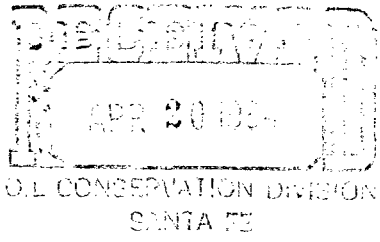
ALPHA TWENTY-ONE PRODUCTION COMPANY

POST OFFICE BOX 1206
JAL, NEW MEXICO 88252

505/395-3056

April 18, 1984



Case 8215

Oil Conservation Division
P.O. Box 2088
Santa Fe, NM 87501

ATTN: Mr. Joe Ramey

RE: BRC Madera No. 1
Sec. 29, T-22-S, R-27-E,
Eddy County, New Mexico

Gentlemen:

Enclosed for your review and approval please find our Application for Classification as a Hardship Gas Well on the above referenced well.

To support our request for the Hardship Classification, we can examine the recent history of the well and find that after a shut-in period, production on the well drops substantially. For example, on August 15, 1982, the well was accidentally shut-in. Up to this point, the well flowed up to 31 MMCF per month. After the shut-in, we could not get the well back to flowing and on August 21, 1982, we rigged up to swab. After swabbing for seven days, twelve hours per day, (at a cost of $872.00 per day), the well finally started flowing. The average swab was 52 BWPD. We have since averaged only 21 MMCF per month. As you san see, because of this accidental shut-in, we have lost 30% of our daily production and we are thoroughly convinced that if the well is shut back or shut-in again, we will lose more or all of our production and thus lose the well.

No attempts to rectify the water volume problem have been made due to the fact that to install smaller than 2-3/8" bore tubing or other de-watering devices such as plunger lift, rod pumping units, etc., would cause us to kill the well with water and as stated in the example above, such attempts could, in all probability, cause a loss of production or even the complete loss of the well. Another factor to consider, with the present decreased market for natural gas, is the economic feasability of rectifying the water volume problem.

If for some reason the well is lost and premature abandonment of the well were to take place, the calculated quantity of gas reserves which would be lost is approximately two billion cubic feet of gas. To prevent this waste and protect our correlative rights, we would, therefore, request administrative approval to produce this well at it's present rate or at least at a minimum rate of 600 MCF per day and given the circumstances and problems we have had with this well, that our Application for Classification as a Hardship Gas Well be approved.

Also please find for your review and records the following supportive information:

(1) Ownership map
(2) Wellbore sketch
(3) Production history of the well
(4) Multipoint and one-point Back Pressure Test
(5) Copy of letter to offset operators
(6) C-102
(7) Certified Statement

If you desire any further information, please contact me.

Sincerely,

Michael D. Oney,
Drilling Superintendent

MDO/tic
Enclosures

cc: Oil Conservation Division
P.O. Drawer DD
Artesia, NM 88210

El Paso Natural Gas
P.O. Box 1492
El Paso, TX 79978

Alpha Twenty-One Production Company
2100 First National Bank Building
Midland, TX 79701

Case 8215

APPLICATION FOR CLASSIFICATION AS HARDSHIP GAS WELL

Operator Alpha Twenty-One Production Co. Contact Party Michael D. Oney

Address P.O. Box 1206 Jal, New Mexico 88252 Phone No. 505-395-3056

Lease BRC Madera Well No. 1 UT B Sec. 29 TWP 22 South RGE 27 East

Pool Name South Carlsbad Morrow Minimum Rate Requested 600 MCFPD

Transp... Name El Paso Natural Gas Company Purchaser (if different) _____

Are you seeking emergency "hardship" classification for this well? _____ yes X no

Applicant must provide the following information to support his contention that the subject well qualifies as a hardship gas well.

Provide a statement of the problem that leads the applicant to believe that "underground waste" will occur if the subject well is shut-in or is curtailed below its ability to produce. (The definition of underground waste is shown on the reverse side of this form)

2) Document that you as applicant have done all you reasonably and economically can do to eliminate or prevent the problem(s) leading to this application.

   a) Well history. Explain fully all attempts made to rectify the problem. If no attempts have been made, explain reasons for failure to do so.

   b) Mechanical condition of the well(provide wellbore sketch). Explain fully mechanical attempts to rectify the problem, including but not limited to:

      i) the use of "smallbore" tubing; ii) other de-watering devices, such as plunger lift, rod pumping units, etc.

