

S. D. Blossom District Superintendent NOV 1 5 1982
OIL CLASSIC

Amoco Production Company

Petroleum Center Building 501 Airport Drive Farmington, New Mexico 87401 505-325-8841

November 10, 1982

New Mexico Oil Conservation Division 1000 Rio Brazos Rd. Aztec, NM 87410 New Mexico Oil Conservation Division ► Box 2088 Santa Fe, NM 87501

File: DHS-519-986.510.1

Commingling Application for the Jack Frost B No. 1E 615' FSL x 810' FWL Section 27, T27N, R10W, San Juan County, New Mexico

Amoco Production Company requests approval to commingle production from the Angels Peak Gallup and Basin Dakota pools in the subject well. This commingling will utilize a production packer set between the two zones at 5920' and a sliding sleeve set at 5832' to produce up a 2-3/8" tubing string landed at 6509'.

The commingling of the Gallup and Dakota is necessary because of the low producing rates in the Gallup. After an extended completion period lasting eight months, the Gallup would produce an average of only 225 MCFD and 2 BOPD. To obtain this prodution rate it was necessary to swab the well several times daily. It is assumed the well will not produce by flowing and it will be necessary to utilize the energy in the Dakota to lift the hydrocarbons. Therefore, the only way to produce the zone is by commingling with the Dakota production. The proposed commingling will not adversely affect either zone for the following reasons.

- 1. Neither zone at the present time produces any formation water. The Gallup did produce some water during swab and flow operations but from water analysis it is shown that this was load water (see Attachment 1).
- 2. Neither zone has a history of sensitivity to liquid hydrocarbons and should not be damaged by either zone's condensate production.
- 3. Several offsets have had good success in the downhole commingling of both zones, the most recent being the commingling of Dugan Production Company's McAdams No. 3, Order No. R-5313 one mile to the southeast (see Attachment 2).
- 4. Since both zones produce gas of approximately the same composition, there will be no loss of value as a result of the commingling.
- 5. Both zones have common ownership, so there will be no problems in allocating royalty or working interest payments.

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6. The bottom hole pressure of the Gallup is 51.7 percent that of the Dakota adjusted to a common datum. This ratio is 1.7 percent above that set down in NMOCD Rule 303C, Order No. R-6882.

In compliance with NMOCD Rule 303C, "Downhole Commingling," please find attached two copies of each of the following:

Attachment No.

- 1 Wellbore diagram of the completed well.
- Well location map showing location of all outside operated wells.
- "Well Location and Dedication Plat" (NMOCD Form C-102).
- 4 List of names and addresses of operators of all outside operated wells.
- A complete well completion history (USGS Form 9-331, "Sundry Notices and Reports on Wells").
- A complete engineering completion summary on both zones along with complete well test data on the Gallup.
- 7 NMOCD Form C-116 for the Dakota showing the results of a 168 hour flow test.
- 8 NMOCD Form C-116 for the Gallup showing the results of a 244 hour flow test. State rules require current (within 30 days) productivity tests. The Gallup test was taken 10-22-81 to 11-3-81. The well was flared for six days then shut in to the present time. Since the Gallup was shut in to the present, we request an exception to be granted to the 30-day limit required for the Gallup.
- Actual bottom hole pressure taken for the Dakota and Gallup with the Dakota adjusted to a common datum.
- A copy of the gas analysis of produced gas from the Dakota.
- A copy of the gas analysis of produced gas from the Angels Peak Gallup.
- A copy of the letter sent to all offset operators and the Minerals Management Service notifying them of our intent to commingle. This letter has been returned approved by all offset operators and the MMS.

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To allocate production to the individual Gallup and Dakota horizons we recommend the following:

- 1. Allocate 24.40 percent of the gas production as shown on Form C-116 to the Gallup horizon.
- 2. Allocate 75.60 percent of the gas production as shown on Form C-116 to the Dakota production.
- 3. Allocate 18.9 percent of the oil production as shown on Form C-116 to the Gallup horizon.
- 4. Allocate 81.1 percent of the oil production as shown on Form C-116 to the Dakota horizon.
- 5. Test the well 30 days after approval of commingling and submit a Form C-116 stating each zone's actual oil and gas productivity under commingling conditions and allocating each zone's production accordingly.

