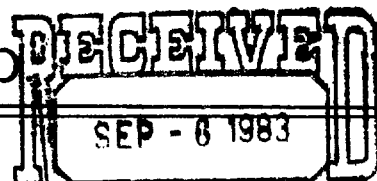


dugan production corp



OIL CONSERVATION DIVISION
SANTA FE

September 2, 1983

New Mexico Oil Conservation Division
Box 2088
Santa Fe, NM 87501

Attn: Joe D. Ramey

RE: Request for Surface Commingling
Dugan Production Corp.
Bengal B Well #1 (Gallup) and Bengal B #6 (Fruitland)
T-26-N, R-12-W, NMPM
Section 2: Units O and P
Federal Lease No. NM 16471
San Juan County, NM

Dear Mr. Ramey:

We hereby request administrative approval to commingle on the surface gas production from the Gallup formation in the Bengal B #1 well and from the Fruitland formation in the Bengal B #6 well, both wells operated by Dugan Production Corp.

The Bengal B #1 was originally drilled by Skelly Oil Co. in 1958 as the J. W. Goddard #6 and was converted to Water Injection Well #32 in 1962 during the operation of the Gallegos Gallup Sand Unit, also operated by Skelly Oil Company. This well was plugged and abandoned in February of 1968 with a cumulative production of 13,947 BO. In December of 1972, Dugan Production Corp. assumed operation of the lease from J. P. McHugh and re-entered the abandoned well bore of the J. W. Goddard #6, completing the Gallup through perforations 4840-5081', with an initial swabbing potential of 144 BOPD plus 20 BWPD and a gas-oil ratio of 1667 on July 16, 1973. Since the recompletion, a total of 1516 BO have been produced as of August 1, 1983. During August, 1983, we acidized the Gallup perforations and the well is currently averaging 10 BOPD and 9 MCFPD. Attached for your reference is a copy of a recent gas-oil ratio test (C-116).

The Bengal B #6 was spudded in February of 1980 by Dugan Production Corp. with 2-7/8" casing being cemented at 1357'. The Fruitland formation was completed 1137-1149'. The well was tested on February 10, 1983 with a flowing rate of 75 MCFD on a 1/2 inch choke with 2 psig flowing tubing pressure. A copy of the C-122 is attached for your review.. As a result of its low deliverability, we have had some problems obtaining a pipeline connection and have recently made arrangements with El Paso Natural Gas

Co. to connect the Bengal B #6 to their system utilizing an existing meter run originally installed for the Bengal B #2 which is currently plugged. The Bengal B #6 was first delivered to El Paso Natural Gas Company on July 11, 1983 and during 17 days of production in July, 28 MCF of gas was delivered into the pipeline. An analysis of the log indicates the Bengal B #6 will be a very marginal producing well, with production not expected to ever exceed 20 MCFPD.

El Paso's gathering line for the Bengal B #6 runs very near the Bengal B #1 and it is our proposal that gas from the #1 be delivered into the gathering line for the #6. This will require commingling of production for the #1 and #6 upstream of El Paso's meter run. (Refer to attached sketch of proposed surface facilities.) With reference to the attached sketch, you will note that El Paso's meter is not located at the well. Since the #1 and #6 are located along the edge of the Gallegos Wash, El Paso set the meter near their main line in an effort to eliminate having to cross the wash. Neither the #1 nor the #6 will justify the installation of individual metering facilities by EPNG; however, El Paso has agreed to accept gas from both wells and utilize their meter run as a central point of delivery of production from both wells. Dugan Production has installed a 4" conventional meter run with a continuous recording Barton dry flow meter at the Bengal B #6. We propose to use this recording to allocate volumes reported by EPNG between the Bengal B #1 and #6.

Federal Lease No. NM 16471 comprises all of Section 2, T-26-N, R-12-W, NMPM, which is currently issued to Jerome P. McHugh with operating rights being assigned to Dugan Production Corp. Also, Dugan Production Corp. has been assigned a 50% interest in all of NM 16471 with the exception of the SE/4, under which we have 100% interest in the Gallup formation and 50% interest in all other zones. All other working interest within Section 2 is owned by Jerome P. McHugh. All royalty is common to the two wells.

