



SHELL OIL COMPANY

PETROLEUM BUILDING
P.O. BOX 1509
MIDLAND, TEXAS 79701

January 25, 1978

JAN 30 1978
NEW MEXICO CONSERVATION COMM.
Santa Fe

DHC - 234

Due - 2/20/78

Subject: Application for Downhole Commingling
for Shell Livingston Well No. 3
Unit Letter W, Located 560' FSL &
2030' FEL Section 3, T-21-S, R-37-E,
Lea County, New Mexico
Drinkard Field

MC-2098

New Mexico Oil Conservation Commission (3)
P. O. Box 2088
Santa Fe, New Mexico 87501

Attention Mr. J. D. Ramey, Secretary-Director

Gentlemen:

Shell Oil Company respectfully requests administrative approval under the provisions of Rule 303-C to commingle within the wellbore production from the Blinebry and Drinkard pools in its Livingston Well No. 3, located in Unit W of Section 3, T-21-S, R-37-E, Lea County, New Mexico.

The subject well is presently flowing 9 BOPD and 8 BOPD, respectively from the Blinebry and Drinkard pools. Both of these zones are in a declining state. We plan to pull present dual production strings and produce through a single 2 3/8" tubing string with provisions for installing gas lift valves at a later date.

Production from the Blinebry and Drinkard formations has been surface commingled at the Livingston tank battery for a number of years without any indication of fluid incompatibility. Since the crudes are commingled at the tank battery before being sold, no difference in value should result by commingling within the wellbore of the subject well.

Static BHP tests have been taken on both zones and are as follows:

Blinebry - 70-hr SIBHP - 379 psi	- 880	200 mcf
Drinkard - 72-hr SIBHP - 485 psi	- 780	93 mcf
	15	293

A copy of this application is being sent to all offset operators. Your further handling and approval of this application will sincerely be appreciated.

Yours very truly,

R. J. Coenen

For: W. T. Weller, Jr.
Operations Manager-Midland
Mid-Continent Division

JWH:DCW

Attachments

cc - Offset Operators (per attached list)

