

OIL CONSERVATION DIVISION

Form C-122
Revised 10-1-78STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENTP. O. BOX 2088
SANTA FE, NEW MEXICO 87501

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Type Test ☒ Initial ☐ Annual ☐ Special				Test Date 3-31-82	
Company ARCO Oil and Gas Company				Connection None	
Pool Kemnitz, Atoka, Morrow, South Gas				Formation Atoka	
Completion Date 3-26-82		Total Depth 13200		Plug Back TD 12968	
				Elevation GL 4153	
Farm or Lease Name State 19					
Csg. Size 5 1/2"	Wt. 17#	d 4.892	Set At 13105	Perforations: From 12615 To 12640	
Tbg. Size 2 3/8	Wt. 4.7#	d 1.995	Set At 12577	Perforations: From Open To Ended	
Type Well - Single - Bradenhead - G.G. or G.O. Multiple Single				Packer Set At 12570	
Producing Thru Tbg.				County Lea	
Reservoir Temp. °F 183 @ 12628		Mean Annual Temp. °F 60°		Baro. Press. - P _c 13.2	
State New Mexico					
L 12577	H 12577	Gg .638	% CO ₂ 2.369	% N ₂ 1.521	% H ₂ S 2.54PPM
Prover 4"		Meter Run Flg.			

FLOW DATA						TUBING DATA		CASING DATA		Duration of Flow	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	
SI							4605		Pkr.		SI 136 Hrs.
1.	4 x 1.750			433	7	97	4250	66			1 Hr.
2.	4 x 1.750			435	13	70	3990	70			1 Hr.
3.	4 x 1.750			448	32	81	3495	70			1 Hr.
4.	4 x 1.750			448	69	76	2820	76			1 Hr.
5.											

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor F _t	Gravity Factor F _g	Super Compress. Factor, F _{sp}	Rate of Flow Q, Mcfd
1	14.93	55.887	446.2	.9662	1.252	1.032	1042
2	14.93	76.332	448.2	.9905	1.252	1.039	1468
3	14.93	121.484	461.2	.9804	1.252	1.037	2309
4	14.93	178.389	461.2	.9850	1.252	1.038	3409
5							

NO.	P _t	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	Mcf/bbl.
1	.66	557	1.53	.938	87177	
2	.66	530	1.46	.927	48	
3	.68	541	1.49	.930		
4	.68	536	1.48	.928		
5						

A.P.L. Gravity of Liquid Hydrocarbons _____ Deg. Specific Gravity Separator Gas _____ Specific Gravity Flowing Fluid _____ Critical Pressure _____ P.S.I.A. Critical Temperature _____ °R			
---	--	--	--

$P_c = 6197.2 P_c^2 = 38405.3$			
NO.	P _t	P _w	P _w ²
1		5764.2	33226.0
2		5465.2	29868.4
3		4957.2	24573.8
4		4106.2	16860.9
5			

$(1) \frac{P_c^2}{P_c^2 - P_w^2} = 4.801$		$(2) \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 4.129$	
$AOF = Q \left[\frac{P_c^2}{P_c^2 - P_w^2} \right]^n = 5781$			

Absolute Open Flow 5781 Mcfd @ 15.025		Angle of Slope @ 47.89°		Slope, n 0.904	
---------------------------------------	--	-------------------------	--	----------------	--

Remarks:			
----------	--	--	--

Approved By Division	Conducted By: Larry Henson	Calculated By: James Cogburn	Checked By: Steve Smith
----------------------	-------------------------------	---------------------------------	----------------------------