Gas production from the #1 well currently qualifies as Sec. 109; however, it is our plan to file for stripper pricing. Gas production from the #6 currently qualifies for Section 103 pricing; however, upon producing the well for 3 months, we plan to file for stripper pricing on it also. Thus, the value of the commingled stream will be equal to the sum of the individual well streams. It should be noted, however, that because of the marginal nature of both wells, any gas produced from the #1 as a result of being allowed to use a common line with the #6 will be gas reserves that otherwise would have been vented or would have been shut in as a result of no market. Over a period of 10 years, this commingling will result in the production of approximately 20 MMCF that would not otherwise have been produced.

Attached is a map on which we have indicated the subject lease and the current producing wells in both the Gallegos Gallup and Fruitland-Pictured Cliffs fields. Also indicated is the daily average production during

New Mexico Oil Conservation Division
Bengal B #1 and Bengal B #6
Page 3

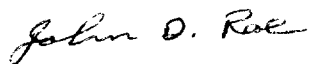
1982 from each well. As can be seen, this is an area that is of fairly low productivity in both formations.

As previously stated, due to the marginal rates from each well, it is our belief that granting of the commingling will result in recoveries of additional natural gas from this lease and will not violate correlative rights. Should this commingling not be permitted, it will be necessary for us to vent the casinghead gas associated with oil production in the Bengal B #1, or shut in the associated oil production.

By copy of this application, we are also requesting approval from the Bureau of Land Management for this proposed commingling.

Should you have any questions regarding this matter, please feel free to contact me.

Sincerely,



John D. Roe

JDR:fp

Enclosures: C-116
C-122
Sketch of Proposed Surface Facilities
Production Map

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

Mat Millenbach
Bureau of Land Management
Caller Service 4104
Farmington, NM 87499

Jerome P. McHugh

GAS-OIL RATIO TESTS

Operator Dugan Production Corp.		Pool Gallegos Gallup		County San Juan											
Address Box 208, Farmington, NM 87499		TYPE OF TEST - (X)		Completion <input type="checkbox"/> Scheduled <input type="checkbox"/> Special <input checked="" type="checkbox"/>											
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/B		
		U	S	T						R	WATER BBL.S.	GRAV. OIL		OIL BBL.S.	GAS M.C.F.
Bengal B	1	0	2	26N	12W	8-15-83	P	- -	- -	24	-0-	34.8	20	18.5	925

RECEIVED
SEP - 6 1983
OIL CONSERVATION DIVISION
SANTA FE

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 Division.

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 Division 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.

Margaret Wheeler
(Signature)

Prod. Report Supervisor

(Title)

