



STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION
AZTEC DISTRICT OFFICE

1000 RIO BRAZOS ROAD
AZTEC, NEW MEXICO 87410
(505) 334-6178

OIL CONSERVATION DIVISION
BOX 2088
SANTA FE, NEW MEXICO 87501

DATE April 28, 1982

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

Gentlemen:

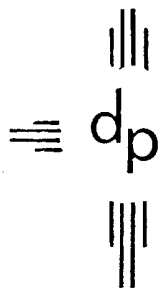
I have examined the application dated April 21, 1982
for the Oxygen Prod. Corps. MF# 1 L-18-24N-9W
Operator Lease and Well No. Unit, S-T-R

and my recommendations are as follows:

Approve

Yours truly,

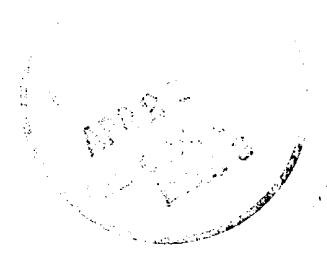
Frank T. Cherry



dugan production corp.

April 7, 1982

Joe D. Ramey
New Mexico Oil Conservation Commission
P.O. Box 2088
Santa Fe, NM 87501



Re: Application for Downhole Commingling
MF #1 Well
Basin Dakota Pool and Undesignated Gallup Pool
T-24-N, R-9-W, NMPM
Sec. 18: NW/4 SW/4
San Juan County, New Mexico

Dear Mr. Ramey:

Enclosed please find duplicate copies of the above referenced Application for Downhole Commingling which we would like to have administratively approved under Rule 303-C.

The criteria for commingling under Rule 303-C would require the well to be completed dually and each zone tested separately. However, we feel that we can forego this requirement on the grounds that data collected from nearby wells imply that the criteria will be met by the subject well. This would save the costs of a dual completion, the additional separator and meter, and the pump which would be required. Our experience in the area indicates that the production from both the Basin Dakota and the Undesignated Gallup formations in this well would be marginal. Gas chromatograph analyses of the Sixteen G's #1 Well, (Unit letter E, Sec. 7, T24N, R9W)(Undesignated Gallup formation) and the above referenced well(Basin Dakota formation) indicate that these flow streams will be miscible.

Also, our successful commingling of these zones in nearby wellbores shows that the liquid flowstreams are compatible and mutually non-damaging to their counterpart zones. This experience also serves to show that, in this area, there is not enough pressure disparity at the flowing conditions to create a crossflow problem. The commingling of the zones further will facilitate the production of the Undesignated Gallup zone by the device of gas lift. The mixture of the Dakota gas and Gallup effluent will be lighter than the Gallup fluids alone. This will allow production from the Gallup without the need for a pump, lower operating costs, extend the production until abandonment and prevent waste.

New Mexico Oil Conservation Commission
March 31, 1982
Page Two

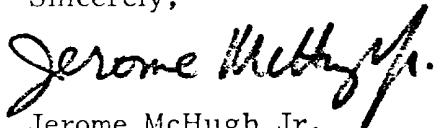
In this case, the price for which the production will be sold is not the same for the two zones. The Basin Dakota formation has been designated a Tight Gas Sand in this area, and the price for the Dakota gas will be twice that of the Gallup gas. By the use of an appropriate allocation formula, we can be sure that the value of the commingled production will not be less than the sum of the values of the individual streams.

There is a common ownership of the two zones, and the distribution of royalties is the same for both zones. For this reason, there is no danger to correlative rights which would arise from the commingling of the zones in this wellbore.

We have notified all off-set operators and/or lessees of surrounding federal leases of the proposed downhole commingling application.

We trust that all is in order for this application. If there are any questions concerning this matter, please feel free to contact either of us.