We would like to obtain approval for this well as soon as possible so that we can begin production. Your prompt handling of this matter is appreciated.

Sincerely,

DWS/tk

Attachments

FARMINGTON, NEW MEXICO

ATTACHMENT NO. Report No:_

LABORATORY WATER ANALYSIS

To: Amoco Production Co.		Date: 3/8/82
501 Airport Dr.	This repo	ort is the property of Nationa
Farmington, NM 87401	. Cementers	s Corp. and neither it nor any reof is to be published or dis
	closed wi	thout first securing the ex-
Attn: Mr. Dave Schott		proval of laboratory managemen however, be used in the course
	of regula	er business operations by any concern and employees thereo
MAR S	receiving	g such report from National
	Cementers	s Corporation.
Submitted By: Dave Schott	Date Rece	eived: 10/2/81
Vell No: Jack Frost B #1E	Depth:4000'	Formation: Gallup
ocation: San Juan County, NM	Swab Sampl	
	· DWAD DEMPI	
Resistivity	0.42	ohms/m ² /m
Temperature	73,°F	
Specific Gravity(Sp.Gr.)	1.007	•
pH	6.7	
Total Dissolved Solids	15,533	parts per million*
Calcium (Ca ^{††})	326	parts per million
Magnesium (Mg ++)	21	parts per million
Chlorides (Cl ⁻)	6,229	parts per million
Carbonates (CO ₃)	0	parts per million
Bicarbonates (HCO3)	355	parts per million
Sulfates (SO _L)	1,606	parts per million
Iron (Fe ⁺⁺⁺)	present	parts per million
Potassium (K ⁺)	₼/6,000 (Estim	nated) parts per million
Sodium (Na [†])(Difference)	996	parts per million
Stability Index (SI)	Not required	
REMARKS: There appears to be ab	out 1% KCL in wat	er
indicates parts per million l	oy weight; uncorr	rected for Specific Gravity
LABORATORY ANALYST:		etfully submitted,
Clarion Cochran	By:	Karion A. Cochian
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EXISTING
ANGEL
PEAK
GALLUP
WELLS

• EXISTING BASIN DAKOTA WELLS

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To the same of the	33 EPNG Sano Unit	Bu 2. Annoco K. M. M. M. M. Mann.	28 C.H. M. Adams	Amos Schnson E.J. Johnson	Amoco 21
Sweeth, y Cou	Thurstains 34	A	15th Gordon 27	Amoco	#iroco 22 Dir. Gordon 22 #inoco Annoco Dir. Gordon
Huersano Unit		Amoro of Sect Frost	Somoso 75 to so	• •	

PROPOSED WELL LOCATION E2

Amended ATTACHMENT NO P. O. BOX 2088 STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT kevised 10-1-78 SANTA FE, NEW MEXICO 87501 All distances must be from the cuter houndaries of the Section Operator JACK FROST "B" AMOCO PRODUCTION COMPANY 1-E Township . Section Rance County 104 27N . San Juan Actual Footage Location of Well: 810 West 615 South feet from the line and Ground Lovel Elev. Producing Formation Dedicated Acreage: 320/80 - Acres Dakota /Gallup Basin Dakota / Angels Peak Gallup 6158 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? If answer is "yes," type of consolidation Communitization XX Yes 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 ACCEPILU FOR RECORD W. L. Peterson 4, N. W. FARRAGEGEGE Position APR 29 1982 DISTRICT ENGINEER Company MINGTON/DISTRICT AMOCO PRODUCTION COMPANY Sec. APRIL 22, 1982 27 I hereby certify that the well location shown on this plat was platted from field notes of actual surveys made by me or under my supervision, and that the same OIL CLANS is true and correct to the best of my knowledge and belief. SF-077951-A Date Surveyed

List of names and addresses of operators of all outside operated wells.