Present historical data which demonstrates conditions that can lead to waste. Such data should include:

   a) Permanent loss of productivity after shut-in periods (i.e., formation damage).

   b) Frequency of swabbing required after the well is shut-in or curtailed.

   c) Length of time swabbing is required to return well to production after being shut-in.

   d) Actual cost figures showing inability to continue operations without special relief

4) If failure to obtain a hardship gas well classification would result in premature abandonment, calculate the quantity of gas reserves which would be lost

5) Show the minimum sustainable producing rate of the subject well. This rate can be determined by:

   a) Minimum flow or "log off" test; and/or

   b) Documentation of well production history (producing rates and pressures, as well as gas/water ratio, both before and after shut-in periods due to the well dying, and other appropriate production data).

6) Attach a plat and/or map showing the proration unit dedicated to the well and the ownership of all offsetting acreage.

7) Submit any other appropriate data which will support the need for a hardship classification.

8) If the well is in a prorated pool, please show its current under- or over-produced status.

9) Attach a signed statement certifying that all information submitted with this application is true and correct to the best of your knowledge; that one copy of the application has been submitted to the appropriate Division district office (give the name) and that notice of the application has been given to the transporter/purchaser and all offset operators.

EXHIBIT "B" CASE NO. 8077 ORDER NO. R-7453

GENERAL INFORMATION APPLICABLE TO HARDSHIP GAS WELL CLASSIFICATION

1) Definition of Underground Waste.

"Underground Waste as those words are generally understood in the oil and gas business, and in any event to embrace the inefficient, excessive, or improper use or dissipation of the reservoir energy, including gas energy and water drive, of any pool, and the locating, spacing, drilling, equipping, operating, or producing, of any well or wells in a manner to reduce or tend to reduce the total quantity of crude petroleum oil or natural gas ultimately recovered from any pool, and the use of inefficient underground storage of natural gas."

2) The only acceptable basis for obtaining a "hardship" classification is prevention of waste with the burden of proof solely on the applicant. The applicant must not only prove waste will occur without the "hardship" classification, but also that he has acted in a responsible and prudent manner to minimize or eliminate the problem prior to requesting this special consideration. If the subject well is classified as a "hardship" well, it will be permitted to produce at a specified minimum sustainable rate without being subject to shut-in by the purchaser due to low demand. The Division can rescind approval at any time without notice and require the operator to show cause why the classification should not be permanently rescinded if abuse of this special classification becomes apparent.

3) The minimum rate will be the minimum sustainable rate at which the well will flow. If data from historical production is insufficient to support this rate (in the opinion of the Director), or if an offset operator or purchaser objects to the requested rate, a minimum flow ("log off") test may be required. The operator may, if he desires, conduct the minimum flow test, and submit this information with his application.

4) If a minimum flow test is to be run, either at the operator's option or at the request of the Division, the offset operators, any protesting party, the purchaser and OCD will be notified of the date of the test and given the opportunity to witness, if they so desire.

5) Any interested party may review the data submitted at either the Santa Fe office or the appropriate OCD District Office.

6) The Director can approve uncontested applications administratively if, in his opinion, sufficient justification is furnished. Notice shall be given of intent to approve by attaching such notice to the regular examiner's hearing docket. Within 20 days following the date of such hearing, the affected parties will be permitted to file an objection. If no objection has been filed, the application may be approved.

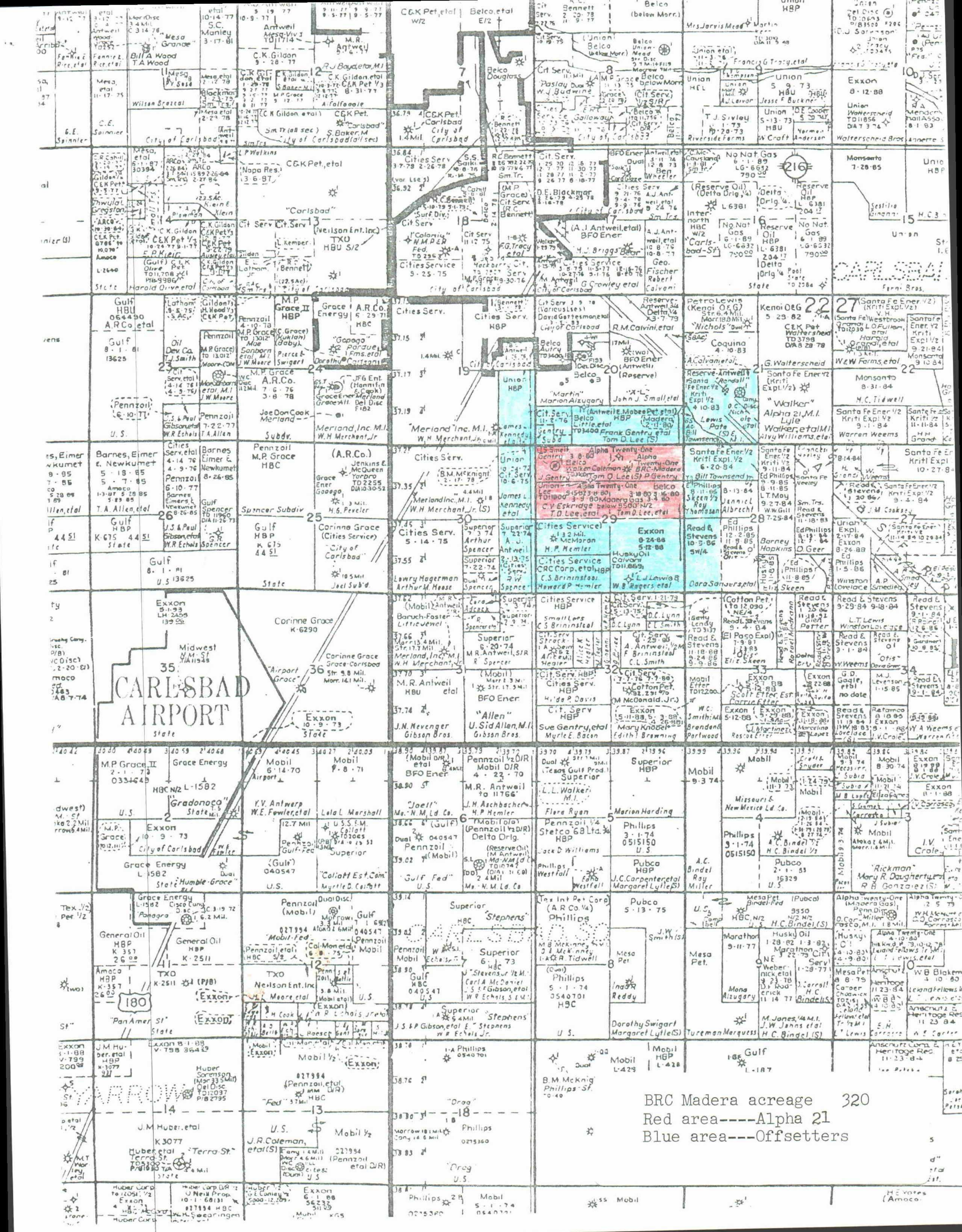
7) Should a protest be filed in writing, the applicant will be permitted to either withdraw the application, or request it to be set for hearing.

8) An emergency approval, on a temporary basis for a period not to exceed 90 days, may be granted by the District Supervisor, pending filing of formal application and final action of the OCD Director. This temporary approval may be granted only if the District Supervisor is convinced waste will occur without immediate relief. If granted, the District Supervisor will notify the purchaser.

9) After a well receives a "hardship" classification, it will be retained for a period of one year unless rescinded sooner by the Division. The applicant will be required to certify annually that conditions have not changed substantially in order to continue to retain this classification.

10) Nothing here withstanding, the Division may, on its own motion, require any and all operators to show cause why approval(s) should not be rescinded if abuse is suspected or market conditions substantially change in the State of New Mexico.