Sincerely,



Jerome McHugh Jr.
Landman



Eric Eckelberg
Engineer

JM/EE:nw

cc: Frank Chavez
New Mexico Oil Conservation Commission
1000 Rio Brazos Rd.
Aztec, NM 87410

T24N-R10W		T24N-R9W		T24N-R9W N.M.P.M.	
12		7		8	
Supron No.1 F-13-24-10	Supron No.2 F-18-24-9	Supron No.1 F-18-24-9	Cotton Pet.		
13 NM45210 Dugan	NM45209 18 * Dugan Production No.1 MF		17		
NM16760 Unleased Federal Expired	NM16760 Dugan * No.3 April Surprise NM4958	NM16760 Unleased Navajo Allotted NM0-C-14-20	NM36473 Dugan No.2 Harvey * NM10755		
24 NM03245	19				

DUGAN PRODUCTION CORP.
MF #1
NW/4 SW/4 Sec 18 T24N R9W
San Juan County, NM

Proration Unit: S/2 Sec 18 T24N R9W

APPLICATION FOR DOWNHOLE COMMINGLING

Offset Operators



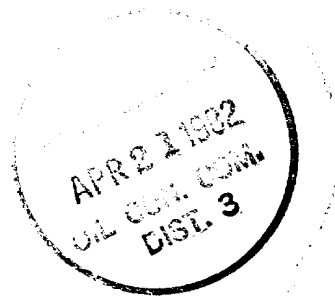
RULE 303-C (§ 2e and § 2i)

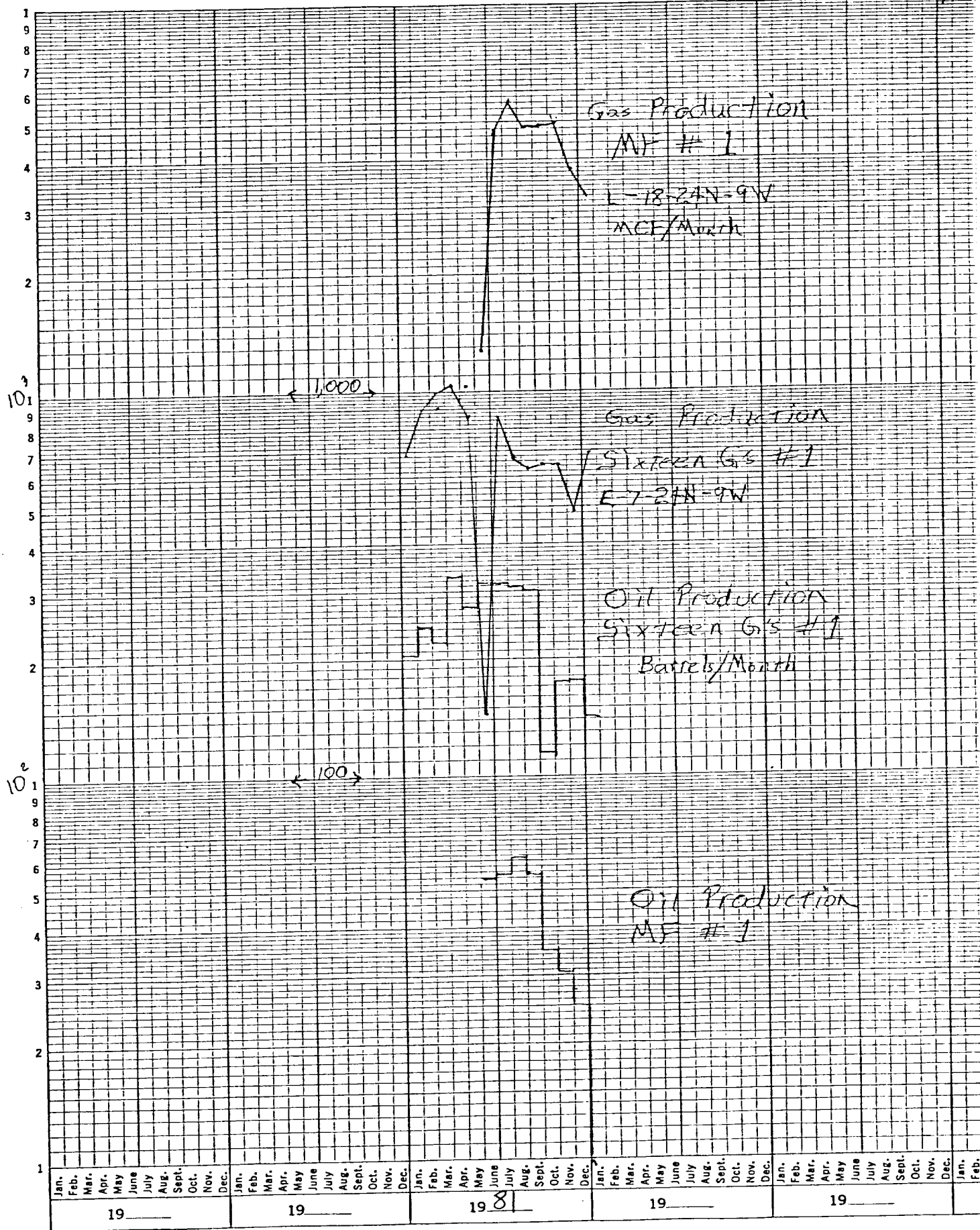
The following information shows a segment of the decline curves from the MF #1 Well, Unit letter L, Sec. 18, T24N, R9W, a Dakota producer, and the Sixteen G's #1 Well, Unit letter E, Sec. 7, T24N, R9W, an Undesignated Gallup producer. This will serve as a prognostication of future production from these zones in this area, and as an example of their relative productions, for use in arriving at an allocation formula.

For eight months, from June, 1981 until January, 1982, both the Sixteen G's and the MF #1 Wells were producing. For this period the average contribution of the Gallup well to the total production of both wells was 85.66% of the oil and 12.47% of the gas.

Two other wells in the same area are producing the commingled fluids from these zones. The July Jubilee #1 Well, Unit letter G, Sec. 30, T24N, R9W, has the gas allocated 90% to the Dakota and 10% to the Gallup, while the oil is allocated 10% to the Dakota and 90% to the Gallup. The Merry May #1 Well, Unit letter I, Sec. 24, T24N, R10W, has the gas allocated 85% to the Dakota and 15% to the Gallup. The oil from this well is allocated 15% to the Dakota and 85% to the Gallup.

Using this data as a guideline, we feel it would be appropriate to allocate the gas production from the July Jubilee #2 Well 85% to the Dakota and 15% to the Gallup. Since the oil is all valued the same, its allocation here is not critical, and the allocation of 15% of the oil to the Dakota and 85% to the Gallup should be acceptable.





11/13/81

EL PASO NATURAL GAS COMPANY
MEASUREMENT DEPARTMENT
POST OFFICE BOX 1492
EL PASO, TEXAS 79999

CHROMATOGRAPHIC GAS ANALYSIS REPORTS

DUGAN PRODUCTION CORP.
P.O. BOX 208
FARMINGTON, NM 87401

ANAL DATE 11 11 81

METER STATION NAME
GOOD TIMES METER SITE

METER STA 93757
OPER 1862

TYPE CODE	SAMPLE DATE	EFF. DATE	USE NOS.	SCALE	H2S GRAINS	LOCATION
CO	11 10 81	11 13 81	06			4 F

NORMAL
MOL%

GPM

CO2	.58	.000
H2S	.00	.000
N2	.73	.000
METHANE	87.10	.000
ETHANE	6.56	1.753
PROPANE	2.62	.721
ISO-BUTANE	.57	.186
NORM-BUTANE	.72	.227
ISO-PENTANE	.36	.132
NORM-PENTANE	.28	.101
HEXANE PLUS	.48	.210