Dugan Production Company P. O. Box 208 Farmington, NM 87401

El Paso Natural Gas Company P. O. Box 990 Farmington, NM 87401

UNITED STATES DEPARTMENT OF THE INTERIOR

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5. LEASE

SANTA FOR DETAILS AND THE DESCRIPTION OF WELL COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well a plug back depth is 6566. Perforated intervals from 6500-6508, 6419-6461, 6359-6375 with 2 spf, a total of 112, 38" holes. Fraced Dakot intervals from 550, 38" holes. Fraced with 20, 500 dates. Fraced wi	GEOLOGICAL SURVEY	6. IF INDIAN, ALLOTTEE OR TRIBE NAME
### Basin Dakota/Angels Peak Callup ### SANDERS OF OPERATOR ### ADDRESS OF OPERATOR ### ADDRE		8. FARM OR LEASE NAME
Amoco Production Company Amoco Production Company Address of Operator 1. Address of Operator 2. Address of Operator 3. Address of Operator 4. Location of Well (Report Location Clearly, See space 17 below.) AT SURFACE: 615' FSL x 810' FWL AT TOP PROD. INTERVAL: Same AT TOTAL DEPTH: Same 1. API NO. 1. API NO		Jack Frost "B" SANTA FE"
Amore Production Company 3. ADDRESS OF OPERATOR 3. ADDRESS OF OPERATOR 501 Airport Drive, Farmington, NN 87401 4. LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.) AT SURFACE: 615' FSL x 810' FWL AT TOP PROD. INTERVAL: Same AT TOTAL DEPTH: Same 14. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE. REPORT, OR OTHER DATA 15. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE. REPORT OR ACIDIZE 16. FRACTURE TREAT 17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)* Completion operations commenced on 1-28-81. Total depth of the vell is 6615' and plug back depth is 6566. Perforated intervals from 6500-6508, 6419-6461, 6369-6375 with 2 spf, a total of 112, 38" holes. Fraced With 20,500 including from 5757-5782 with 2 spf, a total of 50, 38" holes. Fraced with 20,500	R. NAME OF OPERATOR	
501 Airport Drive, Farmington, NM 87401 11: SEC., T. R., M., OR BLK. AND SURVEY OR AREA SW/4, Sw/4, Section 27, below.) 12: LOCATION OF WELL (REPORT LOCATION CLEARLY. See space 17 below.) 13: STATE SW/4, Sw/	- Amoco Production Company	10. FIELD OR WILDCAT NAME
AREA SW/4, Sw/4, Section 27, below.) AT SURFACE: 615' FSL x 810' FWL AT TOP PROD. INTERVAL: Same AT TOTAL DEPTH: Same 16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE. REPORT, OR OTHER DATA REQUEST FOR APPROVAL TO: SUBSEQUENT REPORT OF: TEST WATER SHUT-OFF SILL OR ACIDIZE SHEAR WELL PILL OR ALTER CASING SHOW DF, KDB, AND WD) CHANGE ZONES SHADON.* CHANGE ZONES SHADON.* Chien Completion 17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)* Completion operations commenced on 1-28-81. Total depth of the well is 6615' and plug back depth is 6566. Perforated intervels from 6500-6508, 6419-6461, 6369-6375 with 2 spf, a total of 112, .38" holes. Fraced with 20,500	3. ADDRESS OF OPERATOR	Basin Dakota/Angels Peak Gallup
Delow) AT SURFACE: 615' FSL x 810' FWL AT TOP PROD. INTERVAL: Same AT TOTAL DEPTH: Same 16. CHECK APPROPRIATE BOX TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA REQUEST FOR APPROVAL TO: SUBSEQUENT REPORT OF 6158' GL 17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) 17. DESCRIBE PROPOSED OR COMPLETE OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) 17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) 17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.) 18. LEVATIONS (SHOW DF, KDR, AND WD) 19. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)		
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TEST WATER SHUT-OFF SHOOT OR ACIDIZE REPAIR WELL PILL OR ALTER CASING MULTIPLE COMPLETE CHANGE ZONES 17. DESCRIBE PROPOSED OR COMPLETED OPERATIONS (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work. If well is directionally drilled, give subsurface locations and measured and true vertical depths for all markers and zones pertinent to this work.)* Completion operations commenced on 1-28-81. Total depth of the well is 6615' and plug back depth is 6566. Perforated intervals from 6500-6508, 6419-6461, 6369-6375 with 2 spf, a total of 112, .38" holes. Fraced Dakota intervals with 108,000 gallons of frac fluid and 367,000: 20-40 sand. Perforated intervals from 5757-5782 with 2 spf, a total of 50, .38" holes. Fraced with 20,500	REPORT, OR OTHER DATA	
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and plug back depth is 6566. Perforated intervals from 6500-6508, 6419-6461, 6369-6375 with 2 spf, a total of 112, .38" holes. Fraced Dakota intervals with 108,000 gallons of frac fluid and 367,000# 20-40 sand. Perforated intervals from 5757-5782 with 2 spf, a total of 50, .38" holes. Fraced with 20,500	including estimated date of starting any proposed work. If well is di	e all pertinent details, and give pertinent dates,
5489-5497, 5503-5508, 5590-5609, 5618-5623, 5661-5711, with 2 spf, a total of 174, .38" holes. Frac Gallup with 100,000 gallons of frac fluid and 125,000% of 20-40 sand. Land 2 3/8" tubing at 5781. Swabbed the well and released the rig on 2-27-81.	and plug back depth is 6566. Perforated inter 6369-6375 with 2 spf, a total of 112, .38" hol with 108,000 gallons of frac fluid and 367,000 vals from 5757-5782 with 2 spf, a total of 50, gallons of frac fluid and 71,000# of 20-40 san 5489-5497, 5503-5508, 5590-5609, 5618-5623, 56 of 174, .38" holes. Frac Gallup with 100,000 of 20-40 sand. Land 2 3/8" tubing at 5781.	rvals from 6500-6508, 6419-6461, les. Fraced Dakota intervals 20-40 sand. Perforated inter- 38" holes. Fraced with 20,500 ad. Perforated intervals from 561-5711, with 2 spf, a total gallons of frac fluid and 125,000#
Subsurface Safety Valve: Manu. and Type Set @ Ft.	Subsurface Safety Valve: Manu. and Type	Set @ Ft.
38. Thereby certify that the foregoing is true and correct Original Signed By	Original Signed By	
SIGNED TITLE Dist. Admin. Subvr DATE 3/11/81	SIGNED 7. 7. SYON TITLE Dist. Admin. S	SUDVI DATE 3/11/81 .

