

NEW MEXICO OIL CONSERVATION COMMISSION
MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

RECEIVED

Type Test ☒ Initial ☐ Annual ☐ Special					Test Date 10-14-74		NOV 19 1974				
Company Belco Petroleum Corp.				Connection Natural Gas Pipe Line				O. C. C.			
Pool Los Medanos				Formation Atoka				Unit 160			
Completion Date 7-26-74			Total Depth 14325'		Plug Back TD 13800		Elevation 3298KB-20		Farm or Lease Name Hudson Federal		
Csg. Size 5 1/2	Wt. 16.87	d 4.892	Set At 14325	Perforations: From 12989 To 12995				Well No. No. 1			
Tub. Size 2 7/8	Wt. 8.7	d 2.259	Set At 12685	Perforations: From Open ended				Unit F	Soc. 1	Twp. 23s	R12. 30E
Type Well - Single - Bradenhead - G.O. of G.O. Multiple Single					Packer Set At 12685			County Eddy			
Producing Thru TBG		Reservoir Temp. °F 206		Mean Annual Temp. °F 60		Baro. Press. - P _a 13.2		State New Mexico			
L 12992	H -	G _g 0.905	% CO ₂ 0.461	% N ₂ 0.643	% H ₂ S 0.00	Prover	Meter Run X	Taps F			

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	OUT. p.s.i.g.	Temp. °F	Press. p.s.i.g.	
SI							4291			
1.	2 9/64	1.00		900	70	70	2978	52	Packer	
2.	2 7/64	1.00		900	38	70	3119	52		
3.	2 5/64	1.00		900	5	66	3671	51		
4.	2 4/64	1.00		900	3	78	3962	50		
5.										

RATE OF FLOW CALCULATIONS							
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, Fpv	Rate of Flow Q, Mcfd
1	4.946	252.84	913.2	0.9905	1.051	1.235	1607.7
2	4.946	186.27	913.2	0.9905	1.051	1.235	1184.4
3	4.946	67.57	913.2	0.9943	1.051	1.259	439.6
4	4.946	52.34	913.2	0.9831	1.051	1.217	328.8
5.							

NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio	A.P.I. Gravity of Liquid Hydrocarbons	Specific Gravity Separator Gas	Specific Gravity Flowing Fluid	Critical Pressure	Critical Temperature
1.	1.37	530	1.17	0.656	19.833	50.5	0.905		665	453
2.	1.37	530	1.17	0.656						
3.	1.37	526	1.16	0.631						
4.	1.37	538	1.19	0.675						
5.										

NO.	P _r ²	P _w	P _w ²	P _r ² - P _w ²	(1) $\frac{P_r^2}{P_r^2 - P_w^2} =$	(2) $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n =$
1	—	4527.2	20495.5	17083.9	2.200	2.044
2	—	5056.2	25565.2	12014.2		
3	—	5793.2	33561.2	4018.2		
4	—	5880.2	34576.8	3002.0		
5						

Absolute Open Flow		3286		Mcf/d @ 15.025		Angle of Slope @		46° 42'		Slope, n		0.910	
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Remarks: * BHP @ (-9694) 12992' Used for pressure calculations

Approved By Commission:	Conducted By: Coleman Petr. Eng.	Calculated By: Joe A. Coleman	Checked By: Joe A. Coleman
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COLEMAN PETROLEUM ENGINEERING COMPANY