8-16-83

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

RECEIVED

SEP - 6 1983

Type Test		<input checked="" type="checkbox"/> Initial		<input type="checkbox"/> Annual		<input type="checkbox"/> Special		Test Date		2-10-83							
Company				Jerome P. McHugh				Connection				OIL CONSERVATION DIVISION SANTA FE					
Pool				So. Gallegos Fr-PC				Formation				Fruitland					
Completion Date				1-25-83				Total Length				1360					
Plug Back TD				1324				Elevation				5926' GL					
Ceq. Size				2-7/8"				Wt.				6.4#					
Perforations				From 1137 To 1149				Set At				1357' GL					
Perforations				From To				Set At				2.441					
Form or Lease Name				Bengal B				Well No.				6					
Unit				P				Sec.				2					
Twp.				26N				Rge.				12W					
Type Well - Single - Brdenhead - G.C. or C.O. Multiple								Packer Set At				County					
Single - gas												San Juan					
Producing Thru				Reservoir Temp. °F				Mean Annual Temp. °F				Baro. Press. - P _a					
L				H				Cg				.62 est.					
% CO ₂				% N ₂				% H ₂ S				Prover					
Meter Run				Taps				State				New Mexico					
FLOW DATA												TUBING DATA		CASING DATA		Duration of Flow	
NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h _w	Temp. °F	Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F							
SI											192	7 days					
1.																	
2.																	
3.	1/2" pos. choke			2		60°						3 hrs.					
4.																	
5.																	
RATE OF FLOW CALCULATIONS																	
NO.	Coefficient (24 Hour)	$\sqrt{h_w P_m}$	Pressure P _m	Flow Temp. Factor Ft.	Gravity Factor Fg	Super Compress. Factor, F _{pv}	Rate of Flow Q, Mcfd										
1.																	
2.																	
3.	5.4315		14	1.010	.9837	1.000	75										
4.																	
5.																	
NO.	P _r	Temp. °R	T _r	Z	Gas Liquid Hydrocarbon Ratio _____ Mcf/Lbl.												
1.					A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.												
2.					Specific Gravity Separator Gas _____ XXXXXXXXXX												
3.					Specific Gravity Flowing Fluid _____ XXXXX												
4.					Critical Pressure _____ P.S.I.A. _____ P.S.I.A.												
5.					Critical Temperature _____ R _____ R												
NO.	P _r ²	P _w ²	P _r ² - P _w ²	(1) $\frac{P_r^2}{P_r^2 - P_w^2} =$		(2) $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n =$											
1.																	
2.																	
3.				AOF = Q $\left[\frac{P_r^2}{P_r^2 - P_w^2} \right]^n =$		75											
4.																	
5.																	
Absolute Open Flow				75		Mcf @ 15.025											
Angle of Slope						Slope, n											
Remarks: Friction negligible - AOF = Q																	
Approved By Division				Conducted By		Calculated By											
				Jacobs		Jacobs											
						Checked By											

