Getty

Getty Oil Company | P. O. Box 730 Hobbs, New Mexico 505/397-3571

Central Exploration and Production Division

October 24, 1983

Oil Conservation Commission
State of New Mexico
P. O. Box 2088
Santa Fe, NM 87501

ATTN: Mr. Joe Ramey, Division Director

Case 8043

Ref: Application for downhole commingling
Getty Oil Company
Skelly Unit Well No. 11
Fren Seven Rivers and Grayburg-Jackson Pools
Eddy County, New Mexico

Gentlemen:

We respectfully request Administrative Approval for downhole commingling in the Skelly Unit Well No. 11. The subject well is a dual completion with both wellstreams commingled at the surface. In accordance with Commission Rule 303, Paragraph C, the following facts are submitted:

1. The well is located in Unit Letter I, Section 21, Township 17 South, Range 31 East, 1980' FSL and 660' FEL, on the Skelly Unit, Eddy County, New Mexico. The pools to be downhole commingled are the Fren Seven Rivers and the Grayburg-Jackson.

2. Acreage dedicated to this well is 40 acres, and a plat is attached showing the locations of Well No. 11 and offset wells. Offsetting leases to the subject well are incorporated in the Skelly Unit, and therefore are 100% Getty working interest wells. The nearest outside operated lease is 3 proration units away.

3. The Fren Seven Rivers produced 32 BOPD, 28 BWPD, and 52 MCFPD on September 28, 1983, from perforations at 2217 - 2330' (selective). Production for the Grayburg-Jackson on September 26, 1983, was 10 BOPD, 26 BWPD, and 2 MCFPD from perforations at 3358 - 3493' (selective). Oil Conservation Commission Form C-116 is attached. The combined daily oil production from the two zones before commingling exceeds the limit of 20 BOPD specified in Section 1, paragraph (a), part (1). Total combined water production before commingling also exceeds the aforementioned limit. The pumping equipment presently on location in the Fren Seven Rivers has a potential of producing 232 barrels of fluid per day from 3490'.

3. (continued)
Thus, upon approval to downhole commingle, both oil zones will be effectively pumped down without any loss in total production. (See attached analysis program).

4. Attached is a production decline curve for both oil zones for a period of 20 months. Both zones experienced a constant rate of decline through 1982 until the Fren Seven Rivers zone was acidized in 12/82, and the Grayburg-Jackson responded in 1/83 to encroachment of an oil front.

5. Estimated bottom hole pressures for both the Fren Seven Rivers and the Grayburg-Jackson are 950 psi and 1480 psi, respectively.

6. Getty Oil Company has commingled the two wellstreams at the surface and has encountered no problems in fluid incompatibility; therefore, no reservoir damage should result from downhole commingling these two zones.

7. Both oil streams are considered sweet crude and will not experience a loss in value upon downhole commingling.

8. The Bureau of Land Management has consented to the proposal to downhole commingle this Federal lease (see attached letter, Order No. LC029420-B).

Commingling downhole, as opposed to current surface commingling, will yield significant reductions in equipment and operating costs. By utilizing pumping equipment with enough capacity to pump both zones, we request special consideration as per Rule 303 for this Getty well.

