

CASE 2498: Application of Shell Oil Company for approval of the Emerald Unit Agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Emerald Unit Agreement embracing 1200 acres, more or less, of State lands in Sections 14, 15, 22 and 23, Township 16 South, Range 32 East, Lea County, New Mexico.

CASE 2499: Application of Shell Oil Company for approval of the Royal Unit Agreement, Lea County, New Mexico. Applicant, in the above-styled cause, seeks approval of the Royal Unit Agreement embracing 1078.49 acres, more or less, of State and fee lands in Sections 24 and 25, Township 10 South, Range 34 East, and Sections 19 and 30, Township 10 South, Range 35 East, all in Lea County, New Mexico.

CASE 2500: Application of Pan American Petroleum Corporation for an order pooling all mineral interests in the Flora Vista-Mesa-verde and Basin-Dakota Gas Pools in the N/2 of Section 27, Township 30 North, Range 12 West, San Juan County, New Mexico. As an alternative, applicant requests the establishment of a 318-acre non-standard gas proration unit in the Flora Vista-Mesaverde and Basin-Dakota Gas Pools consisting of all the N/2 of said Section 27, except two acres which comprise Lot 9, Block 3 of Flora Vista Acres subdivision in the NW/4 NE/4 of said Section 27 owned by Henry E. and Loie Irene Lindsey, P. O. Box 176, Flora Vista, New Mexico.

CASE 2501: Application of G. W. Strake for an order creating a new oil pool, Eddy County, New Mexico. Applicant, in the above-styled cause, seeks an order creating a new oil pool to be designated as either the Hackberry-Seven Rivers Pool or Hackberry-Capitan Pool, and comprising the NE/4 of Section 25, Township 19 South, Range 30 East, Eddy County, New Mexico. The discovery well is the G. W. Strake Le Bow-Federal Well No. 4, located in Unit H of said Section 25.

DOCKET: EXAMINER HEARING - TUESDAY - FEBRUARY 27, 1962

9 A.M. - OIL CONSERVATION COMMISSION CONFERENCE ROOM,
STATE LAND OFFICE BUILDING, SANTA FE, NEW MEXICO

The following cases will be heard before Elvis A. Utz, Examiner, or Daniel S. Nutter, as alternate examiner:

- CASE 2491: Application of D. W. Falls, Inc., for the promulgation of special rules governing oil wells in the Basin-Dakota Pool, San Juan and Rio Arriba Counties, New Mexico, and for four non-standard oil proration units. Applicant, in the above-styled cause, seeks the promulgation of special rules governing oil wells in the Basin-Dakota Pool, San Juan and Rio Arriba Counties, New Mexico, including a provision defining an oil well in said pool as a well having a gas-oil ratio of 30,000 to 1, or less, and producing liquid hydrocarbons with a gravity of 49° API, or less; applicant seeks rules establishing 160-acre oil proration units and fixing well location requirements for said wells. Applicant further seeks the establishment of the four following non-standard oil proration units, all in Township 28 North, Range 13 West, San Juan County:
- E/2 of Section 10, comprising 137.58 acres;
W/2 of Section 10, comprising 137.78 acres;
E/2 of Section 11, comprising 137.78 acres;
W/2 of Section 11, comprising 137.58 acres.
- CASE 2496: Application of Elliott, Inc. for an exception to the no-flare provisions of Order No. R-2103, Totah-Gallup Oil Pool, San Juan County, New Mexico. Applicant, in the above-styled cause, seeks an exception to Order No. R-2103 prohibiting the flaring of casinghead gas from oil wells in the Totah-Gallup Oil Pool for a 30-day period for its Totah Well No. 1-A located in the NE/4 NE/4 of Section 30, Township 29 North, Range 13 West, San Juan County, New Mexico.
- CASE 2497: Application of Amerada Petroleum Corporation for a waterflood project, Langlie-Mattix Pool, Lea County, New Mexico. Applicant, in the above-styled cause, seeks permission to institute a waterflood project in the Langlie-Mattix Pool in Sections 27, 28, 33 and 34, Township 24 South, Range 37 East, Lea County, New Mexico; the injection of water initially to be through six wells located in said sections, said project to be governed by the provisions of Rule 701.

