FORM 52 2-57

PAN AMERICAN PETROLEUM CORPORATION

Post Office Box 68
Hobbs, New Mexico

May 21, 1959

File: JWM-166-986.510.1

Subject: Request For Exemption To Rule 111 - Deviation Tests, U.S.A. Malco Refineries "F" No. 5, Empire Abo Field

New Mexico Oil Conservation Commission (2)
Post Office Box 871
Santa Fe, New Mexico

Attention: Mr. D. S. Nutter, Chief Engineer

Gentlemen:

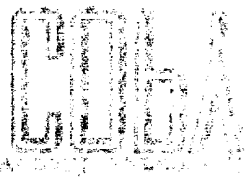
This has reference to your telephone conversation with Mr. J. W. Meek of Pan American on May 18, 1959, whereby you granted tentative verbal approval exempting the subject well from directional survey. This tentative approval was granted with the understanding that the deviation on the subject well would not exceed a deviation of 5° by any appreciable amount below a depth of 5700 feet and thus insure the well would be bottomed on the 40 acre tract on which it is drilled.

Currently, we are in the process of completing the Malco "F" No. 5 in the Empire Abo Field. This well is located 1980 feet from the south and west lines of Section 1, T-18-S, R-27-E. Drilling operations were completed on May 19, 1959, at a total depth of 6163 feet. At a depth of 5070 feet, a deviation test registered 6° which was the first deviation recorded above 5°. However, at a depth of 5700 feet, the deviation again dropped below 5° and so remained until total depth was reached.

The Totco surveys taken on this well are furnished on the attached tabulation along with the cumulative drift computed in a constant direction. You will note from this tabulation that the deviation below 5700 feet remains constant at 4-1/2°. At a depth of 6070 feet, the total drift was computed at 320.99 feet. Although no survey was taken at total depth, considering the drift angle remained constant as it has on the four previous surveys, the cumulative drift would amount to 328.29 feet.

The data discussed above, shows the maximum possible horizontal distance of the bottom of the hole could be, from the surface, 328 feet. This is based on the unlikely premise that the drift would continue in a constant direction which is highly unlikely under actual operating conditions. Since these calculations indicate the bottom of the hole is well within the boundaries of the 40 acre tract on which this well is located, we believe the terms of our verbal agreement have been met.

COPY



We wish to thank you for your consideration in granting the tentative approval for this exemption, and request that formal approval be granted to exempt this well from the directional survey requirements of Rule 111.

Yours very truly,

Original Signed by
J. W. BROWN
J. W. Brown
Area Superintendent

cc: Mr. M. L. Armstrong
N.M.O.C.C.
Artesia, New Mexico

DEVIATION SURVEYS
USA MALCO REFINERIES "F" NO. 5

Depth Totco Ran	Interval Between Totcos	Drift Indicated By Totco	Horizontal Drift Over Interval	Cumulative Horizontal Drift
300'	300'	1/2°	2.61'	2.61'
1095'	795'	1/4°	3.42'	6.03'
1400'	305'	3/4°	3.97'	10.00'
1910'	510'	2°	17.80'	27.80'
2160'	250'	2-1/2°	10.90'	38.70'
2500'	340'	2-1/4°	13.33'	52.03'
2775'	275'	2-1/2°	11.99'	64.02'
3125'	350'	3-1/4°	18.79'	82.81'
3320'	195'	3°	10.20'	93.01'
3680'	360'	4°	25.13'	118.14'
4000'	320'	4°	22.34'	140.48'
4140'	140'	4-1/2°	10.99'	151.47'
4440'	300'	4-1/4°	22.23'	173.70'
4650'	210'	5°	18.31'	192.01'
4790'	140'	5°	12.21'	204.22'
4900'	110'	5°	9.59'	213.81'
5070'	170'	6°	17.76'	231.57'
5185'	115'	6-1/4°	12.51'	244.08'
5310'	125'	5-3/4°	12.51'	256.59'
5530'	220'	5-3/4°	22.02'	278.61'
5700'	170'	4-1/2°	13.33'	291.94'
5770'	70'	4-1/2°	5.50'	297.44'
6070'	300'	4-1/2°	23.55'	320.99'
6163'	93'	4-1/2°	7.30'	328.29'

Budget Bureau No. 42-R355.4.
Approval expires 12-31-60.