Sincerely,

GETTY OIL COMPANY

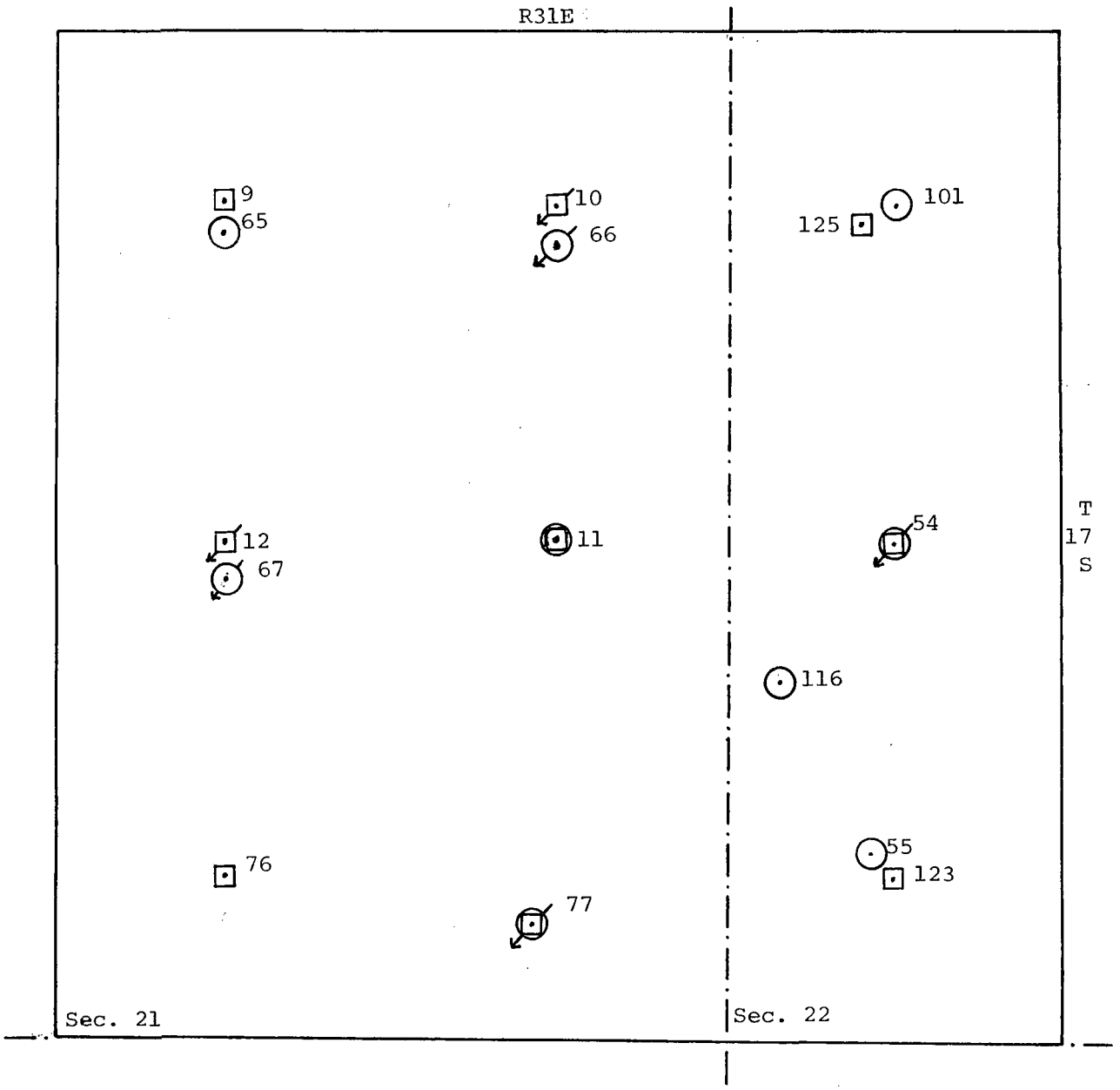
Dale R. Crockett
Area Superintendent

BDB/sc

pc: Hobbs/NMOCC
BLM/Roswell
NMOCC/Santa Fe (2)
File

Attachments

Getty Oil Company
Skelly Unit
Eddy, Co., NM



operator

Getty

RECEIVED

Getty Oil Company | P.O. Box 730 Hobbs, New Mexico 88240 (505) 397-3571

Central Exploration and Production Division

SEP 13 10 22 AM '83

BUR. OF LAND MGMT
ROSWELL, NEW MEXICO DISTRICT

September 9, 1983

Bureau of Land Management
P.O. Box 1857
Roswell, NM 88201

LC 029420-B

Gentlemen:

Getty Oil Company requests approval to downhole commingle the Fren 7-Rivers and Grayburg Jackson zones in Federal well no. 11 on the Skelly Unit, located at Unit ltr. I, Sec. 21, T17S, R31E, Eddy County, New Mexico. At present, well no. 11 is producing the two Permian zones as a dual completion, with the flow-streams commingled at the surface.