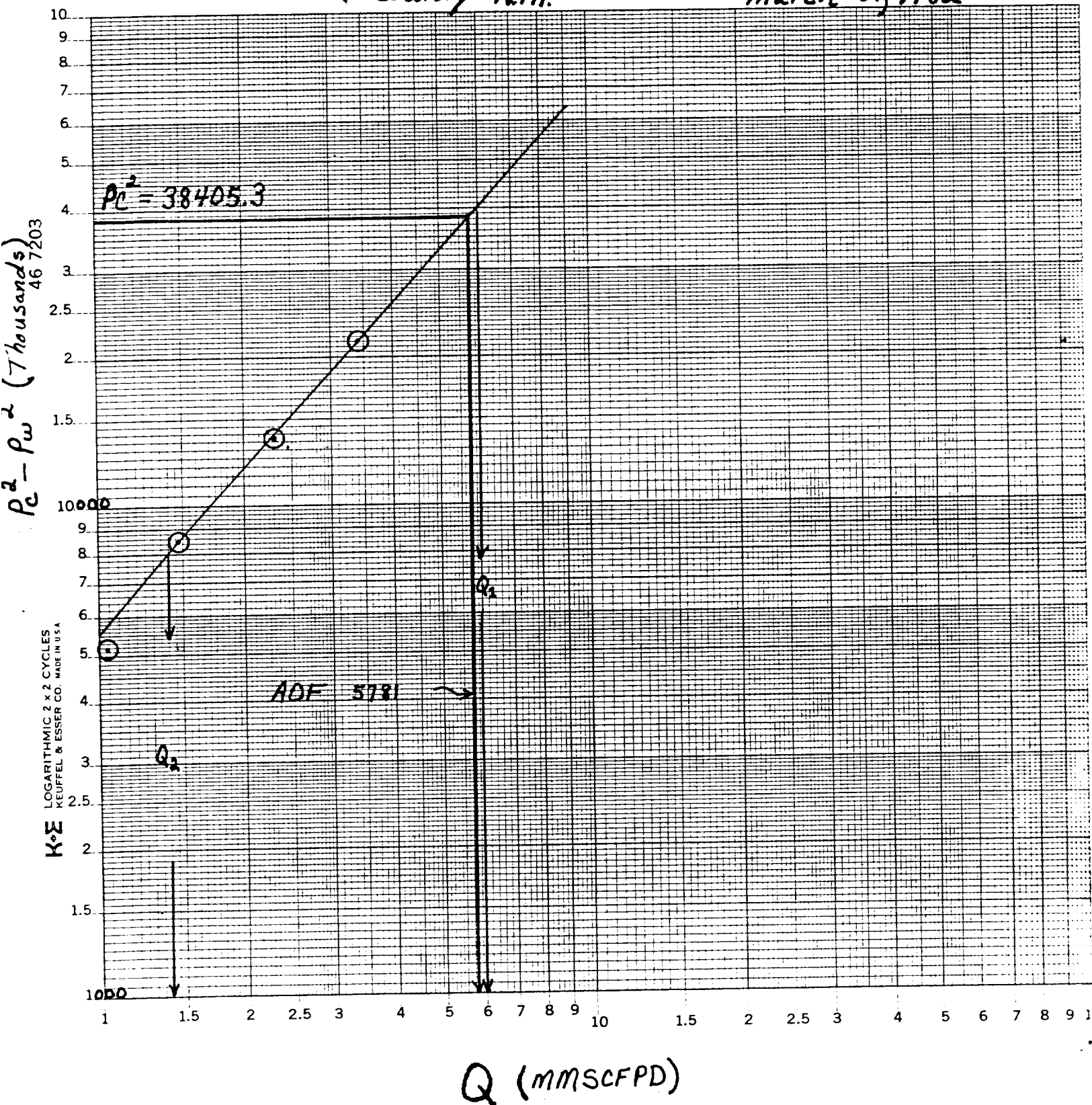
RECEIVED

APR 7 1982

322
HCS63 OFFICE

ARCO Oil & Gas Company
 State 19 #1
 Unit D 19 16 34
 Lea County N.M.

March 31, 1982



$$Q_1 = 6000 \text{ MMSCFPD}$$

$$\Delta p_1^2 = 40000$$

$$n = \frac{\log 1400 - \log 6000}{\log 8000 - \log 40000} = .904$$

$$Q_2 = 1400 \text{ MMSCFPD}$$

$$\Delta p_2^2 = 8000$$

OIL CONSERVATION DIVISION

P. O. BOX 2088

SANTA FE, NEW MEXICO 87501

Form C-103
Revised 10-1-75

NO. OF COPIES RECEIVED	
DISTRIBUTION	
SANTA FE	
FILE	
U.S.G.S.	
LAND OFFICE	
OPERATOR	

5a. Indicate Type of Lease	
State ☒	For ☐
5. State Oil & Gas Lease No.	
E-944	

SUNDRY NOTICES AND REPORTS ON WELLS

DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR.
USE "APPLICATION FOR PERMIT -" (FORM C-101) FOR SUCH PROPOSALS.

