

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						ARCO Oil and Gas Company Division of Atlantic Richfield Company	
3. ADDRESS OF OPERATOR						P. O. Box 5540, Denver, Colorado 80217	
4. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)*						At surface 1795' FSL & 1575' FWL	
At top prod. interval reported below						Approx the same	
At total depth						API# 30-045-24277	
14. PERMIT NO.		DATE ISSUED		12. COUNTY OR PARISH		13. STATE	
Mr. Becher		4-4-80		San Juan		New Mexico	
15. DATE SPUDDED	16. DATE T.D. REACHED	17. DATE COMPL. (Ready to prod.)	18. ELEVATIONS (DF, REB, RT, GR, ETC.)*		19. ELEV. CASINGHEAD		
6-6-80	6-20-80	7-10-80	6232'GL; 6245'DF; 6246'KB		---		
20. TOTAL DEPTH, MD & TVD	21. PLUG, BACK T.D., MD & TVD	22. IF MULTIPLE COMPL., HOW MANY*	23. INTERVALS DRILLED BY	ROTARY TOOLS	CABLE TOOLS		
6690'	6650'	1	→	0-6690'	---		
24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD)*					25. WAS DIRECTIONAL SURVEY MADE		
Dakota 6563' - 6611'					NO		
26. TYPE ELECTRIC AND OTHER LOGS RUN					27. WAS WELL CORED		
DIL; CNL/FDC					NO		
28. CASING RECORD (Report all strings set in well)							
CASING SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE	CEMENTING RECORD		AMOUNT PULLED	
8-5/8"	24#	531'	12-1/4"	350 sxs		NONE	
4-1/2"	10.5#	6685'	7-7/8"	1075 sxs (2 stage)		NONE	
29. LINER RECORD							
SIZE	TOP (MD)	BOTTOM (MD)	SACKS CEMENT*	SCREEN (MD)	DEPTH SET (MD)	PACKER SET (MD)	
NONE				2-3/8"	6542'	NONE	
31. PERFORATION RECORD (Interval, size and number)				32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.			
Dakota 6563' - 6611' 15 shots				20/40 mesh sand			
33.* PRODUCTION				34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)			
DATE FIRST PRODUCTION		PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)			WELL STATUS (Producing or shut-in)		
WO CONNECTION		Flowing			Shut In		
DATE OF TEST	HOURS TESTED	CHOKE SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	
7-10-80	24 hrs.	48/64"	→	30	2329	30 (frac)	
FLOW. TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)	
370#	637#	→	30	2329	30 (frac)	58.1 ⁰ API @ 60 ⁰ F	
35. LIST OF ATTACHMENTS				TEST WITNESSED BY			
2 of #26 above and Daily Well History				Rex Hitchcock			
36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records				ACCEPTED			
SIGNED		TITLE		DATE			
W. A. Walther, Jr.		Operations Manager		7-17-80			

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

NMOCC

BY

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 of 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
				Pictured Cliffs	2002'
				Chacra	2928'
				Mesaverde	3600'
				Point Lookout	4484'
				Upper Mancos	4712'
				Gallup	5574'
				Nelson	5920'
				Tocito	5986'
				Greenhorn	6409'
				Graneros	6465'
				Dakota	6560'