TOTALS

100.00

3.330

SPECIFIC GRAVITY

.665

MIXTURE HEATING VALUE
(BTU/CF AT 14.73 PSIA, 60 DEGREES, DRY) 1,159

RATIO OF SPECIFIC HEATS

1.291

NO TEST SECURED FOR H2S CONTENT

11/13/81

EL PASO NATURAL GAS COMPANY
MEASUREMENT DEPARTMENT
POST OFFICE BOX 1492
EL PASO, TEXAS 79999

CHROMATOGRAPHIC GAS ANALYSIS REPORTS

DUGAN PRODUCTION CORP.
P.O. BOX 208
FARMINGTON, NM 87401

ANAL DATE 11 11 81

METER STATION NAME
SIXTEEN G'S #1METER STA 99825
OPER 1862

TYPE CODE	SAMPLE DATE	EFF. DATE	USE MOS.	SCALE	H2S GRAINS	LOCATION
CO	11 10 81	11 13 81	03			4 F 0

	NORMAL MOL%	GPM
CO2	.82	.000
H2S	.00	.000
N2	.91	.000
METHANE	65.93	.000
ETHANE	13.47	3.601
PROPANE	11.02	3.032
ISO-BUTANE	1.38	.451
NORM-BUTANE	3.66	1.153
ISO-PENTANE	.66	.315
NORM-PENTANE	.93	.337
HEXANE PLUS	1.02	.446

TOTALS

100.00

9.335

SPECIFIC GRAVITY

.877

MIXTURE HEATING VALUE
(BTU/CF AT 14.73 PSIA, 60 DEGREES, DRY) 1,479

RATIO OF SPECIFIC HEATS

1.257

NO TEST SECURED FOR H2S CONTENT

GAS-OIL RATIO TESTS

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 BBL.S.		OIL BBL.S.	GAS M.C.F.
Sixteen G's	1	E	7	24N	9W	12-28-77	P	8	24	1/2	37.5	10	35	3,500	

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.

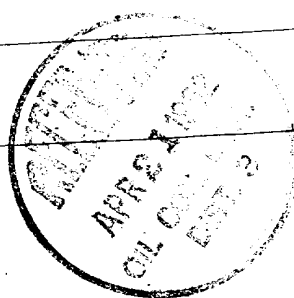
Mail original and one copy of this report to the district office of the New Mexico Oil Conservation Commission in accordance with Rule 301 and appropriate pool rules.

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

Rud Crane
(Signature)
Production Superintendent
December 30, 1977
(Date)

Operator		County		San Juan										
DUGAN PRODUCTION CORP.		Pool/Downhole commingled		Basin Dakota & Undesignated Gallup										
Address		TYPE OF TEST - (X)		Completion ☒ Scheduled ☐ Special ☐										
P O Box 208, Farmington, NM 87401														
LEASE NAME	WELL NO.	LOCATION			DATE OF TEST	CHOKE SIZE	TBG. PRESS.	DAILY ALLOW-ABLE	LENGTH OF TEST HOURS	PROD. DURING TEST				GAS - O RATIO CU.FT./E
		U	S	T						R	WATER BBL/S.	GRAV. OIL	OIL BBL/S.	
July Jubilee	#1	G	30	24N	9W	9-24-81	--	55	24	25*	39	114	493	4324
														*Frac water

X Date of 1st new oil to tank 8-27-81



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.

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.

Thomas A. Dugan, Sr.
 Petroleum Engineer
 (Title)

10-12-81

DEPARTMENT OF THE INTERIOR GEOLOGICAL SURVEY

1. (Instructions on reverse side)

WELL COMPLETION OR RECOMPLETION REPORT AND LOG *

1. TYPE OF WELL: OIL WELL ☐ GAS WELL ☒ DRY ☐ Other _____

2. TYPE OF COMPLETION: NEW WELL ☒ WORK OVER ☐ DEEP-EN ☐ PLUG BACK ☐ DIFF. RESVR. ☐ Other _____

3. NAME OF OPERATOR
Dugan Production Corp.

4. ADDRESS OF OPERATOR
P O Box 208, Farmington, NM 87401

5. LOCATION OF WELL (Report location clearly and in accordance with any State requirements)
At surface 1820' FSL - 690' FWL