OIL WELL ☐ GAS WELL ☒ OTHER ☐		7. Unit Agreement Name
Name of Operator ARCO Oil and Gas Company Division of Atlantic Richfield Company		8. Farm or Lease Name State 19
Address of Operator P.O. Box 1710, Hobbs, New Mexico 88240		9. Well No. 1
Location of Well UNIT LETTER <u>O</u> <u>960</u> FEET FROM THE <u>South</u> LINE AND <u>2130</u> FEET FROM THE <u>East</u> LINE, SECTION <u>19</u> TOWNSHIP <u>16S</u> RANGE <u>34E</u> N.M.P.M.		10. Field and Pool, or Wildcat Undes Kemnitz Atoka Morrow So. Gas
11. Elevation (Show whether DF, RT, GR, etc.) 4153' GR		12. County Lea

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data
NOTICE OF INTENTION TO: SUBSEQUENT REPORT OF:

PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐	CHANGE PLANS ☐	COMMENCE DRILLING OPNS. ☐	PLUG AND ABANDONMENT ☐
PULL OR ALTER CASING ☐	OTHER ☐	CASING TEST AND CEMENT JOBS ☒	Intermediate ☐

Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

Finished drlg 11" hole to 4500' @ 2:15 AM 12-2-81. RIH w/2356' of 8-5/8" OD 28# S-80 & 2144' of 8-5/8" OD 24# K-55 csg set @ 4500'. Cmted csg w/1400 sx HOWCO Lite cmt contg 15#/sk salt, 1#/sk flocele followed by 300 sx C1 "C" cmt contg 1#/sk flocele. PD @ 6:30 PM 12-2-81. Circ 150 sx cmt to pit. WOC 35 1/4 hrs. Press tested csg to 1000# for 30 mins. Drlg new fm @ 5:30 PM 12-4-81.

I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED James W. Schmitt TITLE Dist. Drlg. Supt. DATE 12-4-81

APPROVED BY _____ TITLE _____ DATE _____

CONDITIONS OF APPROVAL, IF ANY:

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

NO. OF COPIES RECEIVED	
DISTRIBUTION	
SANTA FE	
FILE	
U.S.O.S.	
LAND OFFICE	
OPERATOR	

OIL CONSERVATION DIVISION

P. O. BOX 2088
SANTA FE, NEW MEXICO 87501

Form C-103
Revised 10-1-78

5a. Indicate Type of Lease	
State ☒	Fee ☐
5. State Oil & Gas Lease No.	
#-944	

SUNDRY NOTICES AND REPORTS ON WELLS

DO NOT USE THIS FORM FOR PROPOSALS TO DRILL OR TO DEEPEN OR PLUG BACK TO A DIFFERENT RESERVOIR.
USE "APPLICATION FOR PERMIT" (FORM C-101) FOR SUCH PROPOSALS.

1. OIL ☐ GAS ☒ OTHER ☐		7. Unit Agreement Name
2. Name of Operator ARCO Oil and Gas Co. Div of Atlantic Richfield Co.		8. Farm or Lease Name State 19
3. Address of Operator P. O. Box 1710, Hobbs, N M 88241-1710		9. Well No. 1
4. Location of Well UNIT LETTER 0 960 FEET FROM THE South LINE AND 2130 FEET FROM THE East LINE, SECTION 19 TOWNSHIP 16S RANGE 34E NMPM.		10. Field and Pool, or Whicat Undesignated Kemnitz Atoka Morrow So. Gas
15. Elevation (Show whether DF, RT, GR, etc.) 4153' GR		12. County Lea

16.

Check Appropriate Box To Indicate Nature of Notice, Report or Other Data

NOTICE OF INTENTION TO:

SUBSEQUENT REPORT OF:

PERFORM REMEDIAL WORK ☐	PLUG AND ABANDON ☐	REMEDIAL WORK ☐	ALTERING CASING ☐
TEMPORARILY ABANDON ☐	CHANGE PLANS ☐	COMMENCE DRILLING OPNS. ☒	PLUG AND ABANDONMENT ☐
PULL OR ALTER CASING ☐	OTHER ☐	CASING TEST AND CEMENT JOB ☒ Surface	OTHER ☐

17. Describe Proposed or Completed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work) SEE RULE 1103.

Spudded 17½" hole @ 8:00 AM, 11/21/81. Fin drlg to 418' @ 3:00 PM, 11/21/81. RIH w/13-3/8" OD 54.5# K-55 csg set @ 418'. Cmted w/420 sx Cl C cmt contg 2% CaCl₂. Circ 70 sx cmt to surf. PD @ 10:45 PM, 11/21/81. WOC 21¼ hrs. Press test csg to 1000# for 30 mins, OK. Commenced drlg new fm @ 8:00 PM, 11/22/81.

18. I hereby certify that the information above is true and complete to the best of my knowledge and belief.

SIGNED Jerry W. Schmidt TITLE Dist. Drlg. Supt DATE 12/02/81

APPROVED BY Les Clements TITLE Oil & Gas Insp. DATE
CONDITIONS OF APPROVAL, IF ANY: