

# Gulf Oil Corporation

EXPLORATION AND PRODUCTION DEPARTMENT—U. S. OPERATIONS  
ROSWELL DISTRICT

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DISTRICT MANAGER  
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DISTRICT SERVICES MANAGER

December 6, 1967

P. O. Drawer 1938  
Roswell, New Mexico 88201

h-18-279  
100/100 20

Secretary Director  
Oil Conservation Commission  
State of New Mexico  
Post Office Box 2088  
Santa Fe, New Mexico 87501

RECEIVED

'67 DEC 8 AM 8 15

Re: Application of Gulf Oil Corporation for  
Administrative Approval to Convert Well  
No. 163 in the Northwest Eumont Unit, Lea  
County, New Mexico, to Injection Status

Dear Sir:

Gulf Oil Corporation, as Operator of the Northwest Eumont Unit, seeks administrative approval from the Commission to convert Unit Well No. 163 to water injection status for the purpose of cooperating with Continental Oil Company along the common boundary of the Reed Sanderson Unit and the Northwest Eumont Unit. In support of this application, the following information is offered:

- (1) The proposed injection well is located in SW/4 SW/4 Section 34, T-19S, R-36E, Lea County, New Mexico, as shown on the attached plat.
- (2) The well is within the boundary of the Northwest Eumont Unit (Case No. 2981, Order No. R-2657, March 4, 1964) and is on pattern with the Northwest Eumont Unit Waterflood Project (Case No. 2982, Order No. R-2659, March 4, 1964). The well is also on pattern with Continental's Reed Sanderson Waterflood Project (Case No. 3464, Order No. R-3131, October 4, 1966), which adjoins the Northwest Eumont Unit on the south.
- (3) Continental Oil Company initiated water injection in the Reed Sanderson project in June, 1967 and there is substantial indication that Unit Well No. 2 (NW/4 NW/4 Section 3, T-20S, R-36E) has responded to injection. From well tests oil production increased from 3 BOPD September 1, 1967 to 4 BOPD November 13, 1967; the GOR decreased from 8,900 cu. ft/bbl. to 1,250 cu. ft/bbl. during this same period.

Commission Form C-116 for the Reed Sanderson Unit Well No. 2, showing these production tests, is attached.

- (4) Gulf plans to inject up to 500 BOPD into the Queen formation (Eumont Pool) through perforations from 3,896 to 3,956 feet below the surface. Injection water will be supplied from Continental's Reed Sanderson system.



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In further support of this application we have attached, in addition to the location plat, a radioactivity log of the proposed injection well and a diagrammatic sketch showing the casing program, cement tops, perforations and the tubing and packer settings.

Copies of this application, complete with all attachments, have been sent to the State Engineer Office, Santa Fe, New Mexico, and Resler & Sheldon and Continental Oil Company, the two offset operators to the proposed injection well.

Respectfully submitted,

GULF OIL CORPORATION



M. I. Taylor

Attachments  
DGB:ers

cc: State Engineer Office  
Post Office Box 1079  
Santa Fe, New Mexico 87501

New Mexico Oil Conservation Commission  
Post Office Box 1980  
Hobbs, New Mexico 88240