PHONE EXPRESS 3-3813

611 GRIMES

P O BOX 1929

HOBBS, NEW MEXICO

BOTTOM HOLE PRESSURE RECORD

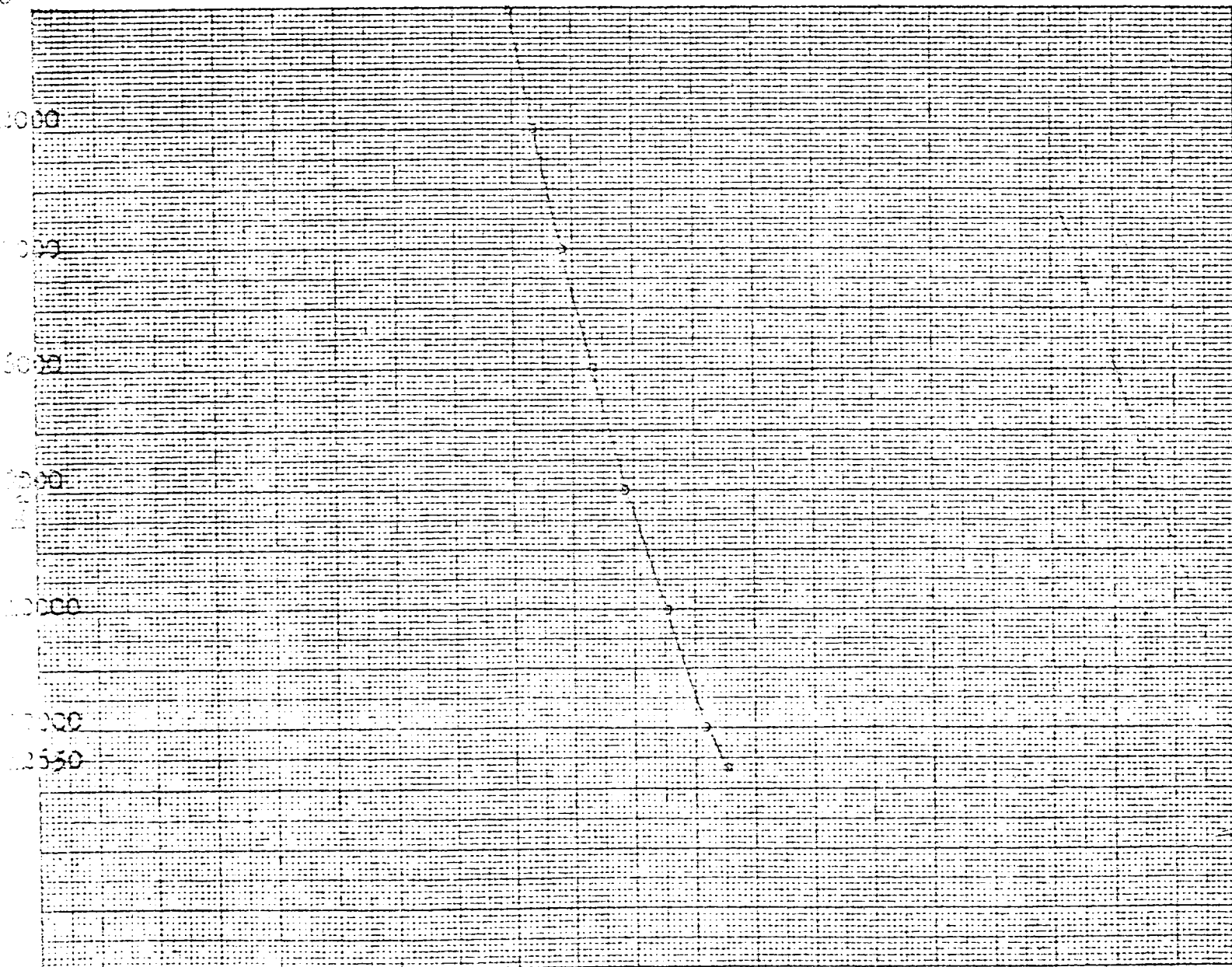
OPERATOR Belco Petroleum Corporation
FIELD Los Medanos FORMATION Atoka
LEASE Hudson Federal WELL 1
COUNTY Eddy STATE New Mexico
DATE 10-14-74 TIME 6:00PM
Status Flowing 3/64 First depth 12650
Time S. I. choke Last test date -
Tub Pres. 3962 BHP last test -
Cas. Pres. PKR BHP change -
Elev. 3298KB-20 Fluid top Flowing
Datum (-9694)** Water top -
Temp. @ 206°F Run by Adkins
Cal. No. A7756N Chart No. 2

Depth	Pressure	Gradient
0	3962	-
2000	4187	.113
4000	4411	.112
6000	4667	.128
8000	4935	.134
10000	5261	.163
12000	5583	.161
12650	5769	.286
12992(-9694)	5867** *	(.286)