- New Mexico Oil Conservation Commission
P. O. Box 1980
Hobbs, New Mexico 88240

OFFSET OPERATORS

LIVINGSTON NO. 3
BLINEBRY AND DRINKARD OIL FIELDS
LEA COUNTY, NEW MEXICO

AZTEC OIL AND GAS COMPANY
P. O. BOX 337
HOBBS, NM 88240

CONTINENTAL OIL COMPANY
P. O. BOX 460
HOBBS, NM 88240

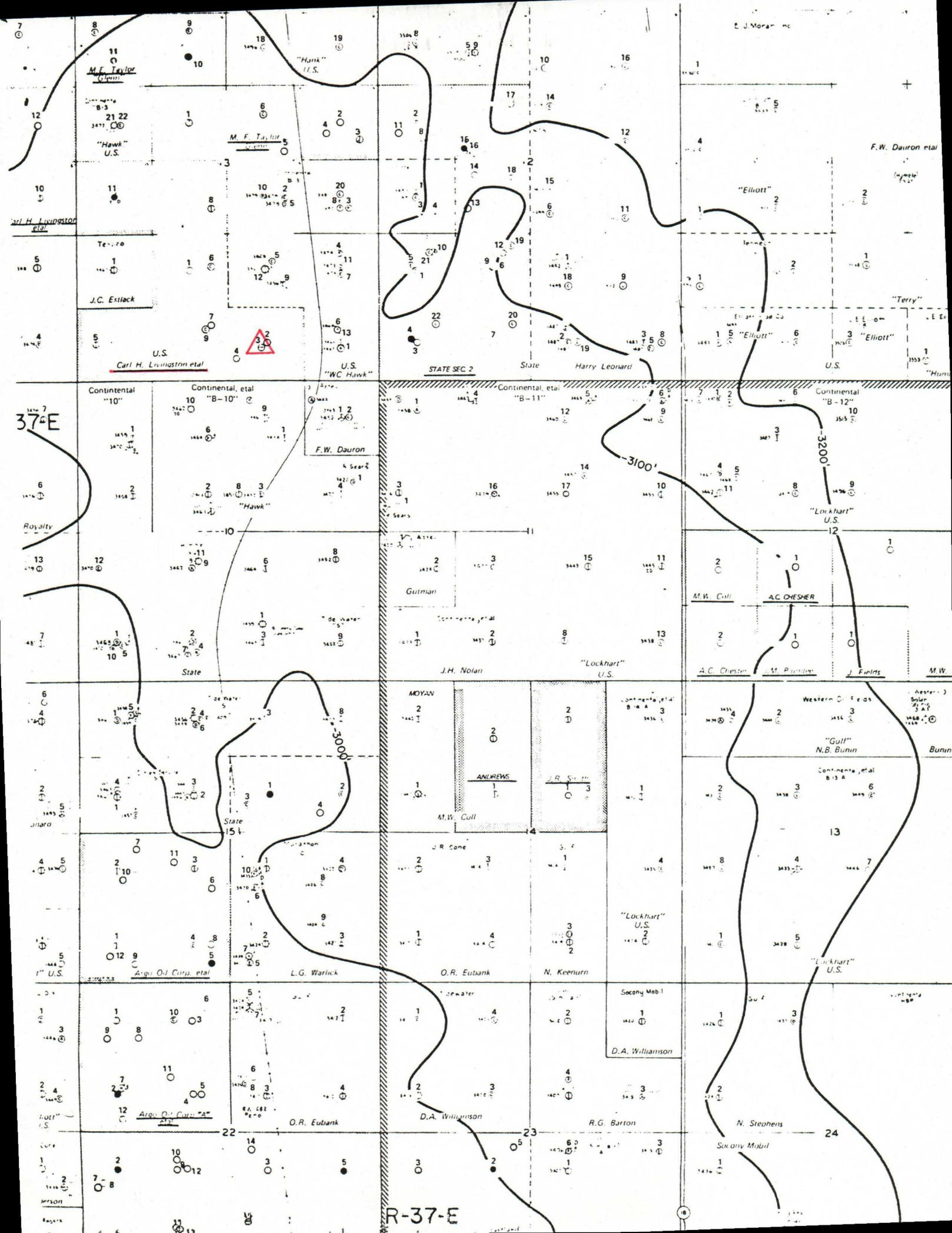
MORRIS R. ANTWEIL
P. O. BOX 2010
HOBBS, NM 88240

AMOCO PRODUCTION COMPANY
P. O. BOX 3092
HOUSTON, TX 77001

TEXACO INC.
P. O. BOX 3109
MIDLAND, TX 79702

EXXON COMPANY - U.S.A.
P. O. BOX 1600
MIDLAND, TX 79702

SUMMIT ENERGY, INC.
112 N. FIRST
ARTESIA, NM 88210



Shell-Livingston Well No.3
 Drinkhard Field
 Lea County, New Mexico
 Drinkhard/Blinebry Pools
 Current Down-Hole Mechanical Arrangement

TD- 8094'

PBTD- 7000' (CIBP)

Elev- 3433' OF

2 7/16" E.U.E +bg

2 7/16" E.U.E +bg

13 3/8", 32" cmtd @ 22.4' w/ 250 sx

8 5/8", 32" cmtd @ 31.47' w/ 2200 sx

Baker Pkr @ 5672'

Blinebry- 5604'- 5642' (5 holes)

Blinebry: 5708'- 5745' (4 JS PF)

5854'- 5951' (7 holes)

Baker Pkr @ 6392'

Drinkhard: 6450'- 6750' (31 holes)

CIBP @ 7000' capped w/ 1 1/2" sx cmt

Wantz Abo: 7140'- 7290' (4 JS PF)

CIBP @ 7400' capped w/ cmt.

5 1/2" cmtd @ 7968' w/ 500 sx
 TOC @ 5345' Temp. Survey

Ellenburger Open hole

TD- 8094'

ALB 1/10/78

Drinkard FieldLivingston #3LOCATION 560' FSL & 2080' FELSECTION 3, T-21-S, R-37-EDual Blinbry & Drinkard Producer COUNTY Lea Co., New MexicoDATUM 3433' (OF) G.L. ELEV. _____TD 8094'PBD 7000'

(CIBP)

Elev 3433' OF

CASING RECORD

LOGGING RECORD

SIZE	WT.	DEPTH	CMT.	TOC	DATE	CO.	TYPE	INTERVAL
13 3/8"	32#	224'	250					
8 5/8"	32#	3147'	2200					
5 1/2"	-	7968'	500	5345'				

LOG TOPS

PERFORATIONS AND/OR OPEN HOLE

ZONE	TOP	SUBSEA	DATE	ZONE	DEPTHS	DENS & SIZE
Per/Simp	7480'	-4047'	3-30-54	Abo	*7140-7185, 7195-7210,	4TSPF
8 5/8" McKee	7584'	-4161'			7225-7240, 7260-7290	(420 holes)
Connell	7878'	-4445'	2-18-61	Blinbry	5708-5745 (37 holes)	1-1/2" JSPF
Elln line	7928'	-4495'	11-20-73	Drnk	6450, 64, 69, 80, 93, 6505, 17	1TSPF
Elln Odo	7975'	-4592'			23, 32, 40, 53, 59, 70, 83, 91,	(31 holes)
					6607, 32, 44, 50, 57, 64, 74, 79,	
					89, 6700, 07, 19, 26, 33, 41, 50	
					* NOT OPEN NOW	

SQUEEZE & REPAIR

GOC	DATE	DEPTH	WORK DONE
OWC			

STIMULATION

DATE	ZONE	AMOUNT & TYPE	METHOD	BEFORE	AFTER
4-5-51	Elln Odo	1,500g 15% acid	AT Ellenburger openhole		
4-6-51	"	3,000g 15% acid	AT "		
4-9-51	"	6,000g 15%	AT "		
4-19-51	"	20,000g 15% acid	AT "		
11-22-53	"	10,000 g 15% LST	AT "	2580	280
4-20-54	Abo	5,000 g 15% LST	AT Abo	-	22180
10-5-55	Abo	10,000g NE LST acid	AT Abo	4980	
2-19-61	Blinbry	1000g 15% Spearhead	AT Blinbry		
2-21-61	Blinbry	21,000g LC + 1% sd/g +	Free Blinbry	-	5380
		1/20" lg Mark II Adomite			
11-2-67		2000g 15% NEA			

OPT

DATA AVAILABLE

DST ☐
CORE ☐PVT ☐
OTHER ☐

REMARKS:

DATE: 6-14-77

ALB

Livingston #3

DATUM _____ () G.L. ELEV. _____ TD _____ 8TD _____

[illegible]

DATE: 6-14-77

ALB

SURVEYOR

[illegible]

1. D. J. Knoch

Company Shell Oil Company
Lease LIVINGSTON Well No. 13
Field SHINKARD State NEW MEXICO
Test Date 12/14/77

Producing Formation _____
Elevation (CHF, DF, KB, etc.) _____
Datum _____ subsea, or _____
Tubing Obstruction at _____
Production Packer at _____
Perforations _____

Instrument Data

Company Running Survey
Element—Range & No.
Clock — Range & No.
Calibration Date

Shell Oil Company
4400 psi - 7406 psi
3 hr - 516 hr
12/8/77

Static Pressure Data

Test Depth	5650	ft
Pressure at Datum	485	psig
Shut-in Time	71.5	hrs
P _i at Datum	—	psig
Shut-in Tubing Pressure	408	psig
Shut-in Casing Pressure	—	psig
Top of Oil	—	
Top of Water	—	
Temperature at — feet	—	°F
Date of Last Test		
Pressure @ Datum, Last Test	unkn	psig
Shut-in Time, Last Test		

Flow Test Data

Test Date	_____	_____
Choke Size	_____	in
Period of Stabilized Flow	_____	hrs
Stabilized Production (q)	_____	---
Oil _____	_____	bbls/day
Gas _____	_____	MCF/day
Water _____	_____	bbls/day
Flowing Tubing Pressure	_____	psig
Flowing Casing Pressure	_____	psig
Cumulative Production (Q)	_____	_____
Oil _____	_____	bbls
Gas _____	_____	MCF
Water _____	_____	bbls
Effect. Prod' Life, $t=24 Q/q$	_____	hrs

Remarks:

SURVEYOR D. O. Knecht

[illegible]

NEW MEXICO OIL CONSERVATION COMMISSION GAS-OIL RATIO TESTS

C-116

Revised 1-1-65

Operator		Pool		County		Completion		Special								
SHELL OIL COMPANY		BLINEBRY OIL		LEA												
Address		P. O. BOX 576 HOUSTON, TEX. 77001		TYPE OF TEST - (X)		SCHEDULED										
LEASE NAME	WELL NO.	LOCATION			DATE OF TEST	CHOKE SIZE	TBG. PRESS.	DAILY ALLOW. ABLE	LENGTH OF TEST HOURS	PROD. DURING TEST			GAS - OIL RATIO CU.FT./BBL.			
		U	S	T						R	WATER BBL.S.	GRAV. OIL		OIL BBL.S.	GAS M.C.F.	
Andrews	23266	1	F	14	21	37	7-02-77	40	80	15	24	0	39.4	9	102	11,333
	23267	2	C	14	21	37	8-04-77	40	70	7	24	0	34.9	7	183	26,143
	23272	1	M	15	21	37	8-02-77	48	60	16	24	1	35.8	13	137	10,224
Argo	28027	2	M	15	21	37	8-03-77	48	60	10	24	0	35.6	7	287	42,836
	23276	3	K	15	21	37	8-04-77	48	135	6	24	0	37.6	6	106	17,667
Argo A	23297	1	D	22	21	37	8-08-77	40	50	9	24	1	36.2	6	263	43,833
	23308	7	E	22	21	37	8-09-77	20	225	9	24	0	35.9	8	379	49,221
Chester	23313	10	C	22	21	37	8-09-77	32	70	9	24	0	36.1	9	421	46,778
	23321	2	M	12	21	37	7-12-77	0	45	6	24	0	37.6	5	70	14,000
Coll	23322	1	J	12	21	37	7-15-77	0	45	4	24	0	36.3	3	12	4,000
	23323	2	L	12	21	37	7-16-77	0	45	7	24	1	35.2	7	71	10,143
Livingston	23339	3	W	3	21	37	7-02-77	32	80	9	24	1	37.0	8	200	25,000

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.

This is 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.

M. J. Adams
(Signature)

Supervisor Oil Accounting

(Title)

**NEW MEXICO OIL CONSERVATION COMMISSION
GAS - OIL RATIO TESTS**

C-116
Revised 1-1-83

Operator Shell Oil Company		County Lea		TYPE OF TEST - (X)		SCHEDULED ☒ X		Completion ☐		Special ☐					
Address P. O. Box 576, Houston, Texas 77001		Pool Drinkard		DATE OF TEST		LOCATION		CHOKES		PROD. DURING TEST					
LEASE NAME	WELL NO.	LOCATION			DATE OF TEST	CHOKES	T.B.G. PRESS.	DAILY ALLOWABLE	LENGTH OF TEST HOURS	PROD. DURING TEST		GAS - OIL RATIO CU.FT/B			
		U	S	T						R	WATER BBL.S.		GRAV. OIL	OIL BBL.S.	GAS M.C.F.
Andrews	1	F	14	21	37	3-04-77	F	32	60	4	0	35.1	4	56	14,000
	1	M	15	21	37	3-02-77	F	33	90	8	0	40.0	7	319	45,571
Argo	3	K	15	21	37	3-03-77	F	48	140	18	0	37.6	4	80	20,000
	6	K	15	21	37	3-05-77	F	40	60	0	0	39.8	8	250	31,250
Argo A	8	N	15	21	37	3-06-77	F	40	70	4	0	38.7	5	246	49,200
	10	L	15	21	37	3-03-77	F	40	100	13	0	39.3	10	446	44,600
Livingston	3	C	22	21	37	3-08-77	F	40	55	11	0	38.6	7	188	26,857
	4	F	22	21	37	3-09-77	F	40	90	9	1	39.5	8	326	40,750
Livingston	8	D	22	21	37	3-04-77	F	32	55	9	1	38.9	6	287	47,833
	12	E	22	21	37	3-10-77	F	48	90	Gas	0	38.9	3	274	91,333
Livingston	1	S	3	21	37	2-02-77	F	48	120	8	1	34.7	10	114	11,400
	3	W	3	21	37	2-02-77	F	32	93	10	0	34.0	7	93	13,286

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Well 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.

N. J. Ad
(Signature)
Supervisor Oil Accounting
(Title)

INDIVIDUAL
WELL TEST RECORD
(OIL)

WELL DATA

LEASE & WELL Livingston

FIELD Drinkard

FORMATION Blainebr

DATE COM 2-24-61

PROD METHOD plunger

SINGLE ☒ MULTIPLE ☐

DATUM TO CNF 12'

TOTAL DEPTH 8094

PPD 7000

SURFACE CSG. 13 7/8" @ 20

INTERM. CSG. 8 9/8" @ 3147

OIL STRING 5 1/2" @ 796

LINER COR

TYPE COMP. perf

PROD INTERVALS 5708-4

TYPE LIFT EQUIP shop made

20" long x 2.900" OD 46

ORIGINAL PRESS.

PRESS. DEPTH & DATE

PUMP DATA

TUBING SIZE 2 3/8

PUMP SIZE

PUMP DEPTH

S.P.M.

STROKE LENGTH

LEGEND

— BOPD. - - - - - BWPD

x - - - - - SCH. FTP.

Δ 02 thru Δ 55 refers to NON-

SCHEDULED DOWN TIME CODES

TREATMENT HISTORY

(date, amount, type, improvement)

2-18-61 1000 g 1570 NEA

2-21-61 21,000 g LC w/aw

OTHER INFORMATION

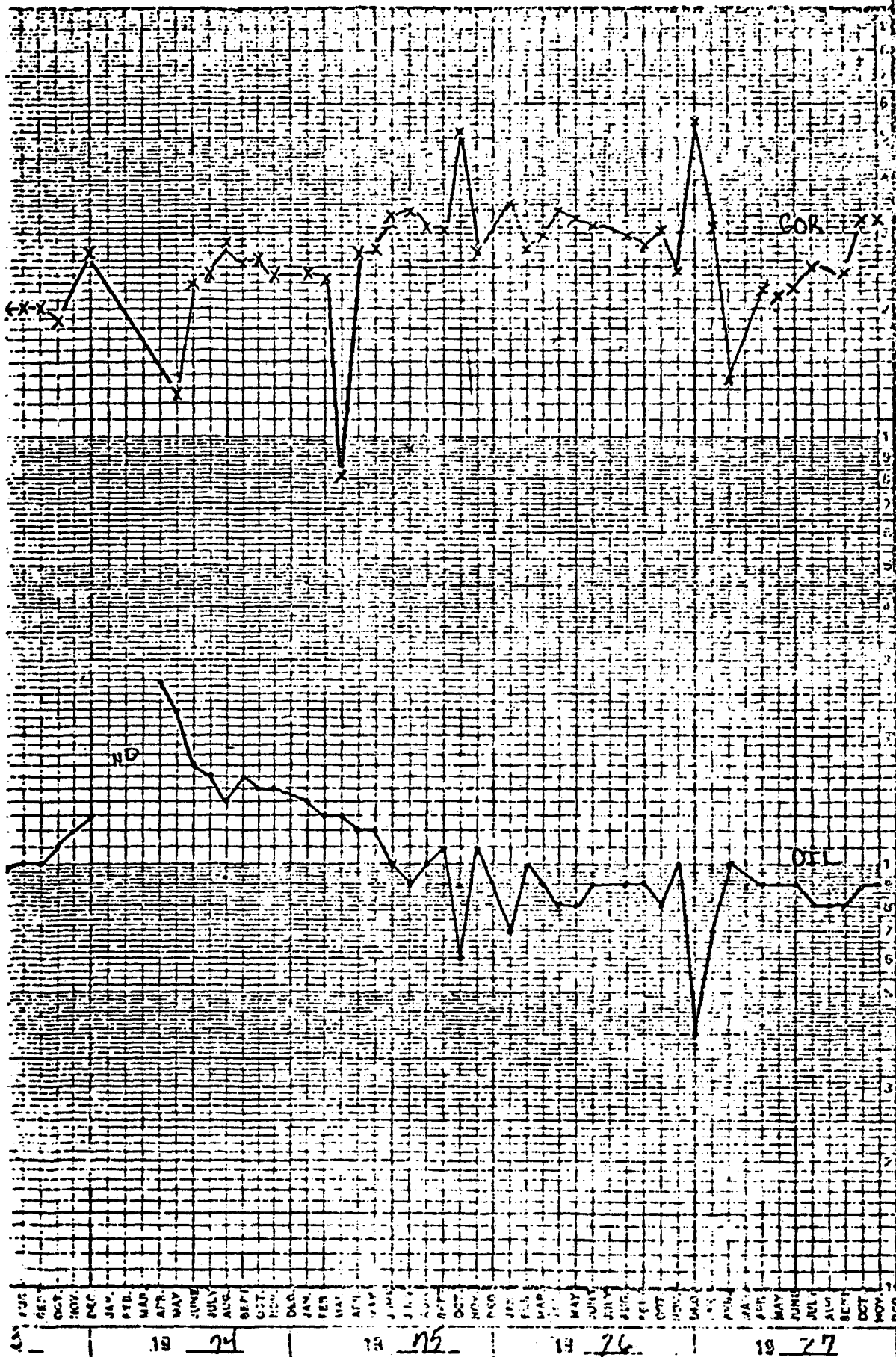
less than 1 BWPD

2 3/8" @ 5812 (187 jts)

BPMA @ 5782-5812 SU

16g perf 5778 82, 5V w