11) A well classified as a "hardship well" will continue to accumulate over and under production (prorated pools). Should allowables exceed the hardship allowable assigned, the well will be permitted to produce at the higher rate, if capable of doing so, and would be treated as any other non-hardship well. Any cumulative overproduction accrued either before or after being classified "hardship" must, however, be balanced before the well can be allowed to produce at the higher rate.



BRC Madera acreage 320
Red area----Alpha 21
Blue area---Offsetters

NEW MEXICO OIL CONSERVATION COMMISSION

WELL LOCATION AND ACREAGE DEDICATION PLAT

Form C-102
Supersedes C-128
Effective 1-1-65

All distances must be from the outer boundaries of the Section

Operator	Lease	Well No.
Black River Corp.	BRC Madera	1

Unit Letter	Section	Township	Range	County
B	29	22 South	27 East	Eddy

Actual Footage Location of Well:
860 feet from the North line and 1980 feet from the East line

Ground Level Elev.	Producing Formation	Pool	Dedicated Acreage:
3138.8	MORROW	UNDESIG	320 Acres

1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below.

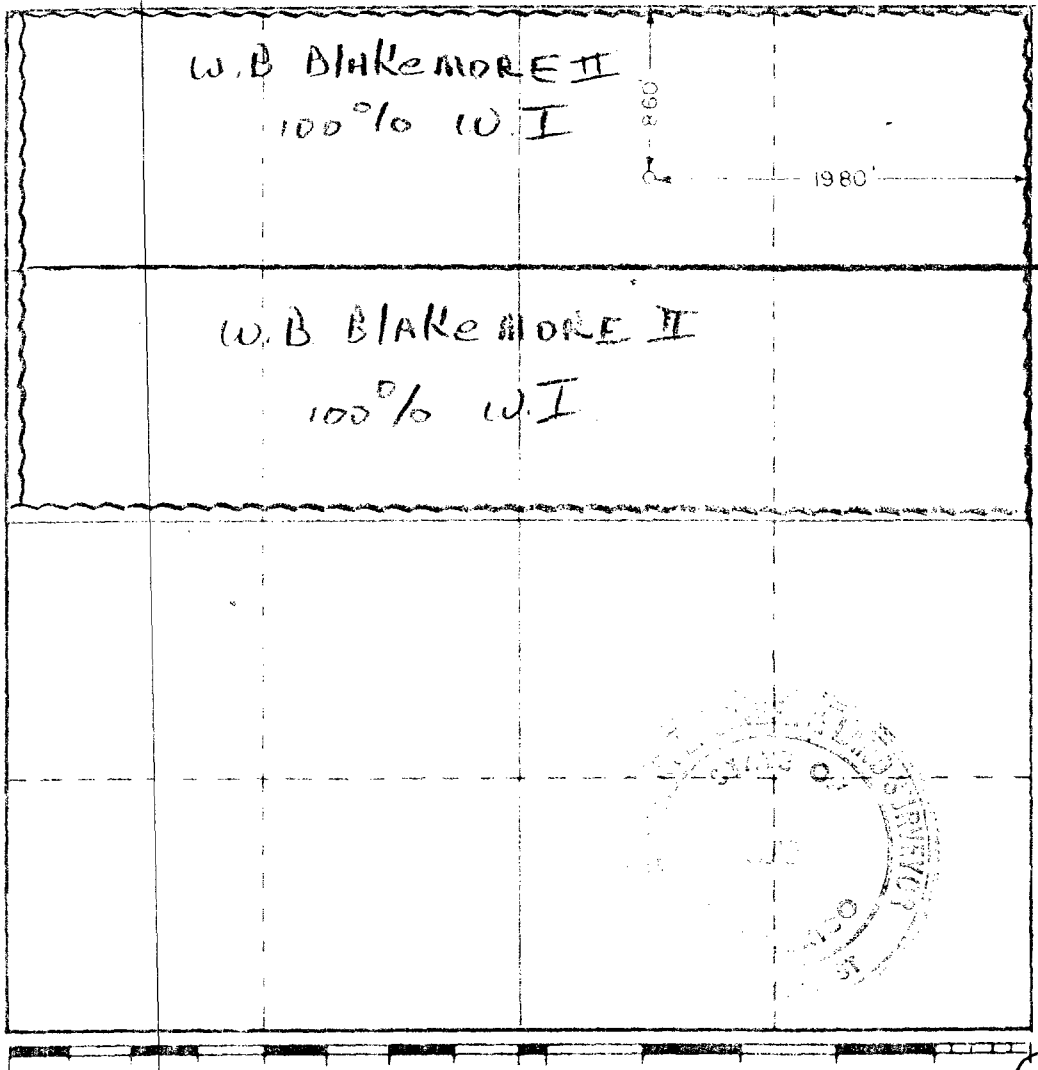
2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty).