Average daily production for the well is 45 BOPD (34 BO from the 7-Rivers, 11 from the Grayburg) and 64 BWPD (37 BW from the 7-Rivers, 27 from the Grayburg) along with 52 MCFPD of 7-Rivers gas. Since both oil streams are considered sweet crude, there would be no loss in oil value after commingling downhole. Existing pumping equipment will effectively pump off the two pays. No loss of production or damage, resulting from commingling should occur. By commingling downhole, as opposed to current surface commingling, significant reduction of equipment and operating costs will be realized.

Please forward an approved copy (if approved) to the New Mexico Oil Conservation Commission and return (1) copy to us.

Sincerely,

GETTY OIL COMPANY

Dale R. Crockett
Hobbs Area Superintendent

DJS/ly

Attachments

SEP 1983 RECEIVED Getty Oil Co. HOBBS

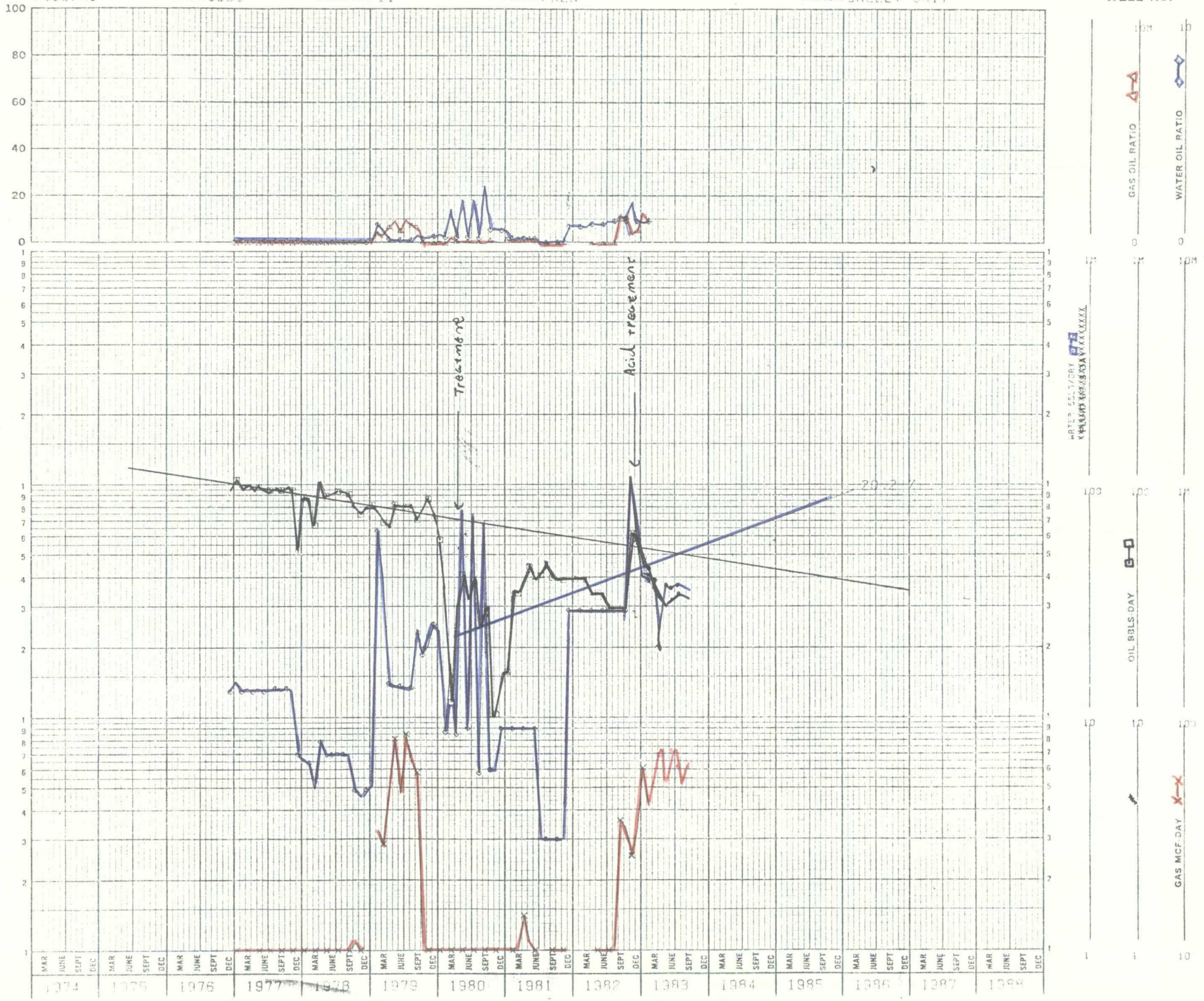
SUBJECT TO LIKE APPROVAL BY STATE

APPROVED

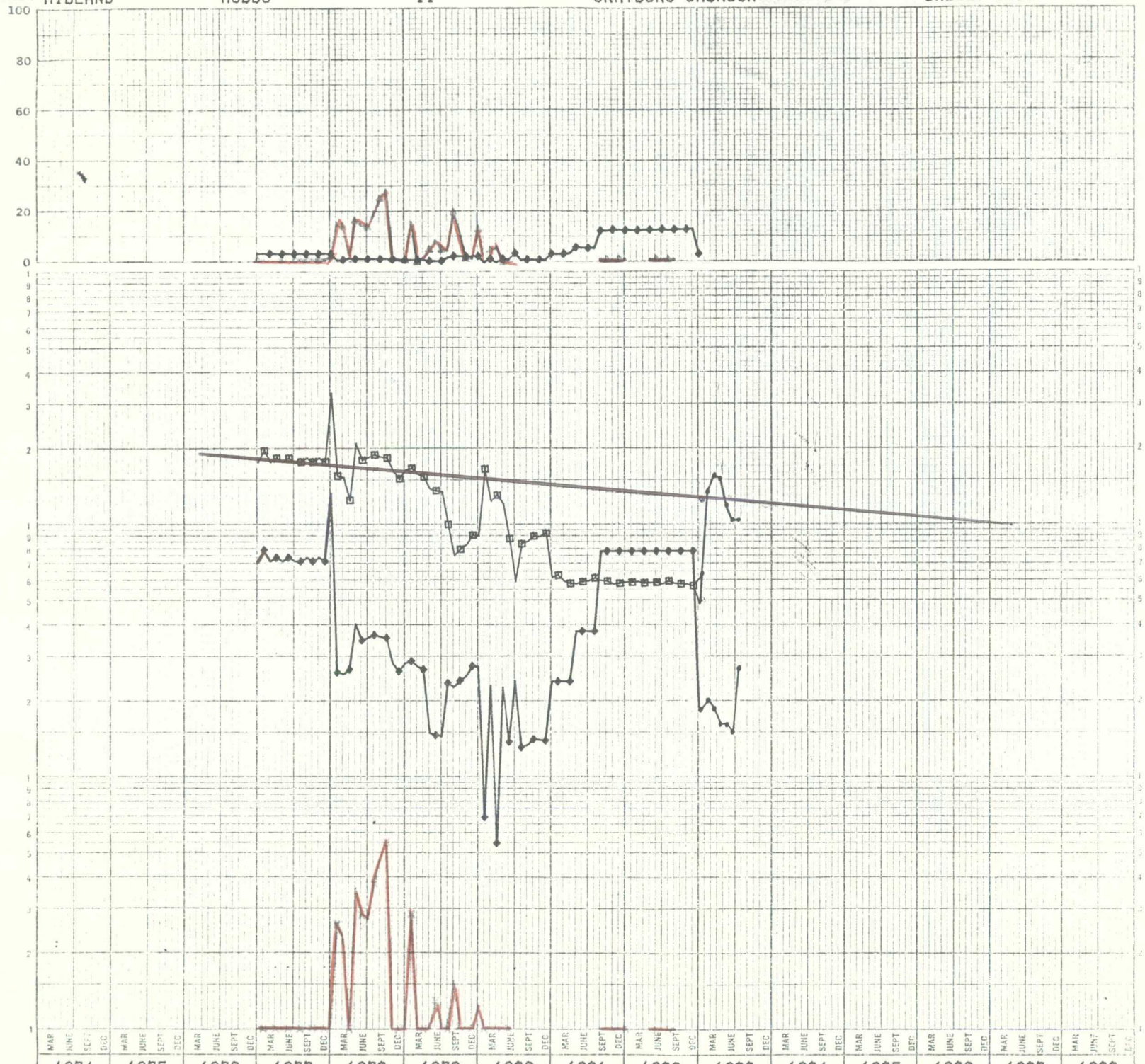
SEP 19 1983

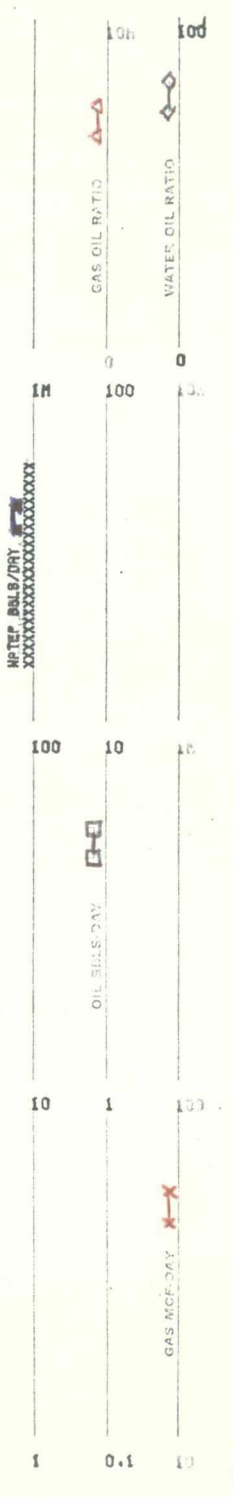
SUBJECT TO LIKE APPROVAL BY STATE

DISTRICT MIDLAND AREA HOBBS SECTOR 11 FIELD FREN LEASE SKELLY UNIT WELL NO. 11



DISTRICT MIDLAND AREA HOBBS SECTOR 11 FIELD GRAYBURG JACKSON LEASE SKELLY UNIT WELL NO. 11 -L





NL TREATING CHEMICALS
NL INDUSTRIES, INC.

SCALING TENDENCIES OF WATERS

COMPANY: GETTY OIL COMPANY
SAMPLE POINT: WELL #11 LOWER Com.
LOCATION: SKELLY UNIT
DATE: OCTOBER 4, 1983

WATER ANALYSIS (MG/L):

SODIUM:	43100.0
CALCIUM:	2160.0
MAGNESIUM:	2074.0
CHLORIDE:	73000.0
SULFATE:	4310.0
BICARBONATE:	366.0
IRON:	0.
BARIUM:	0.

PH: 7.0

IONIC STRENGTH = 2.3381

INDEX VALUES GREATER THAN ZERO INDICATE SCALING CONDITIONS
INDEX VALUES OF ZERO OR LESS INDICATE A STABLE WATER

BHT: 95°

TEMP.	CALCITE INDEX	GYPSUM INDEX	ANHYDRITE INDEX	BARITE INDEX
60	0.15	-0.08	-0.40	-42.13
80	0.26	-0.08	-0.29	-42.23
100	0.40	-0.08	-0.20	-42.33
120	0.59	-0.08	-0.12	-42.44
140	0.83	-0.09	-0.04	-42.56
160	1.12	-0.09	0.05	-42.67
180	1.45	-0.10	0.14	-42.79
200	1.84	-0.09	0.24	-42.91
220	2.27	-0.09	0.35	-43.03
240	2.76	-0.08	0.47	-43.12
260	3.30	-0.08	0.59	-43.17

10/21/83
Scaling tendencies minimal at 95°. No significant damages should occur.