PAN AMERICAN PETROLEUM CORPORATION

P. O. Box 480, Farmington, New Mexico
June 21, 1962

File: H-1081-400.1

Subject: Schedule of Well Costs - Revised
Stedje Gas Unit No. 1
San Juan County, New Mexico

Mr. A. L. Porter
New Mexico Oil Conservation Commission
P. O. Box 871
Santa Fe, New Mexico

Dear Sir:

In accordance with the last paragraph of our letter dated May 8, 1962, File: N-1063-400.1, we are listing below revised cost data representing costs shown by our records as of May 31, 1962.

Drilling Costs

Day Work - Drilling Contract	\$11,853.19	
Turnkey Contract	30,704.30	
Truck and Service Equipment	3,275.85	
Fuel	726.20	
Drilling Mud and Related Material	459.04	
Bits and Rental Equipment	1,830.78	
Well Surveys and Test Services	891.65	
Acidizing, Shooting and Perforating	7,982.29	
Cementing Casing	4,580.64	
Geological and Engineering	136.43	
Roads, Bridges and Canals	43.55	
Losses on Retirements, Sales, Transfers, and Other Charge-Offs	13.67	
Material and Supplies - Other	3,152.35	
Other Labor - Company	483.18	
Other Labor - Contract	511.16	
Other Drilling Costs	<u>301.21</u>	\$66,945.49

Well Equipment

Well Head	\$ 3,830.81	
Casing	17,227.62	
Tubing	6,717.57	
Noncontrollable Tangible Material	1,288.79	
Valuation Reserve	<u>(421.00)</u>	\$28,643.79

*File
Case 2500*

Page 2
Mr. A. L. Porter

June 21, 1962
File: H-1081-400.1

Lease Equipment

Construction	\$ 2,611.41	
Noncontrollable Tangible Material	990.13	
Pipe	578.23	
Heater	3,826.93	
Tank	4,347.05	
Separator	5,206.80	
Other	245.76	
Walkway	720.19	
Valuation Reserve	<u>(170.58)</u>	\$18,355.92

Overhead Charges

Field	\$ 192.70	
District	144.85	
Administrative	303.79	
Miscellaneous Charges and Credits	<u>54.16</u>	\$ 695.50

Operation

Well Expense		<u>\$ 970.29</u>
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\$115,610.99

Yours very truly,

PAN AMERICAN PETROLEUM CORPORATION

T. M. Curtis

T. M. Curtis
District Superintendent

GLH:ep

cc: Henry E. and Loie Irene Lindsey
P. O. Box 176
Flora Vista, New Mexico

PAN AMERICAN PETROLEUM CORPORATION

P. O. Box 480, Farmington, New Mexico

May 8, 1962

MAY 9 PM 1:28

File: H-1063-400.1

Subject: Schedule of Well Costs
 Stedje Gas Unit No. 1
 San Juan County, New Mexico

Mr. A. L. Porter
 New Mexico Oil Conservation Commission
 P. O. Box 871
 Santa Fe, New Mexico

Dear Sir:

In accordance with the requirements of Case No. 2500, Order No. R-2226, we are listing below an itemized schedule of well costs for the Stedje Gas Unit which includes all charges booked as of February 28, 1962.

Drilling Costs

Day Work - Drilling Contract	\$11,853.19	
Turnkey Contract	30,704.30	
Truck and Service Equipment	3,275.85	
Fuel	726.20	
Drilling Mud and Related Material	459.04	
Bits and Rental Equipment	1,830.78	
Well Surveys and Test Services	891.65	
Acidizing, Shooting and Perforating	7,982.29	
Cementing Casing	4,580.64	
Geological and Engineering	136.43	
Roads, Bridges and Canals	43.55	
Losses on Retirements, Sales, Transfers, and Other Charge-Offs	8.11	
Material and Supplies - Other	3,152.35	
Other Labor - Company	483.18	
Other Labor - Contract	511.16	
Other Drilling Costs	294.44	\$66,933.16

Well Equipment

Well Head	\$ 3,970.06	
Casing	17,361.01	
Tubing	6,717.57	
Noncontrollable Tangible Material	1,380.95	
Valuation Reserve	(577.38)	28,852.21

Page 2
Mr. A. L. Porter
New Mexico Oil Conservation Commission

May 8, 1962
File: H-1063-400.1

Lease Equipment

Pipe	\$	227.30	
Other		245.76	
Noncontrollable Tangible Material		328.60	
Valuation Reserve		<u>(381.27)</u>	\$ 420.39

Overhead Charges

Field	\$	192.70	
District		54.44	
Administrative		218.14	
Miscellaneous Charges and Credits		<u>17.52</u>	<u>482.80</u>

\$96,688.56

Subsequent to the completion of the well, we have recently installed necessary lease equipment in order to initiate the sale of gas and condensate, the cost of which is not yet available to this office. In the near future we will furnish revised cost data which will include recently installed lease equipment, as well as any adjustments that may be necessary for costs recorded subsequent to February 28, 1962.