3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling, etc?

☐ Yes ☐ No If answer is "yes," type of consolidation _____

If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.) _____

No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission.



CERTIFICATION

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

Name: Ronnie Lewdas
Position: Vice President
Company: Black River Corporation
Date: 11-28-77

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my knowledge and belief.

Date Surveyed: Nov. 11, 1977

Registered Professional Engineer and/or Land Surveyor: John W. West

Certificate No. 676

ALPHA TWENTY-ONE PRODUCTION COMPANY

POST OFFICE BOX 1206
JAL, NEW MEXICO 88252

505/395-2056

April 18, 1984

Cities Services Company
P.O. Box 1919
Midland, TX 79702

RE: BRC Madera No. 1
Sec. 29, T-22-S, R-27-E,
Eddy County, New Mexico

Gentlemen:

As an offset operator, please be informed that we are applying for a Hardship Gas Well Classification on our above referenced well.

Enclosed for your review and records please find one copy of each of the Application for Classification as a Hardship Gas Well and an ownership map showing the proration unit dedication and ownership of all offsetting acreage.

If you have any questions concerning this application should be directed to the Oil Conservation Commission of New Mexico in Santa Fe, New Mexico

Sincerely,

Michael D. Oney,
Drilling Superintendent

MDO/tic
Enclosures

cc: Antweil Oil Company
P.O. Box 2010
Hobbs, NM 88240

Belco Petroleum Corporation
10000 Oil Katy Road, Suite 100
Houston, TX 77055

Coquina Oil Corporation
P.O. Drawer 2960
Midland, TX 79702

Union Oil Company of California
P.O. Box 3110
Midland, TX 79702

El Paso Natural Gas Company
P.O. Box 1492
El Paso, TX 79978

Husky Oil Company
6060 S. Willow Drive
Englewood, CO 80111

Mabee Petroleum Corporation
901 Petroleum Building
Midland, TX 79701

Alpha Twenty-One Production Company
2100 First National Bank Building
Midland, TX 79701

ALPHA TWENTY-ONE PRODUCTION COMPANY
Tabulation of Production
BRC Madera
Sec. 29, T22S, R27E
Eddy County, New Mexico
Carlsbad Morrow So.