At top prod. interval reported below

At total depth

14. PERMIT NO. U. S. GEOLOGICAL SURVEY
APR 16 1981
FARMINGTON, N. M.

6. LEASE DESIGNATION AND SERIAL NO.

NM 16760

7. IF INDIAN, ALLOTTEE OR TRIBE NAME

8. UNIT AGREEMENT NAME

9. FARM OR LEASE NAME

MF

10. WELL NO.

#1

11. FIELD AND POOL, OR WILDCAT

Basin Dakota

12. SEC., T., R., M., OR BLOCK AND SURVEY OR AREA

Sec 18 T24N R9W

13. COUNTY OR PARISH

San Juan

14. STATE

NM

15. DATE SPECIFIED 1-16-81 16. DATE T.D. REACHED 1-25-81 17. DATE COMPL. (Ready for prod.) 2-5-81 18. ELEVATIONS (DF, RKB, RT, GR, ETC.) 6992 KB

20. TOTAL DEPTH, MD & TVD 6500' 21. PLUG, BACK T.D., MD & TVD 6450' 22. IF MULTIPLE COMPL., HOW MANY? single 23. INTERVALS DRILLED BY TD

24. PRODUCING INTERVAL(S), OF THIS COMPLETION—TOP, BOTTOM, NAME (MD AND TVD) 6416 - 6438 Dakota 25. WAS DIRECTIONAL SURVEY MADE NO

26. TYPE ELECTRIC AND OTHER LOGS RUN

IES, CDL, Gamma Ray Correlation & Collar logs

CASING RECORD (Report all strings set in well)				CEMENTING RECORD		AMOUNT PULLED
CASINO SIZE	WEIGHT, LB./FT.	DEPTH SET (MD)	HOLE SIZE			
8-5/8"	24#	194' RKB	12-1/4"	135 sx class B		
4-1/2"	10.5#	6491' RKB	7-7/8"	565 cu.ft. slurry 1st stage---		
				1203 cu.ft. slurry 2nd stage		

LINER RECORD					TUBING RECORD		
SIZE	TOP (MD)	BOTTOM (MD)	BACKS CEMENT*	SCREEN (MD)	SIZE	DEPTH SET (MD)	PACKER SET (MD)
---					2-3/8"	6441' RKB	6375'

31. PERFORATION RECORD (Interval, size and number)		32. ACID, SHOT, FRACTURE, CEMENT SQUEEZE, ETC.	
6432-6438, 6416-6426 1 SPF		DEPTH INTERVAL (MD)	AMOUNT AND KIND OF MATERIAL USED
		See Sundry Notice of 2-6-81 for details.	

33. PRODUCTION							
DATE FIRST PRODUCTION				PRODUCTION METHOD (Flowing, gas lift, pumping—size and type of pump)			
				flowing			
DATE OF TEST	HOURS TESTED	CHOKER SIZE	PROD'N. FOR TEST PERIOD	OIL—BBL.	GAS—MCF.	WATER—BBL.	GAS-OIL RATIO
2-15-81	3	1/2"	→		138		
FLOW, TUBING PRESS.	CASING PRESSURE	CALCULATED 24-HOUR RATE	OIL—BBL.	GAS—MCF.	WATER—BBL.	OIL GRAVITY-API (CORR.)	
1833 SI		→		138 CAOF			

34. DISPOSITION OF GAS (Sold, used for fuel, vented, etc.)

TEST WITNESSED BY

ACCEPTED FOR RECORD

35. LIST OF ATTACHMENTS

36. I hereby certify that the foregoing and attached information is complete and correct as determined from all available records

SIGNED Jim L. Jacobs TITLE Geologist DATE 4-13-81

*(See Instructions and Spaces for Additional Data on Reverse Side)