Proposed Surface Commingling

Bengal B No. 1 Gallup &

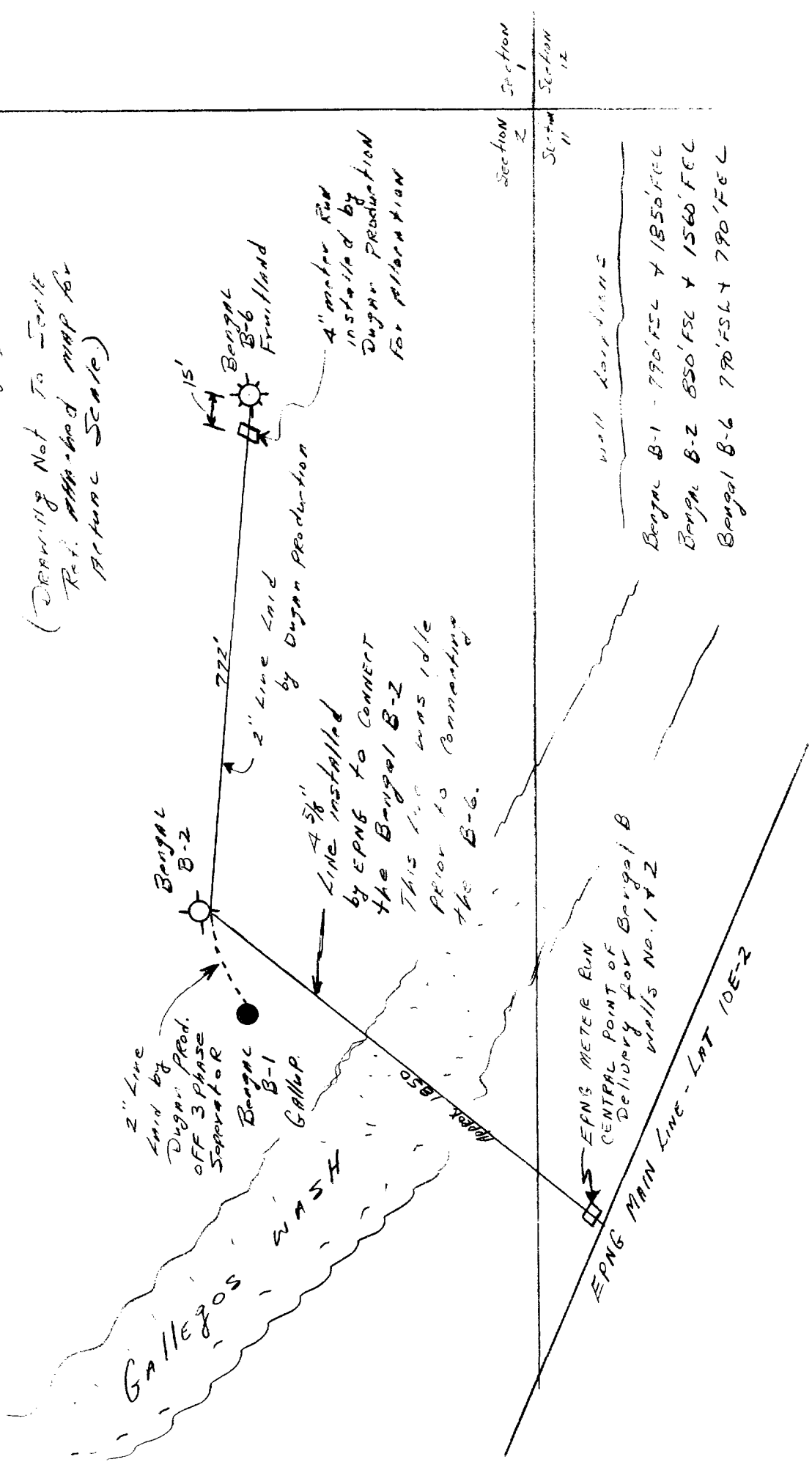
Bengal B No 6 Fruitland

Dugan Production Corp.

Units O & P, Section 2, T-26N, R-12E

San Juan County, New Mexico

(Drawing Not To Scale
Ref. Map-based map for
Actual Scale)