(This space for Federal or State office use)

APPROVED BY CONDITIONS OF APPROVAL, IF ANY:

OPERATOR

AGGEPTEN FOR RECORD

MAR 13 1981

*See Instructions on Paverse Side

US65- Farmengton M.F. Brown

FARMING PARTIES

COMPLETION HISTORY, JACK FROST "B" NO. 1E

1-29-81: Move in and rig up service unit

1-31-81: Perforated 6461-6419', 6379'-6369', 6500'-6508' with 2 JSPF. Fraced Dakota with 108,000 gallons 40 & 30 lbs crosslinked gelled water with 5% condensate. Flushed with 10,235 gallons 2% KCL water. ISIP 740 psi.

2-2-81: Perforate 5757'-5782' with 2 JSPF.

Fraced Gallup with 20,500 gallon 40 lb crosslinked gelled water with 5% condensate. Flush with 9,251 gallons 2% KCL water ISIP 350 psi.

2-7-82: Perforated Gallup 5489'-5497', 5503'-5508', 5590'-5609', 5618'-5623', 5661'-5711'. Perforate 5533'-5542'. Frac entire interval down casing with 100,000 gallons 75 quality foam with 20 lb gelled water and 8 gal suds/1000 gallons flush with 8820 gallons foam. ISIP 700 psi.