	Gas MCF	Annual Cumulative	Total Cumulative	Oil Bbls	Annual Cumulative	Total Cumulative
1978						
March	14,350					
April	28,314	42,664				
May	31,751	74,415				
June	29,039	103,454				
July	30,673	134,127				
August	30,459	164,586				
September	29,327	193,913				
October	34,910	228,823				
November	41,682	270,505				
December	36,157	306,662	306,662			143
1979						
January	40,344			56		
February	36,798	77,142		6		
March	40,924	118,066		65		
April	38,058	156,124		39		
May	37,148	193,272		-52		
June	36,059	229,331		36		
July	33,211	262,542		15		
August	33,303	295,845		10		
September	32,668	328,513		24		
October	35,004	363,517		18		
November	33,243	396,760		42		
December	33,318	430,078	736,740	61	424	567
1980						
January	34,393			28		
February	31,717	66,110		24		
March	34,334	100,444		54		
April	32,466	132,910		36		
May	29,218	162,128		17		
June	29,129	191,257		22		
July	29,676	220,933		20		
August	32,332	253,265		19		
September	31,066	284,331		32		
October	30,825	315,156		46		
November	29,263	344,419		39		
December	29,891	374,310	1,111,050	50	387	954
1981						
January	29,156			18		
February	26,221	55,377	1,166,427	40	58	1,012
March	28,548	83,925	1,194,975	26	84	1,038
April	27,513	111,438	1,222,488	25	109	1,063
May	28,243	139,681	1,250,731	25	134	1,088
June	26,339	166,020	1,277,070	23	157	1,111
July	26,565	192,585	1,303,635	16	173	1,127
August	25,503	218,088	1,329,138	0	173	1,127
September	23,776	241,864	1,352,914	0	173	1,127
October	24,189	266,053	1,377,103	0	173	1,127
November	23,152	289,205	1,400,255	0	173	1,127
December	22,143	311,348	1,422,398	0	173	1,127
1982						
January	21,727	21,727	1,444,125	0	0	1,127
February	23,982	45,709	1,468,107	0	0	1,127
March	26,704	72,413	1,494,811	23	23	1,150
April	25,002	97,415	1,519,813	0	23	1,150
May	24,535	121,950	1,544,348	0	23	1,150
June	24,499	146,449	1,568,847	0	23	1,150
July	24,984	171,433	1,593,831	0	23	1,150
August	15,503	186,936	1,609,334	0	23	1,150
September	19,611	206,547	1,628,945	0	23	1,150
October	20,820	227,367	1,649,765	0	23	1,150
November	20,055	247,422	1,669,820	0	23	1,150
December	24,038	271,460	1,693,858	0	23	1,150

ALPHA TWENTY-ONE PRODUCTION COMPANY
Tabulation of Production
BRC Madera
Sec. 29, T22S, R27E
Eddy County, New Mexico
Carlsbad Morrow So.

	Gas MCF	Annual Cumulative	Total Cumulative	Oil Bbls	Annual Cumulative	Total Cumulative
1983						
January	21,810	21,810	1,715,668	0	0	1,150
February	19,117	40,927	1,734,785	0	0	1,150
March	23,539	64,466	1,758,324	55	55	1,205
April	24,364	88,830	1,782,688	0	55	1,205
May	25,294	114,124	1,807,982	0	55	1,205
June	21,808	135,932	1,829,790	0	55	1,205
July	23,253	159,185	1,853,043	0	55	1,205
August	21,867	181,052	1,874,910	0	55	1,205
September	21,751	202,803	1,896,661	0	55	1,205
October	21,353	224,156	1,918,014	0	55	1,205
November	19,688	243,844	1,937,702	0	55	1,205
December	23,483	267,327	1,961,185	0	55	1,205

NEW MEXICO OIL CONSERVATION COMMISSION

MULTIPOINT AND ONE POINT BACK PRESSURE TEST FOR GAS WELL

Form C-122
Revised 9-1-65

RECEIVED
JUL 12 1978
O. C. C.
ARTESIA, OFFICE

Type Test: ☒ Initial ☐ Annual ☐ Special			Test Date: 5-12-78		
Company: BLACK RIVER CORPORATION		Connection: EL PASO NATURAL GAS CO.			
Pool: SOUTH CARLSBAD		Formation: MORROW		Unit:	
Completion Date: 3-7-78	Total Depth: 11,842'	Plug Back T.D.: 11,765'	Elevation: 3138.8 GR.	Farm or Lease Name: BRC MADERA	
Csg. Size: 7 5/8" / 5" LINER	Wt.: 29.70# / 18.00#	d: 6.875" / 4.276"	Set At: 11,311' / 10,056-11842'	Perforations: From 11,697' To 11,706'	Well No.: 1
Tbg. Size: 2 3/8"	Wt.: 4.6#	d: 1.995"	Set At: 11,708'	Perforations: From OPEN ENDED	Unit: B / Sec.: 29 / Twp.: 22S / Rge.: 27E
Type Well – Single – Bradenhead – G.G. or G.O. Multiple: SINGLE			Packer Set At: 11,617'	County: EDDY	
Producing Thru: TUBING	Reservoir Temp. °F:	Mean Annual Temp. °F: 60	Baro. Press. – P_a: 13.2	State: NEW MEXICO	

L	H	Gg	% CO_2	% N_2	% H_2S	Prover	Meter Run	Taps
		0.582					4"	FLANGE

FLOW DATA

NO.	Prover Line Size	X	Orifice Size	Press. p.s.i.g.	Diff. h_w	Temp. °F
SI	4"	x	1.000"			
1.						
2.						
3.						
4.						
5.						