6/7/80	535	WOC, sd & sh. Spudded 12-1/4" hole 4:30 pm 6/6/80. RU & ran 14 jts 8-5/8" 24# K-55 R-3 ST&C (534.77'), set @ 531'KB. GS @ 531'KB, ran 3 cntrlzrs. Cmt'd w/350 sx Cl "B" w/2% CaCl ₂ , 1/4# Flocele/sx. Had gd returns. Circ $\pm$ 30 sx cmt to surf. 1-3/4" @ 530'. 120 RPM, 30M#. Mud: 8.8#, vis 40, drlg w/gel & lime. B#1, 12-1/4", STC, DT, made 535' in 8 hr.
6/8/80	1210	Drlg sd & sh. 1" @ 1038'. Drlg w/wtr & Benex. 70 RPM, 30M#. (B#2).
6/9/80	2635	Drlg sd & sh. 1" @ 2163'. 70 RPM, 45M#. Drlg w/wtr & benex. (B#2).
6/10/80	3435	Drlg sd & sh. 3/4" @ 3290'. 70 RPM, 45M#. Drlg w/wtr & benex. (B#2).
6/11/80	4210	Drlg. 3/4" @ 4074'. 70 RPM, 45M#. Drlg w/wtr & benex (B#2).
6/12/80	4285	Drlg - lost 1 1/2 cones off bit #2. Rec'd all cones. Cut 150' drlg line. Wash 45' to btm. Back on btm drlg @ 3:00 am, 6/12. 70 RPM, 45M#. MW: 8.9#, Vis 40, WL 6.9, solids 2.75%, gels 1/2, Pv 4, Yld 2, Ph 8.5, Sd-tr, FC 2/32, 1/4" @ 4215'. B#2, 7-7/8", Reed, 3680' in 78 1/2 hrs. (B#3).
6/13/80	4705	Drlg. Trip f/hole in DP, 26 stds. 70 RPM, 45M#. Mud: 9.2#, vis 40, WL 8.9, solids 5%, Gels 10/18, Pv 16, Yld 8, Ph 8.5, Sd-tr, FC 2/32, Cl 350, Ca 40. (B#3).
6/14/80	5035	Drlg. 1/4" @ 4710'. 70 RPM, 45M#. MW: 9.1#, Vis 39, WL 12.8, solids 5.75%, gels 12/24, Pv 20, Yld 16, Ph 8.5, FC 2/32, Cl 350, Ca 40. (B#3).
6/15/80	5371	TIH - hole in DP, 58 stds out. 70 RPM, 45M#. MW: 9.1#, Vis 40, WL 12.8, solids 6, gels 1/3, Pv 18, Yld 10, Ph 8.5, FC 2/32, Cl 400, Ca 40. (B#3).
6/16/80	5670	Drlg. MW: 9.2#, Vis 42, WL 13, solids 6, gels 3/5, Pv 20, Yld 10, Ph 8.5, Sd-tr, FC 2/32, Cl 300, Ca 40. (B#3).
6/17/80	5978	Drlg. 1/2" @ 5357'. 70 RPM, 45M#. Mud: 9.2#, vis 41, WL 10.8, solids 8%, Gels 6/14, Pv 18, Yld 12, Ph 8.5, Sd tr, FC 2/32, Cl 350, Ca 40. (B#3).
6/18/80	6260	Drlg. Lost approx 200 BM @ 6005'. 70 RPM, 45M#. Mud: 9.2#, vis 42, WL 10.8, solids 6.5%, Gels 8/16, Pv 21, Yld 14, Ph 8.5, Sd tr, FC 2/32, Cl 350, Ca 40. (B#3).
6/19/80	6540	Drlg - 70 RPM, 45M#. MW 9.3, Vis 43, WL 10, solids 9.5, gels 10/28, Pv 24, Yld 16, Ph 8.5, sd tr, FC 2/32, Cl 350, Ca 40. (B#3).
6/20/80	6690	TD - Circ f/logs. Reached TD 6690' @ 5:00 am 6/20/80. 1-1/2" @ 6629'. 70 RPM, 45M#. Mud: 9.4#, vis 58, WL 8, solids 8%, gels 14/30, Pv 31, Yld 18, Ph 8.5, Sd 1/2%, FC 2/32, Cl 350, Ca 40. B#3, 7-7/8", Sm., F-3, made 2414' in 163-1/2 hrs. (B#4).
6/21/80	6690	TD - RU to run csg. Circ & cond mud. Made short trip. POH. Schl ran DIL, SFL, FDC & CNL w/GR WLTD 6684'. Was necessary to send in truck & get replacement truck - trouble w/magnetic counter on line. 70 RPM, 45M#. Mud: 9.4#, vis 58, WL 8, solids 8%, Gels 14/30, Pv 31, Yld 18, Ph 8.5, sd 1/2%, FC 2/32, Cl 350, Ca 40. B#4, 7-7/8", Sm., F-4, made 6' in 6 hrs.
6/22/80	6690	TD - MORT. Ran 160 jts 4-1/2" OD 10.5# K-55 ST&C csg (6717.74'), set @ 6685' RKB, FC @ 6649', DV tool @ 2233'. Ran HOWCO, FC, GS & DV tool. 5 cntrlzrs on btm it & one on ea clr above flt clr. Also 1 cntrlzr above & below DV. Total 7 cntrlzrs. Ran 2 cmt bskts below DV tool. Ran 10 scratchers, 8' apart f/6630-6550'. Cmt'd 1st stage: 10 BM flush, 320 sx 65/30 Poz + 14% gel, 12-1/2# gilsonite/sx, foll w/285 sx 50/50 Poz + 2% gel, 3/4% CFR-2. Gd circ thruout. PD 1:30 pm 6/21/80. Flt held. Opnd DV tool @ 2233' & circ'd 3-1/2 hrs. Cmt'd 2nd stage: thru DV @ 2233' w/10 BM flush w/470 sx 65/35 Poz + 14% gel, 12-1/2# gilsonite/sx. PD 6:15 pm. Circ 50 sx cmt to surf. Set 65M# on slips & cut off csg. RR @ 9:00 pm 6/21/80. Mud: 9.4#, vis 58, WL 8, solids 8%, gels 14/30, Pv 31, Yld 18, Ph 8.5%, Sd 1/2%, FC 2/32, Cl 350, Ca 40.
6/23/80	6690	TD - WO completion Fin MORT.
6/24/80	6690	TD - WO completion.