RECEIVED
JUN 1 1959
U. S. GEOLOGICAL SURVEY
ARTESIA, NEW MEXICO

Form 9-330

U. S. LAND OFFICE Las Cruces
SERIAL NUMBER LC 062412
LEASE OR PERMIT TO PROSPECT

UNITED STATES
DEPARTMENT OF THE INTERIOR
GEOLOGICAL SURVEY

LOCATE WELL CORRECTLY

LOG OF OIL OR GAS WELL

Company Pan American Petroleum Corporation Address Box 68 - Hobbs, New Mexico
Lessor or Tract Malco Refineries "F" Field Empire Abo State New Mexico
Well No. 5 Sec. 1 T. 18S R. 27E Meridian NMPM County Eddy
Location 1980 ft. {N. S.} of S Line and 1980 ft. {E. W.} of W Line of Section 1 Elevation 3613 RDB (Derrick floor relative to sea level)

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

Signed Original Signed by J. W. BROWN

Date May 26, 1959 Title Area Superintendent

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

Commenced drilling April 23, 1959 Finished drilling May 22, 1959

OIL OR GAS SANDS OR ZONES
(*Denote gas by G*)

No. 1, from 6040 to 6080 No. 4, from to
No. 2, from to No. 5, from to
No. 3, from to No. 6, from to

IMPORTANT WATER SANDS

No. 1, from to No. 3, from to
No. 2, from to No. 4, from to

CASING RECORD

Size casing	Weight per foot	Threads per inch	Make	Amount	Kind of shoe	Cut and pulled from	Perforated From—	Perforated To—	Purpose
8-5/8	24	8	J-55	1506	Float				Surface
4-1/2	9.5	8	J-55	6189	Float		6040	6080	Oil String
							w/2 shots Per Ft.		

MUDDING AND CEMENTING RECORD

Size casing	Where set	Number sacks of cement	Method used	Mud gravity	Amount of mud used
8-5/8	1507	600	Howco		
4-1/2	6163	600	Howco		

PLUGS AND ADAPTERS

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 Surface feet to 6163 feet, and from feet to feet
Cable tools were used from feet to feet, and from feet to feet

DATES

Completed May 23, 1959 Put to producing May 22, 1959

The production for the first 24 hours was 83 barrels of fluid of which 100 % was oil; % emulsion; % water; and % sediment. Gravity, °Bé. 42°

If gas well, cu. ft. per 24 hours Gallons gasoline per 1,000 cu. ft. of gas

Rock pressure, lbs. per sq. in.

EMPLOYEES

B. J. Wright, Driller R. E. Mills, Driller
J. W. Martin, Driller W. P. Tadlock, Driller

FORMATION RECORD

FROM—	TO—	TOTAL FEET	FORMATION
0	235	235	Red Bed
235	1507	1272	No Returns
1507	2859	1352	Lime
2859	3130	271	Lime and Sand
3130	3203	73	Lime
3203	3418	215	Lime and Sand
3418	4885	1467	Lime
4885	4910	25	Lime and Sand
4910	5129	219	Lime
5129	5397	268	Lime and Dolomite
5397	5767	370	Dolomite
5767	6163	396	Lime

TOPS
San Andres - 1900'
Glorietta - 3420'
Abo Reef - 5780'

FOLD MARK

16—43094-4

FORMATION RECORD—Continued

FROM—	TO—	TOTAL FEET	FORMATION

HISTORY OF OIL OR GAS WELL

16—43094-2 U. S. GOVERNMENT PRINTING OFFICE

It is of the greatest importance to have a complete history of the well. Please state in detail the dates of redrilling, together with the reasons for the work and its results. If there were any changes made in the casing, state fully, and if any casing was "sidetracked" or left in the well, give its size and location. If the well has been dynamited, give date, size, position, and number of shots. If plugs or bridges were put in to test for water, state kind of material used, position, and results of pumping or bailing.

Well was drilled to a TD of 6163' and perforated 6040' - 6080' with 2 shots per foot, acidized perforations with 500 gallons 15% regular acid. On test well flowed 83 BO, no water, 53 MCF gas on 9/64" choke in 24 hours. TPF - 650, GOR 639.