Yours very truly,

PAN AMERICAN PETROLEUM CORPORATION


T. M. Curtis
District Superintendent

GLH:ep

cc: Henry E. and Loie Irene Lindsey
P. O. Box 176
Flora Vista, New Mexico

NEW MEXICO OIL CONSERVATION COMMISSION

BEST AVAILABLE COPY

Form C-122

MULTI-POINT BACK PRESSURE TEST FOR GAS WELLS

Revised 12-1-55

Pool Basin Dakota Formation Dakota County San Juan
Initial X Annual _____ Special _____ Date of Test November 22, 1961
Company Pan American Petroleum Corp. Lease Stedje Gas Unit Well No. 1
Unit F Sec. 27 Twp. 30N Rge. 12W Purchaser _____
Casing 7" Wt. 20 & 23 I.D. 6.331 Set at 6339 6228 6235
6180 6187
Tubing 2-3/8" Wt. 4.7 I.D. 1.995 Set at 6114 _____ To _____
Gas Pay: From 6180 To 6235 6114 .70 est 4280 Bar.Press. 12
Producing Thru: Casing _____ Tubing X Type Well Gas-Dual
Single-Bradenhead-G. G. or G.O. Dual
Date of Completion: 11-15-61 Packer 6100 Reservoir Temp. _____

OBSERVED DATA

Tested Through (Flowmeter) (Choke) (Meter) Type Taps _____

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Flowmeter) (Line) Size	(Choke) (Flowmeter) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI	<u>7 Days</u>					<u>2003</u>				
1.	<u>2"</u>	<u>3/4"</u>	<u>234</u>			<u>306</u>	<u>60° est</u>			<u>3 Hrs.</u>
2.										
3.										
4.										
5.										

FLOW CALCULATIONS

No.	Coefficient (24-Hour)	$\sqrt{h_w P_f}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	<u>12,3650</u>		<u>246</u>	<u>1.000</u>	<u>.9258</u>	<u>1.028</u>	<u>2895</u>
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ of/bbl.
Specific Gravity of Liquid Hydrocarbons _____ deg.
9.402 (1-e^{-S}) .267
Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
2015 P_c 4,060,225

No.	P _w P _t (psia)	P _t ²	P _t Q	(P _t Q) ²	(P _t Q) ² (1-e ^{-S})	P _t Q	P _c ² -P _w ²	Cal. P _a	P _w P _c
1.	<u>318</u>	<u>101,124</u>	<u>27,219</u>	<u>740,874</u>	<u>197,813</u>	<u>298,937</u>	<u>3,761,288</u>		
2.									
3.									
4.									
5.									

Absolute Potential: 3066 MCFPD; n 0.75
COMPANY Pan American Petroleum Corporation
ADDRESS Box 480, Farmington, New Mexico
AGENT and TITLE R. M. Bauer, Jr. Senior Petroleum Engineer
WITNESSED _____
COMPANY _____

REMARKS

ILLEGIBLE

BEST AVAILABLE COPY

INSTRUCTIONS

This form is to be used for reporting multi-point back pressure tests on gas wells in the State, except those on which special orders are applicable. Three copies of this form and the back pressure curve shall be filed with the Commission at Box 871, Santa Fe.

The log log paper used for plotting the back pressure curve shall be of at least three inch cycles.

NOMENCLATURE

- Q = Actual rate of flow at end of flow period at W. H. working pressure (P_w).
MCF/da. @ 15.025 psia and 60° F.
- P_c = 72 hour wellhead shut-in casing (or tubing) pressure whichever is greater.
psia
- P_w = Static wellhead working pressure as determined at the end of flow period.
(Casing if flowing thru tubing, tubing if flowing thru casing.) psia
- P_t = Flowing wellhead pressure (tubing if flowing through tubing, casing if
flowing through casing.) psia
- P_f = Meter pressure, psia.
- h_w = Differential meter pressure, inches water.
- F_g = Gravity correction factor.
- F_t = Flowing temperature correction factor.
- F_{pv} = Supercompressability factor.
- n = Slope of back pressure curve.

