

SUPPLEMENTARY WELL HISTORY - ROSA UNIT 36-11

Well was spudded October 16, 1959, and drilled to 300 feet with rotary tools. 13-3/8" casing was set in 17-1/4" hole to 297 feet and cemented with 275 sacks cement containing 2% calcium chloride. Cement was circulated. After waiting on cement, casing was tested with 350 psi for 30 minutes with no indication of pressure drop. Reduced hole to 12-1/4" at 300 feet and resumed drilling operations.

9-5/8" casing was set at 3702 feet with 800 sacks of cement with 6% gel, followed by 100 sacks neat cement. Good circulation throughout cement. Tested casing with 2000 psi, which held with no indication of pressure drop. Top cement 700' by temperature survey. Rigged up to drill with gas. Tested 9-5/8" casing with 1200 psi for 30 minutes, which held with no indication of pressure drop. Resumed drilling operations.

Total depth 7805'. 7" casing was set at 7805' with 875 sacks slo-set 6% gel cement containing 1 pound fine Taf-Plug per sack followed by 100 sacks neat slo-set cement. Bumped plug with 2500 psi. After waiting on cement, tested 7" casing and water shut-off with 1250 psi for 30 minutes, which held with no indication of pressure drop. Reduced hole to 6-1/4" at 7805' and continued drilling.

Total depth 8148'. Ran 5" liner with Basc Ross delayed action lead seal casing hanger and set 7692-8148'. Cemented with 75 sacks slo-set with final pressure 2500 psi. Reversed out 15 sacks of cement. Pulled Basc Ross setting tool.

Total depth 8148, plug back depth 8117. Halliburton abrasijet out 5" liner at 8101'. Spotted 400 gallons MCA at 8101'. Set Baker full bore packer at 7585'. Sand-water fracked with 20,000 gallons water and 20,000 pounds sand below packer. Breakdown pressure 5000 psi, treating pressure at start 3200 pounds increased to 4300 pounds. Pumped in 13,528 gallons water and 10,000 pounds sand. Pressure increased to 4800 pounds. Sanded off. Injection rate 13 barrels per minute. Started sand at 1/2 pound per gallon. Pumped 5 minutes, increased to 3/4 pounds per gallon. Pulled packer. Set bridge plug at 8075'. Made abrasijet out at 8020' with 5000 pounds. Sand with 3500 - 3800 psi. Circulated sand and cleaned hole. Attempted frac. Unable to breakdown using 5000 psi. Found sand at 8009'. Cleaned out to 8075'. Abrasijet 4 holes at 8018'. Cleaned out. Set packer at 7584'. Sand-water fracked with 50,600 gallons water and 25,000 pounds sand. Formation broke at 4050 to 3600 pounds. Maximum treating pressure 5150 pounds. Minimum treating pressure 2600 pounds. Average injection rate 10 barrels per minute. Well flowed 24 hours with gas too small to measure. Pulled packer. Did not obtain commercial production from Dakota. Ran drillable cement retainer set at 7987'. Squeezed Dakota with 50 sacks regular cement containing 1/4 of 1% HR-4 retarder. Initial pressure 3700 psi and final 5000 psi. Pulled out of retainer and reversed out 15 sacks at 7956'. Perforated Mesaverde 5620-5624, 5634-5640, 5690-5696, 5722-5744, 5760-5764, 5770-5788, 5802-5816, 5828-5834 with 2 shots per foot. Sand-water fracked with 100,000 gallons water and 50,000 pounds sand. Breakdown pressure 900 - 800 psi. Maximum treating pressure 1500, average treating pressure 1000 psi, average injection rate 63 barrels per minute. Injected 160 rubber ball sealers in 8 batches at 5 minute intervals during frac. Ran 18' joints of 1-1/4" tubing and landed at 5817'. Released rig 12-3-59. Total depth 8148', plug back depth 7956'. Completed December 4, 1959 as shut in Blanco Mesaverde Field Gas Well. Preliminary test December 4, 1959, 1948 MEFPD.

Pacific Northwest Pipeline Corporation assumed operation December 4, 1959.

The following information was obtained from a review of the records of the Federal Bureau of Investigation, Department of Justice, and the Central Intelligence Agency, regarding the activities of the Soviet Union in the United States during the period 1945-1954.