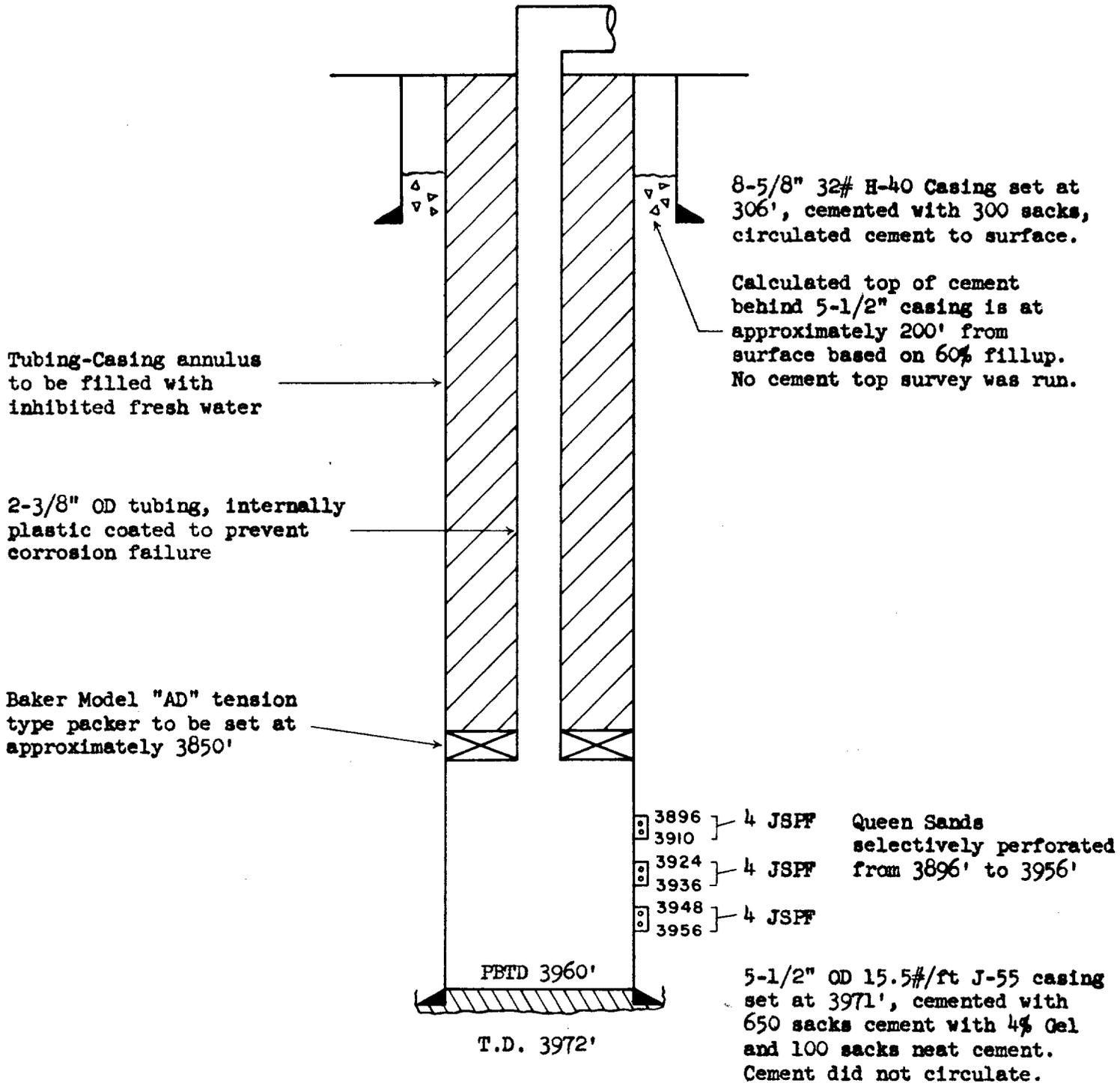
Resler & Sheldon  
801 West Texas Street  
Artesia, New Mexico 88210

Continental Oil Company  
Post Office Box 460  
Hobbs, New Mexico 88240

NORTHWEST EUMONT UNIT  
 OPERATOR: GULF OIL CORPORATION  
 LEA COUNTY, NEW MEXICO

DIAGRAMMATIC SKETCH  
PROPOSED INJECTION WELL

NORTHWEST EUMONT UNIT WELL NO. 163  
 660' FSL & 990' FWL OF SECTION 34-19S-36E, LEA COUNTY, N.M.