Note: If P_w cannot be taken because of manner of completion or condition of well, then P_w must be calculated by adding the pressure drop due to friction within the flow string to P_t .

BEST AVAILABLE COPY

NEW MEXICO OIL CONSERVATION COMMISSION

Form C-122

Revised 12-1-55

MULTI-POINT BACK PRODUCTION TEST FOR GAS WELLS

Pool Flora Vista Mesaverde Formation Mesaverde County San Juan
Initial X Annual _____ Date of Test November 29, 1961
Company San American Petroleum Corp. Leasehold Gas Unit 1
Unit 2 Sec. 27 Twp 30S Rge. 12E
Casing 2 1/2 Wt. 20.5 Lbs. 6.241 6339 3799 5318
Tubing 1 3/8 Wt. 1.7 Lbs. 1.295 3799 _____
Gas Pay: From 3299 To 3318 1285 .70 2300 Bar. Press. 12
Producing Thru: Casing _____ Tubing X Type Well Gas-Prod
Date of Completion: 11-15-61 Packer 6100 Single-Bradenhead-G. G. or G.O. Dual
Reservoir Temp. _____

OBSERVED DATA

Tested Through (Choke) (Choke) _____ Type Taps _____

No.	Flow Data					Tubing Data		Casing Data		Duration of Flow Hr.
	(Line) Size	(Choke) Size	Press. psig	Diff. h _w	Temp. °F.	Press. psig	Temp. °F.	Press. psig	Temp. °F.	
SI	<u>1 1/2</u>					<u>1321</u>		<u>1332</u>		
1.	<u>2"</u>	<u>1 1/4"</u>	<u>399</u>			<u>659</u>	<u>66° out</u>	<u>1005</u>		<u>3 hrs</u>
2.										
3.										
4.										
5.										

FLOW CALCULATION

No.	Coefficient (24-Hour)	$\sqrt{h_{wp}}$	Pressure psia	Flow Temp. Factor F _t	Gravity Factor F _g	Compress. Factor F _{pv}	Rate of Flow Q-MCFPD @ 15.025 psia
1.	<u>12.3690</u>		<u>611</u>	<u>1.0000</u>	<u>.9298</u>	<u>1.077</u>	<u>7333</u>
2.							
3.							
4.							
5.							

PRESSURE CALCULATIONS

Gas Liquid Hydrocarbon Ratio _____ cf/bbl.
Gravity of Liquid Hydrocarbons _____ deg.
P_c _____ (1-e^{-S})
Specific Gravity Separator Gas _____
Specific Gravity Flowing Fluid _____
P_c 1300 P_c 1,776,000

No.	P _w P _t (psia)	P _t ²	F _c Q	(F _c Q) ²	$\left(\frac{P_c}{1-e^{-S}}\right)^2$	P _w ²	P _c ² -P _w ²	Cal. P _w	$\frac{P_w}{P_c}$
1.						<u>1,032,396</u>	<u>744,633</u>		
2.									
3.									
4.									
5.									

Absolute Potential: 15,767 MCFPD; n 0.75
COMPANY San American Petroleum Corporation
ADDRESS San Juan, New Mexico
AGENT AND TITLE E. H. Bauer, Jr. Senior Petroleum Engineer
WITNESSED _____
COMPANY _____

ORIGINAL SIGNED BY
E. H. Bauer, Jr.

REMARKS

ILLEGIBLE

BEST AVAILABLE COPY

INSTRUCTIONS

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NOMENCLATURE

- Q = Actual rate of flow at end of flow period at W. H. working pressure (P_w).
MCF/da. @ 15.025 psia and 60° F.
- P_c = 72 hour wellhead shut-in casing (or tubing) pressure whichever is greater.
psia
- P_w = Static wellhead working pressure as determined at the end of flow period.
(Casing if flowing thru tubing, tubing if flowing thru casing.) psia
- P_t = Flowing wellhead pressure (tubing if flowing through tubing, casing if
flowing through casing.) psia
- P_f = Meter pressure, psia.
- h_w = Differential meter pressure, inches water.
- F_g = Gravity correction factor.
- F_t = Flowing temperature correction factor.
- F_{pv} = Supercompressability factor.
- n = Slope of back pressure curve.

Note: If P_w cannot be taken because of manner of completion or condition of well, then P_w must be calculated by adding the pressure drop due to friction within the flow string to P_t .

Case No.

2500

Page - Exhibits