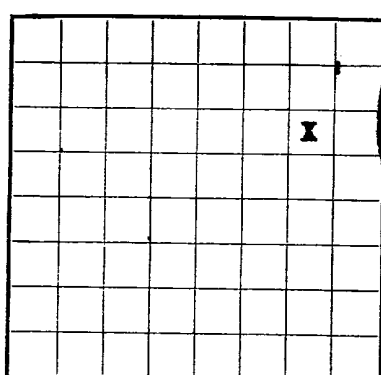
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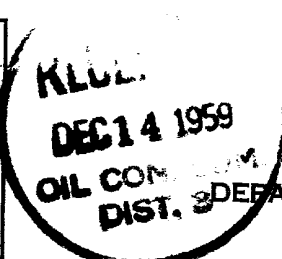
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CONFIDENTIAL - SECURITY INFORMATION



LOCATE WELL CORRECTLY

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEYU. S. LAND OFFICE Santa Fe
SERIAL NUMBER SP-078771
LEASE OR PERMIT TO PROSPECT

RECEIVE

DEC 11 1959

U. S. GEOLOGICAL SURVEY
ALBUQUERQUE, NEW MEXICO

LOG OF OIL OR GAS WELL

Company Pan American Petroleum Corporation Address Box 427, Farmington, New Mexico
Lessor or Tract Rosa Unit Field Blanco-Mesaverte State New Mexico
Well No. 36-11 Sec. 11 T. 31N R. 6W Meridian N.M.P.M. County Rio Arriba
Location 1890 ft. N of 1 Line and 790 ft. E of 2 Line of Section 11 Elevation 6437 (RDB)
(Derive floor relative to sea level)

The information given herewith is a complete and correct record of the well and all work done thereon
as far as can be determined from all available records.

ORIGINAL SIGNED BY
Signed R. M. Bauer, Jr.Date December 10, 1959 Title Area Engineer

The summary on this page is for the condition of the well at above date.

Commenced drilling October 16, 1959 Finished drilling November 19, 1959

OIL OR GAS SANDS OR ZONES

(Denote gas by G)

No. 1, from <u>5620</u> to <u>5624</u>	No. 4, from <u>5760</u> to <u>5766</u>
No. 2, from <u>5634</u> to <u>5640</u>	No. 5, from <u>5770</u> to <u>5788</u>
No. 3, from <u>5690</u> to <u>5696</u>	No. 6, from <u>5802</u> to <u>5816</u>
<u>5722</u>	<u>5828</u>
IMPORTANT WATER SANDS	
No. 1, from <u>8000</u> to <u>8032</u>	No. 3, from <u>8092</u> to <u>8115</u>
No. 2, from <u>8092</u> to <u>8115</u>	No. 4, from <u>8115</u> to <u>8115</u>

CASING RECORD

Size casing	Weight per foot	Threads per inch	Make	Amount	Kind of shoe	Cut and pulled from	Perforated		Purpose
							From—	To—	
13-3/8	297	8RT	8-80	1919	Guide				Surface
9-5/8	270	8RT	8-80	2447	Guide				Oil String
7	20	8RT	8-80	3491	Guide				Oil String
5	15	8RT	8-80	457	Guide				Liner

MUDGING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
13-3/8	297	275 sacks of cement	Halliburton 1 plug		
9-5/8	270	200 sacks of cement	Halliburton 2 plug		
7	20	975 sacks of cement	Halliburton 2 plug		
5	15	75 sacks of cement	Halliburton 1 plug		

Heaving plug—Material _____ Length _____ Depth set _____
Adapters—Material _____ Size _____

SHOOTING RECORD

Size	Shell used	Explosive used	Quantity	Date	Depth shot	Depth cleaned out

TOOLS USED

Rotary tools were used from _____ feet to _____ feet, and from _____ feet to _____ feet
Cable tools were used from 0 feet to 8148 feet, and from _____ feet to _____ feet

DATES

Completed as shut in gas well Blanco-Mesaverte field December 4, 1959
Preliminary test for 24 hours was _____ barrels of fluid of which December 4 % was oil; _____ %
emulsion; _____ % water; and _____ % sediment.
Gravity, °Bé. _____
If gas well, cu. ft. per 24 hours _____
Rock pressure, lbs. per sq. in. 1948
Gallons gasoline per 1,000 cu. ft. of gas _____