* Extrapolated Pressure

** Mid Point of casing perforations

Pressure 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000





COLEMAN PETROLEUM ENGINEERING COMPANY

PHONE EXPRESS 3-3513
611 GRIMES
P O BOX 1829
HOBBS, NEW MEXICO

BOTTOM HOLE PRESSURE RECORD

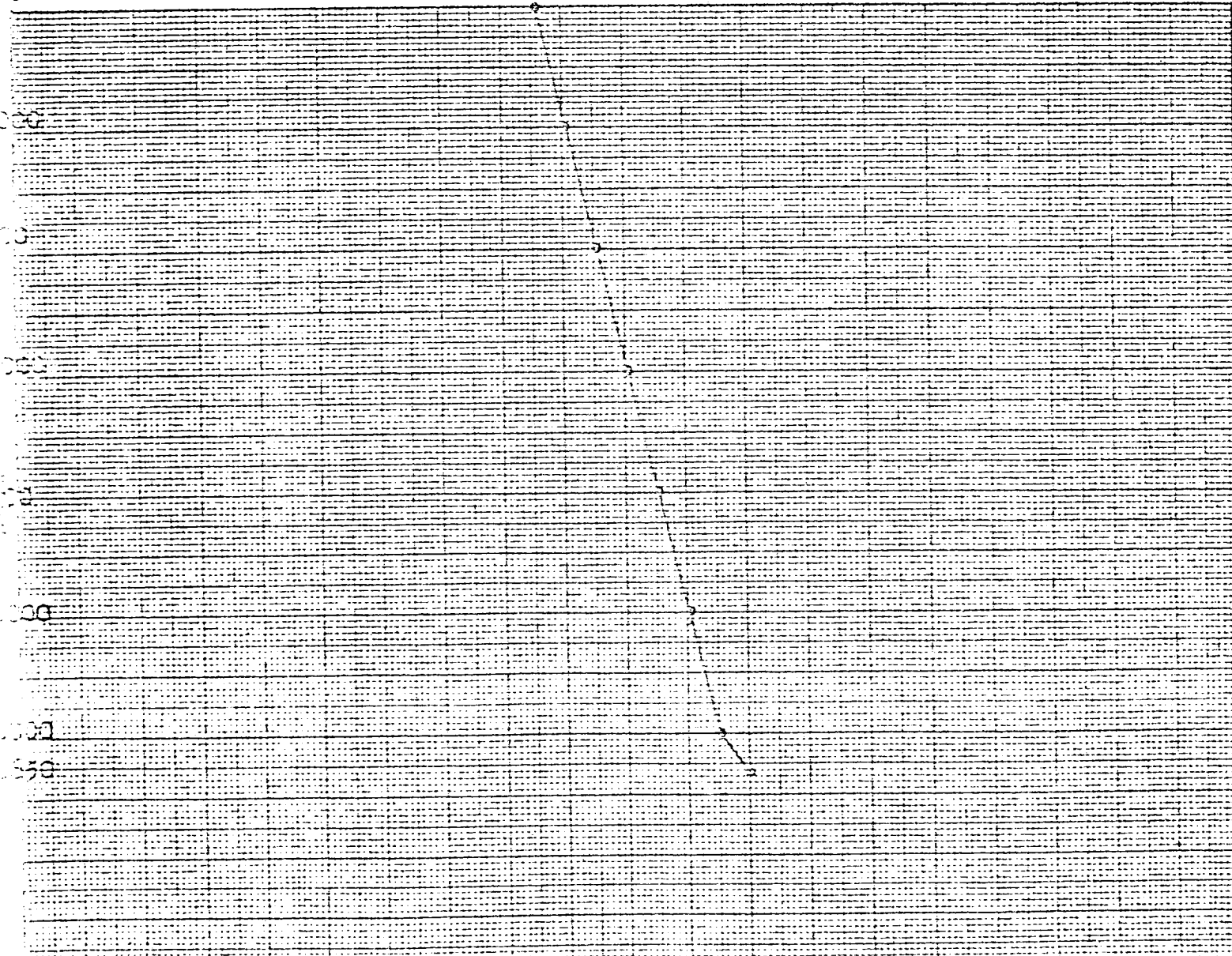
OPERATOR Balco Petroleum Corporation
FIELD Los Medanos FORMATION Atoka
LEASE Hudson Federal WELL No. 1
COUNTY Eddy STATE New Mexico
DATE 10-14-74 TIME 10:00 AM
Status shut in Test depth 12650
Time S. I. 72 hrs. Last test date Initial
Tub Pres. 4291 BHP last test -
Cas. Pres. PKR BHP change -
Elev. 3298KB-20 Fluid top 12000'
Datum (-9694)** Water top -
Temp. @ 206° F Run by Adkins
Cal. No. A7756N Chart No. 1