LARGE FORMAT  
EXHIBIT HAS  
BEEN REMOVED  
AND IS LOCATED  
IN THE NEXT FILE

NEW MEXICO OIL CONSERVATION COMMISSION  
GAS-OIL RATIO TESTS

C-1116  
Revised 1-1-65

Operator		Pool		County									
Continental Oil Company		Eumont		Lea									
Address		TYPE OF TEST - (X)		Completion		Special							
P. O. Box 460, Hobbs, New Mexico 88240		SCHEDULED <input type="checkbox"/>		Completion <input type="checkbox"/>		Special <input checked="" type="checkbox"/>							
LEASE NAME	WELL NO.	LOCATION			DATE OF TEST	CHOKE SIZE	TBG. PRESS.	DAILY ALLOWABLE	LENGTH OF TEST HOURS	PROD. DURING TEST			GAS - OIL RATIO CU.FT./BBL.
		U	S	T						R	WATER BBLs.	GRAV. OIL	
Reed Sanderson Unit	2	D	3	20	36	-	6	24	2	32	6	30.6	5,150
	2	D	3	20	36	-	6	14	1	31	3	26.7	8,900
	2	D	3	20	36	-	6	14	4	32	4	5.0	1,250
Water injection commenced during June, 1967. Response is indicated by reduced GOR.													

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.

*[Signature]*  
(Signature)

Sup. Conservation Engineer  
(Title)

December 4, 1967  
(Date)

# NORTHWEST EUMQNT UNIT WELL #163



## RADIOACTIVITY LOG

NATURAL GAMMA RADIATION      INDUCED GAMMA RADIATION

COMPANY SHELL OIL COMPANY CASE FILE WELL FOSTER # 4 FIELD Eumont County Le. State Mex	COMPANY SHELL OIL COMPANY	Location
	FILE	From Well
	WELL FOSTER # 4	From
	FIELD Eumont	Sec
	COUNTY Le. State Mex	Twp
COUNTY Le. State Mex	STATEN Mexico	GR NG (QUART)
SEC 39 TWP 12 S RGE 30 E		Elev. DE 3035
SURVEY		K.B. 3042
		Grd. 352245

Log Measured From	Top Drive Bushing	Elevation	5079
Drilling Measured From	Top Drive Bushing	Elevation	5040
Permanent Datum	Ground Level	Elevation	502245

Type Log	GAMMA	NGAMMA		
Run No.	ONE	ONE		
Date	12-20-54	12-20-54		
Footage Logged	3923'	3923'		
Total Depth, Driller	3970'	3970'		
Total Depth, Logged	3963'	3973'		
Type of Fluid in Hole	MUD	MUD		
Fluid Level	Surface	Surface		
Max. Temp.	109 F	109 F		
Neutron Source Strength		400mg		
Source to Center of Counter	19 in.	19 in.		
Length Meas. Device in	29 in.	14 in.		
O.D. of Instrument in	3 5/8"	3 5/8"		
Time Constant - sec	2	2		
Logging Speed Ft. min.	See Remarks	See Remarks		
Recorded by	A.C. Bracke	A.C. Bracke		
Witnessed by	M. McCague	M. McCague		

CASING RECORD				O.
RUN NO.	SIZE - IN	WT. - LB.	INTERVAL	BIT-SI
ONE	8 5/8"		0 TO 300	
			TO	

REMARKS --- NOT AVAILABLE THIS LOG MADE WITH I.M. EQUIPMENT  
 GR NG TOOL # 2003 SOURCE CODE "BLUE"  
 GR LOGGING SPEED APPROXIMATELY 25' PER MINUTE  
 CASING COLLARS RECORDED 14' DOWN FROM TRUE DEPTH

GAMMA COUNTS PER SECOND	Depth & Casing Collars	NEUTRON COUNTS P
100		200
100		700
100		700
100		1200
Time Constant 2 Sec		Time Constant 2 Sec
		SCALE FROM 300' TO TD
		300
		800
		600
		1300
		Time Constant 2 Sec