w/o ball w/1 3/8" fish ne



Control No. 2333

OIL CONSERVATION COMMISSION
Hobbs DISTRICT

OIL CONSERVATION COMMISSION
BOX 2088
SANTA FE, NEW MEXICO

DATE February 7, 1978

RE: Proposed MC _____
Proposed DHC X _____
Proposed NSL _____
Proposed SWD _____
Proposed WFX _____
Proposed PMX _____

3-9 1978
OIL CONSERVATION COMMISSION
SANTA FE

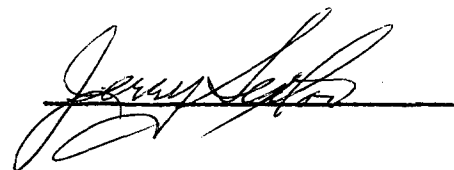
Gentlemen:

I have examined the application dated _____
for the Shell Oil Co. Livingston #3-W 3-21-37
Operator Lease and Well No. Unit, S-T-R

and my recommendations are as follows:

O.K.---J.S.

Yours very truly,



OIL CONSERVATION COMMISSION
Hobbs DISTRICT

OIL CONSERVATION COMMISSION
BOX 2088
SANTA FE, NEW MEXICO

DATE January 27, 1978

RE: Proposed MC _____
Proposed DHC X _____
Proposed NSL _____
Proposed SWD _____
Proposed WFX _____
Proposed PMX _____

Gentlemen:

I have examined the application dated _____
for the Shell Oil Co. Livingston #3-W 3-21-37
Operator Lease and Well No. Unit, S-T-R

and my recommendations are as follows:

O.K.----J.S.

Yours very truly,