TUBING DATA		CASING DATA		Duration of Flow
Press. p.s.i.g.	Temp. °F	Press. p.s.i.g.	Temp. °F	
480				24 HRS

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, Fpv	Rate of Flow Q, Mcfd
1	4.753	178.3	493.2	1.000	1.311		1,111
2							
3							
4							
5							

NO.	P_t	Temp. °R	T_f	Z
1				
2				
3				
4				
5				

Gas Liquid Hydrocarbon Ratio _____ Mcf/bbl.
A.P.I. Gravity of Liquid Hydrocarbons _____ Deg.
Specific Gravity Separator Gas 0.582 XXXXXXXXXX
Specific Gravity Flowing Fluid XXXXX
Critical Pressure _____ P.S.I.A. _____ P.S.I.A.
Critical Temperature _____ R _____ R

P_c _____ P_c^2 _____

NO	P_t^2	P_w	P_w^2	$P_c^2 - P_w^2$
1				
2				
3				
4				
5				

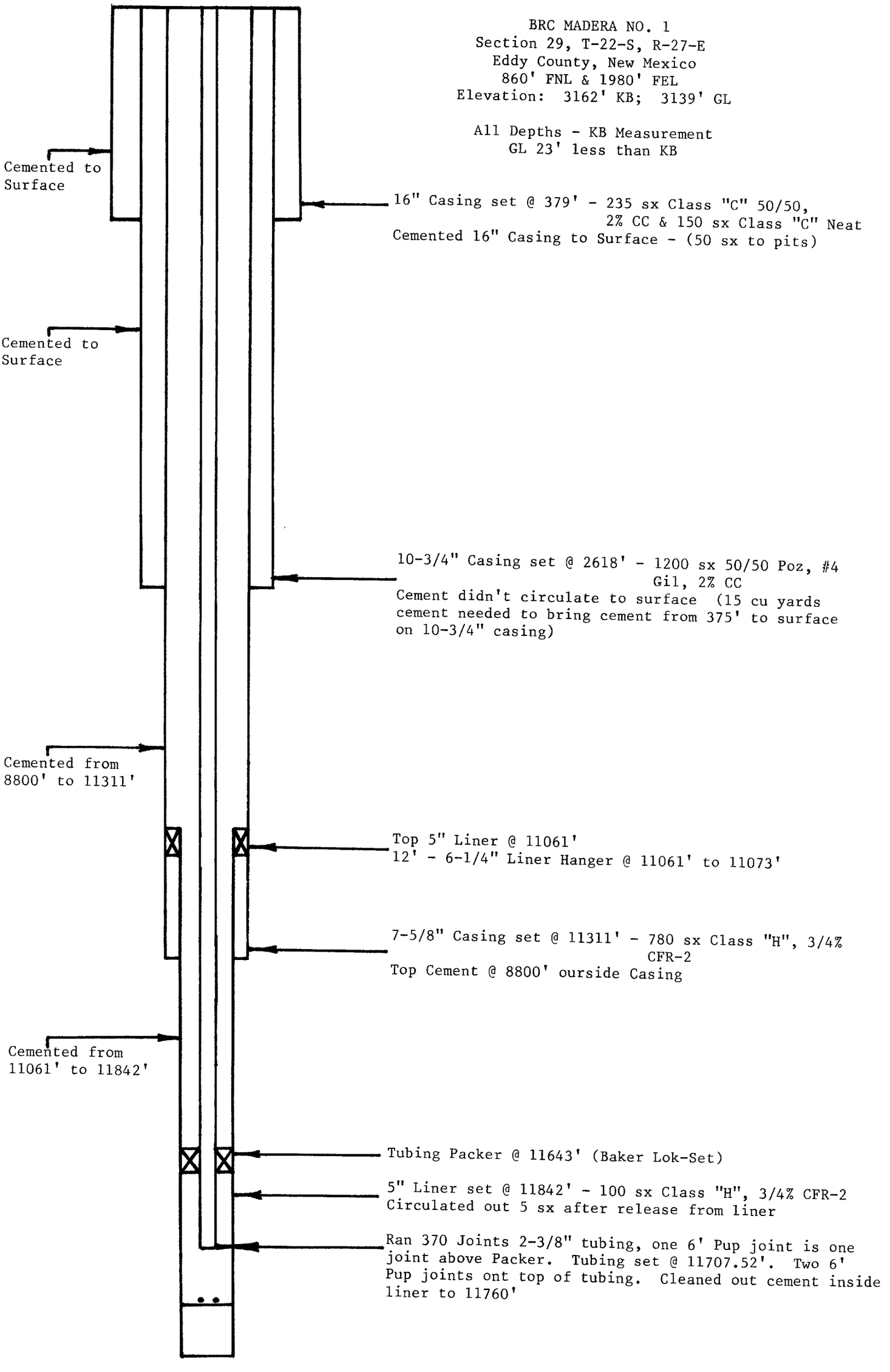
(1) $\frac{P_c^2}{P_c^2 - P_w^2} =$ _____ (2) $\left[\frac{P_c^2}{P_c^2 - P_w^2}\right]^n =$ _____