6/25/80	6690	TD - POH to run CBL log. MI & RU 6/24/80. Unloaded & meas 220 jts 2-3/8" tbg. TIH w/72 jts tbg to 2233'. Drld out DV tool. PU 141 jts. Tagged cmt @ 6598'. CO to FC @ 6650'. Circ'd hole w/2% KCl wtr. POH w/10 stds. SI f/dark.
6/26/80	6690	TD - Prep to spt 100 gals 15% HCl acid @ 6615' to perf. POH. Ran CBL w/var dens & GR correl log: 100% bond 6641-6430'; 60% bond 6430-6414'; 90-100% bond 6414-5390'; 80-90% bond 5390-4820'; fair to poor bond 4820' - top cmt 4750'; poor DV tool @ 2233' - top cmt 1906'. RD loggers. RU Halliburton. Press tst to 4000# - held steady 5 min. POH & SD f/dark.
6/27/80	6690	TD - POH w/tbg to frac trtd perfs. RU Halliburton & spt 100 gals 15% HCl @ 6615' & POH. Perf'd Dakota @ 6553', 65', 67', 69', 71', 73', 76', 78', 82', 95', 97', 6602', 04', 09', 11' (15 shots). All meas f/D-A CBL 6/25/80 correl' to Schl CNL/FDC 6/20/80. TIH w/pkr to 6410'. Brk fm dn w/100 gals acid @ 1000#. Trtd w/1000 gals 15% HCl & 30 ball sealers 4 BPM @ 1800#. Had complete ball off & held 4000# f/15 min. Bled off press. Displ'd 9 bbls acid. ISIP 1200#. SI. Swbd tbg dry. Rec'd 26 BLW w/show of gas.
6/28/80	6690	TD - GIH w/tbg to CO sd. POH w/pkr. Halliburton frac'd Dakota 6563-6611 w/40300 gals & 118,000 lbs 20/40 sd as foll: 5,000 gals pad, 25 BPM, 2300#; 4,000 gals, 1# sd/gal, 25 BPM, 2000#; 5,000 gals, 2# sd/gal, 25 BPM, 2000#; 5,000 gals, 3# sd/gal, 25 BPM, 1800#; 5,000 gals, 4# sd/gal, 25 BPM, 5000 gal. 5# sd/gal, 25 BPM, 2650#; 5,000 gals, 6# sd/gal, 27 BPM, 3400#; 2000 gals, 7# sd/gal, 27 BPM, 3500#; 4300 gals flush, 27 BPM, 2700#. Total frac 40,300 gals fld & 118,000 lbs sd. ISIP 1000#, 10 min 430#. SI 18 hrs WO gel to brk. (Note: cut 7# ppg short by 2000 gals when attempt to screen out MXP 3800
6/29/80	6690	TD - Flwg well to clean up. WIH w/tbg. Tag sd @ 6570'. CO to 6649' w/N ₂ . ND BOP & NU tree. Land 211 jts tbg @ 6542' w/"F" nple @ 6512' (total tbg 652 Unload hole w/N ₂ . Flwd Dakota perfs 6563-6611' to pit 15 hrs w/SICP 500# & FTP 100# on 3/4" chk. Estimated GARO 1667 MCFD w/steady stream of wtr.
6/30/80	6690	TD - Prep to SI. Flwg to clean up on 3/4" chk. TP 100#, CP 550#. Est flw rate 1600 MCFD, recv'g spray of wtr.
7/1/80	6690	TD - Well SI.
7/2/80	6690	TD - Well SI.
7/3-7/10/80	6690	TD - Well SI.
7/11/80	6690	TD - <u>COMPLETED SI GAS WELL</u> , Dakota fm, 7/10/80. Tst date 7/10/80. 10-day SITP 1302#, SICP 1302#. Flwd 3 hrs on 48/64" chk, FTP 370#, FCP 637#. Gas rate 232' MCFD, liquid rate 3rd hr 30 bbls condensate per day & est 30 BFW from Dakota perfs 6563'-6611'. Gravity 58.1° API @ 60° F. 30 min bld-up TP 1039#, CP 1022. LPP 6611'. (Calc AOF 2489 MCFD).