', 02', 4597', 60', 54', 49', 41', 35', 26', 13', 07', 01', 4494', 89', 82', 77', 69', 64', & 60'. RD D-A. Closed BOP & SDON.
12/21/78	4653	PB - Prep to acidize & frac if road conditions allow. SD because of snow storm. Unable to fin filling frac tks & move frac equip.
12/22/78	4653	PB - Prep to frac. RIH w/4-1/2" Bkr retriev pkr on 2-3/8" tbg. Left pkr hang free above perfs @ 4250'. Fin filling frac tks & strt moving in Western frac equip.