$\left[\frac{P_c^2}{P^2 - P_w^2}\right]^n =$ _____

Absolute Open Flow _____ Mcfd @ 15.025 | Angle of Slope θ _____ | Slope, n _____

Remarks: THE 24 HOUR FLOW TEST WAS CONDUCTED IN LIEU OF THE CONVENTIONAL 4-POINT TEST. IT WAS FEARED SHUTING THE WELL IN WOULD CAUSE IT TO LOG OFF AND NOT COME BACK.

Approved By Commission:	Conducted By:	Calculated By:	Checked By:
	B.J.T.	M.C.T.	J.W.W.


BRC MADERA NO. 1
Section 29, T-22-S, R-27-E
Eddy County, New Mexico
860' FNL & 1980' FEL
Elevation: 3162' KB; 3139' GL
All Depths - KB Measurement
GL 23' less than KB
Cemented to Surface
16" Casing set @ 379' - 235 sx Class "C" 50/50, 2% CC & 150 sx Class "C" Neat
Cemented 16" Casing to Surface - (50 sx to pits)
Cemented to Surface
10-3/4" Casing set @ 2618' - 1200 sx 50/50 Poz, #4 Gil, 2% CC
Cement didn't circulate to surface (15 cu yards cement needed to bring cement from 375' to surface on 10-3/4" casing)
Cemented from 8800' to 11311'
Top 5" Liner @ 11061'
12' - 6-1/4" Liner Hanger @ 11061' to 11073'
7-5/8" Casing set @ 11311' - 780 sx Class "H", 3/4% CFR-2
Top Cement @ 8800' ourside Casing
Cemented from 11061' to 11842'
Tubing Packer @ 11643' (Baker Lok-Set)
5" Liner set @ 11842' - 100 sx Class "H", 3/4% CFR-2
Circulated out 5 sx after release from liner
Ran 370 Joints 2-3/8" tubing, one 6' Pup joint is one joint above Packer. Tubing set @ 11707.52'. Two 6' Pup joints ont top of tubing. Cleaned out cement inside liner to 11760'

ALPHA TWENTY-ONE PRODUCTION COMPANY

POST OFFICE BOX 1206
JAL, NEW MEXICO 88252

505/395-3056

April 18, 1984

I, Michael D. Oney, certify that all foregoing information submitted with the Application for Classification as Hardship Gas Well on the BRC Madera No. 1, Sec. 29, T-22-S, R-27-E, Eddy County, New Mexico is true and correct to the best of my knowledge and further atest that one copy of the Application has been submitted to the appropriate Division district office (Oil Conservation Division, P.O. Drawer DD, Artesia, NM 88210) and that notice of this application has been given to the transporter/purchaser (El Paso Natural Gas Company, P.O. Box 1494, El Paso, Texas 79978) and notice of this application has been given to all offset operators.

Michael D. Oney

Michael D. Oney, Drilling Superintendent