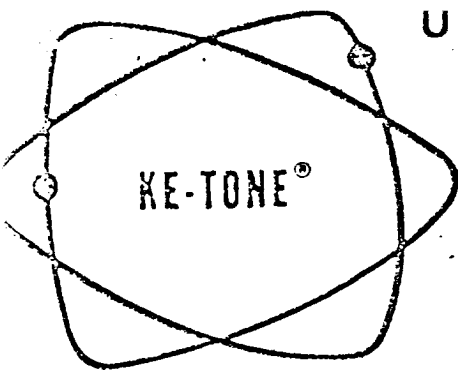
Depth	Pressure	Gradient
0	4291	-
2000	4526	.118
4000	4774	.124
6000	5024	.125
8000	5274	.125
10000	5526	.126
12000	5778	.126
12650	6000	.342
12992 (-9694)	6117* **	(.343)

* Extrapolated Pressure

** Mid Point of casing perforations

0 1000 2000 3000 4000 5000 6000 7000 8000 9000 10000





UNION CHEMICAL CORPORATION

OF NEW MEXICO

P. O. BOX 1499

PHONE 393-7701

HOBBS, NEW MEXICO 88240

No. 3307

Run No.

Date of Run 10-14-74

Date Secured

CERTIFICATE OF ANALYSIS

A Sample of Belco Petroleum Corp. - Los Madanos Atoka Gas
Secured from Coleman Engineering
At Hobbs, NM Secured by _____
Time _____ Date _____
Sampling conditions _____ Press _____
Temp. _____

FRACTIONAL ANALYSIS

Percentage Composition

	MOL %	LIQ. %	G.P.M.
Carbon Dioxide	.461		
Air	.643		
Nitrogen			
Oxygen			
Hydrogen sulfide			
Hydrogen			
Methane	78.436		
Ethane	3.876		1.034
Propane	1.773		.488
Butanes			
Iso-Butane	.935		.305
N-Butane	2.212		.695
Pentanes			
Iso-Pentane	2.356		.860
N-Pentane	2.628		.950
Hexanes	3.766		1.545
Heptanes	2.914		1.240
TOTAL	100.00		7.117

Calc. Sp. Gr. — 0.9052

Calc. A.P.I. —

Calc. Vapor Press. — PSI

Sp. Gr.

26.51

Mol. Wt.

LIQUID CONTENT (GAL./MCF)

Propane Calc. G.P.M. .488
Butanes Calc. G.P.M. 1.000
Pentanes Plus. G.P.M. 4.595
Ethane Calc. G.P.M. 1.034
* RVP Gasoline G.P.M.

B.T.U./Cu. Ft. @ 14.696 P.S.I.A.

Dry Basis

Wet Basis

1540

1513

Sulfur Analysis by Titration

Gr./100 Cu. Ft.

Hydrogen Sulfide

Mercaptans

Sulfides

Residual Sulfur

Total Sulfur

Run by Sylvia Bryant Checked by _____ Approved by [Signature]

Additional Data and Remarks



COLEMAN PETROLEUM ENGINEERING COMPANY

PHONE 393-3813

3713 W. MARLAND ST.

P. O. BOX 1829

HOBBS, NEW MEXICO 88240

October 14, 1974

OCT 23 1974

MIDLAND OFFICE

Belco Petroleum Corporation
2000 Wilco Building
Midland, Texas 79701

RE: Los Medanos Atoka Gas
Hudson Federal, No. 1
Eddy County, New Mexico
4 Point Back Pressure Test
Gas Sample Analysis

Gentlemen:

In compliance with your instructions, a 4-Point Back Pressure Test was conducted, and the absolute open flow potential was calculated to be 3286 MCFD. The average gas production was recorded to be 890.1 MCFD, with 44.88 Bbls. D/D, and with a resulting GOR of 19833 CF Gas/Bbl D.

The gas sample taken during the flow test yielded component percentages as follows:

Carbon Dioxide	.461
Nitrogen	.643
Methane	78.436
Ethane	3.876
Propane	1.773
Iso-Butane	.935
N-Butane	2.212
Iso-Pentane	2.356
N-Pentane	2.628
Hexanes	3.766
Heptanes	2.914

TOTAL 100.000

Calculated Sp.G	0.9052
Calculated BTU Dry	1540
Calculated BTU Wet	1513

Enclosures:

JAC/km

Very Truly Yours

Coleman Petroleum Engr. Co.

Joe A. Coleman
Joe A. Coleman

RECEIVED

NOV 19 1974

O. C. C.
ARTESIA, OFFICE