Don Steinmetz
Area Engineer

SUCKER ROD STRING DESIGN AND ANALYSIS PROGRAM PAGE: 1

FIELD NAME: FREN 7 RIVERS - GRAYBURG JACKSON

LEASE NAME: SKELLY UNIT WELL NUMBER: 11

*** DESIGN REPORT ***

INPUT:

PUMP DEPTH	3490.	FLUID LIFT	3450.	TUBING SIZE	2.375	ANCHORED?	NO	BPD REQUIRED	90.
API OIL GRAVITY	36.	% WATER CUT	50.	FLD SPEC GRAV	0.960	PUMP BORE	1.500	POLISHED ROD TRVL	74.
STROKES PER MIN	13.0	SYNCH SPEED?	NO	3-WAY DESIGN	WITHOUT SINKER BARS			TYPE: ****	

RESULTS:

BEST STRING DESIGN USE GRADE C SUCKER RODS

SIZE	PERCENT	FOOTAGE					
8	27.	942.	WEIGHT OF STRING	7441.4 LBS	DYNAMIC ROD LOAD	8761.4 LBS
7	27.	942.	FLUID LOAD	1904.4 LBS	DYNAMIC FLD LOAD	2242.2 LBS
			STATIC LOAD	9345.8 LBS	PK. POL ROD LOAD	11003.6 LBS
6	46.	1605.	ACCELERATION FACTOR	1.177	MAX UNIT STRESS	14010.2 PSI
SINKER BARS	****		MINIMUM LOAD	4335.4 LBS	COUNTERBAL REQD	8394. LBS
USE:	0.	0.	LOAD RANGE	6668.2 LBS	PEAK TORQUE	123348. IN-LBS
			POLISHED ROD HP	8.6	INPUT HP	15.2
CORRECTED FOR OVERTRAVEL		77.3	ROD-TUBING STRETCH	9.3 IN	NET PLUNGER TRAVEL	68.0 IN

* PRODUCTION AT 100% V.E. 231.7 Bbls/Day

PUMP PRODUCTION VOLUMETRIC EF 39.%

NEW MEXICO OIL CONSERVATION COMMISSION
GAS-OIL RATIO TESTS

C-116
Revised 1-1-65

Operator	Pool	County
GETTY OIL COMPANY	FREN - SEVEN RIVERS	EDDY COUNTY, NEW MEXICO

Address	TYPE OF TEST - (X)	Scheduled	Completion	Special
P. O. Box 730, Hobbs, NM 88240		[ ]	[ ]	[XX]

LEASE NAME	WELL NO.	LOCATION U	S	T	R	DATE OF TEST	STATUS	CHOKE SIZE	TBG. PRESS.	DAILY ALLOW-ABLE	LENGTH OF TEST HOURS	PROD. DURING TEST WATER BBLS.	GRAV. OIL	OIL BBLS.	GAS M.C.F.	GAS - OIL RATIO CU.FT/BBL
SKELLY UNIT	11	I	21	17	31	9/28/83	P	--	--	30	24	28	37	32	52	1625

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

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

Robert L. Cook
(Signature)

Area Superintendent

NEW MEXICO OIL CONSERVATION COMMISSION

GAS-OIL RATIO TESTS

C-116
Revised 1-1-65

Operator: GETTY OIL COMPANY | Pool: GRAYBURG-JACKSON | County: EDDY COUNTY, NEW MEXICO

Address: P. O. Box 730, Hobbs, NM 88240 | TYPE OF TEST - (X) | Scheduled ☐ | Completion ☐ | Special XXX

LEASE NAME	WELL NO.	LOCATION U	S	T	R	DATE OF TEST	STATUS	CHOKE SIZE	TBG. PRESS.	DAILY ALLOW-ABLE	LENGTH OF TEST HOURS	PROD. DURING TEST WATER BBLS.	GRAV. OIL	OIL BBLS.	GAS M.C.F.	GAS - OIL RATIO CU.FT/BBL
SKELLY UNIT	11	I	21	17	31	9/26/83	P	---	---	12	24	26	35	10	2	200

No well will be assigned an allowable greater than the amount of oil produced on the official test.

During gas-oil ratio test, each well shall be produced at a rate not exceeding the top unit allowable for the pool in which well is located by more than 25 percent. Operator is encouraged to take advantage of this 25 percent tolerance in order that well can be assigned increased allowables when authorized by the Commission.

Gas volumes must be reported in MCF measured at a pressure base of 15.025 psia and a temperature of 60° F. Specific gravity base will be 0.60.

Report casing pressure in lieu of tubing pressure for any well producing through casing.

Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

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

Robert Duckett
(Signature)

Area Superintendent