EMPLOYEES

Pacific Northwest Pipeline Corporation assumed operation December 4, 1959
F. E. Wright, Driller B. R. Day, Driller
Iva A. Does, J. D. Smithers

FORMATION RECORD

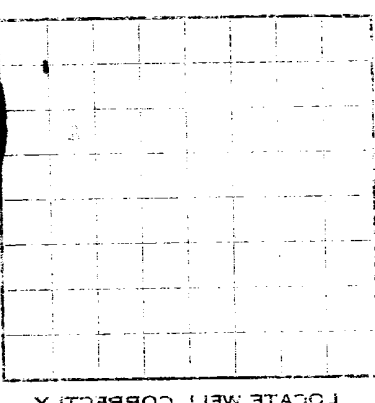
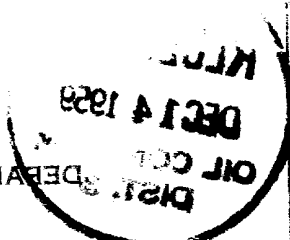
FROM—	TO—	TOTAL FEET	FORMATION
0	3171	3171	Surface sands & shales.
3171	3270	99	Pictured Cliffs sands & shales.
3270	5453	2183	Lewis shale.
5453	5536	83	Cliffhouse sands & shales.
5536	5716	180	Maneese shale.
5716	5792	76	Point Lookout sands & shales.
5792	6934	1142	Maneese shale.
6934	7770	836	Gallup sands & shales.
7770	7840	70	Greenhorn sands & shales.
7840	7955	115	Graneros sands & shales.
7955	8148	193	Dakota sands & shales.
(Tops from radioactivity and electric logs.)			
FEET—	10—	1000 FEET	FORMATION

FORMATION RECORD—Continued

16-42094-4

LOG OF OIL OR GAS WELL

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY



LOCATE WELL CORRECTLY

Company, _____
Location, _____
The information given herewith is a complete and correct record of the well and all work done thereon
as far as can be determined from all available records.
Signed, _____
Title, _____
The summary on this page is for the condition of the well at above date.
Commenced drilling _____
Finished drilling _____

OIL OR GAS SANDS OR ZONES

No. 1 from _____ to _____	No. 1 from _____ to _____
No. 2 from _____ to _____	No. 2 from _____ to _____
No. 3 from _____ to _____	No. 3 from _____ to _____
No. 4 from _____ to _____	No. 4 from _____ to _____
No. 5 from _____ to _____	No. 5 from _____ to _____
No. 6 from _____ to _____	No. 6 from _____ to _____
No. 7 from _____ to _____	No. 7 from _____ to _____
No. 8 from _____ to _____	No. 8 from _____ to _____
No. 9 from _____ to _____	No. 9 from _____ to _____
No. 10 from _____ to _____	No. 10 from _____ to _____

CASING RECORD

From	To	Kind of pipe	Size	Weight	Remarks

If pipe or bridges were put in to test for water, state kind of material used, position, and results of pumping or pulling of pipe. If pipe or bridges were put in to test for water, state kind of material used, position, and results of pumping or pulling of pipe. If pipe or bridges were put in to test for water, state kind of material used, position, and results of pumping or pulling of pipe.

HISTORY OF OIL OR GAS WELL

Date	Event

MUDGING AND CEMENTING RECORD

From	To	Kind of mud	Weight	Remarks

PLUGS AND ADAPTERS

From	To	Kind of plug	Weight	Remarks

SHOOTING RECORD

From	To	Kind of shot	Weight	Remarks

TOOLS USED

From	To	Kind of tool	Weight	Remarks

DATES

From	To	Kind of date	Weight	Remarks

EMPLOYEES

From	To	Kind of employee	Weight	Remarks

FORMATION RECORD

From	To	Kind of formation	Weight	Remarks

FORMATION

From	To	Kind of formation	Weight	Remarks

FORMATION

From	To	Kind of formation	Weight	Remarks

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From	To	Kind of formation	Weight	Remarks

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From	To	Kind of formation	Weight	Remarks

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From	To	Kind of formation	Weight	Remarks

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From	To	Kind of formation	Weight	Remarks