Section 2

Section 12

well locations

Bengal B-1 - 790' FSL + 1850' FGL

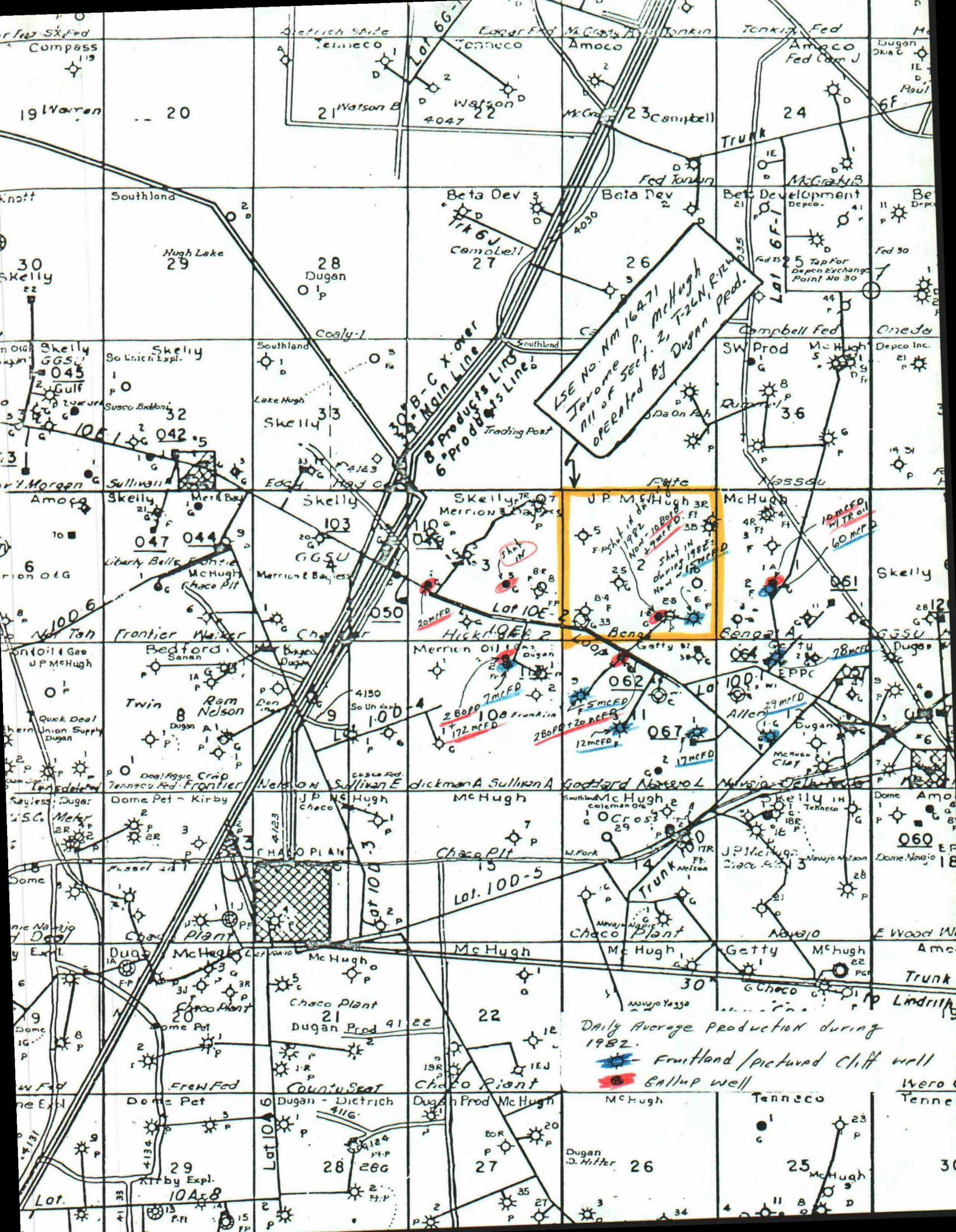
Bengal B-2 850' FSL + 1560' FGL

Bengal B-6 790' FSL + 790' FGL

EPNG METER RUN
CENTRAL POINT OF Bengal B
Delivery for Bengal B
wells No. 1 & 2

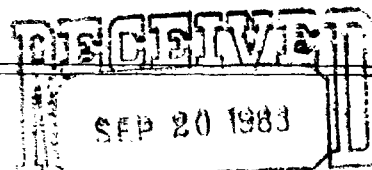
EPNG MAIN LINE - LAT 10E-2

John R. Be
9-1-83



dp

dugan production corp.



September 2, 1983

RECEIVED

SEP 06 1983

Bureau of Land Management
Caller Service 4104
Farmington, NM 87499

BLM
FARMINGTON OFFICE AREA

Attn: Mat Millenbach

RE: Request for Surface Commingling
Dugan Production Corp.
Bengal B Well #1 (Gallup) and Bengal B #6 (Fruitland)
T-26-N, R-12-W, NMPM
Section 2: Units O and P
Federal Lease No. NM 16471
San Juan County, NM

Dear Mr. Millenbach:

Attached is a copy of our application to the New Mexico Oil Conservation Division wherein we request approval to commingle on the surface gas production from the Gallup formation in the Bengal B #1 and the Fruitland formation in the Bengal B #6. Both wells are operated by Dugan Production Corp. Since this application involves federal acreage, approval of this application by your office is required.

As indicated on the application, only marginal rates from each well are involved and approval of the proposed surface commingling will not violate correlative rights and will result in increased recoveries of natural gas from this lease.

Should you have any questions regarding this matter, please feel free to contact me.

Sincerely,

John D. Roe

John D. Roe

JR:fp

Attachment

cc: Jerome P. McHugh

APPROVED

SEP 05 1983

R. Bingham
M. MILLENBACH

AREA MANAGER

Operator

McHugh