Well Test Data in the Gallup

Date	Comments	<u>BWPD</u>	BOPD	MCFD
2-27	SWB	16	8	
2-28	SWB & FLW	30		
3-1	SWB & FLW	22-1/2	2-1/2	
3-2	SWB & FLW	30	3 1 3	
3-10	FLW		20	
3-13	FLW	80	20 ,	
3-14	SWB		38	
3-15	SWB & FLW		40	
3-18	SWB & FLW		60	*
3-19	SWB & FLW		24	
3-22	SWB		0 ,	94
3-23	SWB & FLW		17	64
3-24	FLW	•	16	76
3-25	FLW .		10	70
3-27	Well Dead - WO Worko	ver		

3-28-81 to 9-28-81: Well was SI, WO workover

9-29-81: Move in and rig up service unit

10-2-81: Set packer at 5369 ft. Rig up Howco and pumped 5900 gal of 2% KCL and 1 gal surfactant per 1000 gallons water. Nitrified water with 600 SCF/BBL, 79,500 SCF nitrogen used. Rate was 3 BPM at 2750 psi. ISIP was 1700 psi; 15 ISIP was 1650 psi. Rigged down Howco.

Test Summary:

<u>Date</u>	Comments	BWPD	BOPD	MCFD
10-3-81	SWB	55	trace	
10-4-81	SWB	. 38	trace	
10-5-81	SWB	- 25	. 4	
10-7-81	SWB & FLW	30	5	
10-8-81	SWB & FLW	40	9	
10-10-81	SWB & FLW	1	3	333
10-12-81	SWB & FLW	2	3	163
10-14-81	SWB & FLW	1	0	130
10-15-81	SWB & FLW	2	3	123

COMPLETION HISTORY, JACK FROST "B" NO. 1E (Cont.)

10-16-81 Pumped 5700 gal nitrified paraffin acid dispersent	
10-22-81 SWB & FLW 1	155
10-23-81 SWB & FLW .3 1.5	152
10-24-81 SWB & FLW .75 1	188
10-26-81 SWB & FLW .75 2.8	28 7
10-27-81 SWB & FLW - 3	237
10-28-81 SWB & FLW 0 .5	186
10-29-81 SWB & FLW 1 1.5	237
10-30-81 SWB & FLW 1 5	208
10-31-81 SWB & FLW - 1.5	29 0
11-1-81 SWB & FLW 1 3	25 7
11-2-81 SWB & FLW - 3	307
11-3-81 SWB & FLW - 2	203

11-4-81 to 11-10-81: Blow well to bit and flare 11-10-81: SI to present

ENERGY AND MINERALS DEPARTMENT STATE OF NEW MEXICO

SANTA FE, NEW MEXICO 87501 P. O. BOX 2088

Car Constitue Constitue Carting

ATTACHMENT NO. 7

Form C-116 Revised 10-1-78

GAS-OIL RATIO TESTS

	Jack				Address		Operator
	Frost B	17 17 20 18 23 17		501 Airport Drive, Farmington, NM		Amoco Production Company	
	1E	<u>и</u> 0	WELL	Farming		mpany	
	×	c		ton,			
	27	ن	LOC,	\$		-	Pcol
	27	4	LOCATION	87401			-
	10	כב				Basin	
	10-1-82 to 10-20-82	TEST	DATEOF	7		n Dakota	
ļ	F C	STA		TEST	BAAL		
	Open	SIZE	CHOKE	(X)	0		
	250	ער נר אַנאָדָּ אַנּ		Sch			
		800 E	DAILY	Scheduled X			Co
_	480	HOURS	0 7 6 7 H			လ	County
	Ν	BBLS.	ס	Coles		San Juan	
		GRAV.	PROD. DURING	Ceiapletron [Þ	
	185	33.05 01.0					
	13,932 75,3	M.C.F.	TEST	Spec			
	75,308	CU.FT/BBL	GAS - CIL	Spectal []			

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 publin 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.

will be 0.60. Gus volumes must be reported in MCF measured at a pressure base of 15,025 psic and a temperature of 60° F. Specific gravity base

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 Sule 301 and appropriate pool rules.

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

(Signature)

(Title)

(Date)

STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT

SANTA FE, NEW MEXICO 0750: P. O. 110 X 2088

ATTACHMENT NO. 8

form C-116

Revised 10-1-76

GAS-OIL RATIO TESTS

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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 in located by more than 15 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.

will be oled. Gas volumes must be reported in MCF measured at a pressure base of 15.025 pala and a temperature of 60° E. Specific gravity base

Report custing pressure in lieu of tubing pressure for any well producing through custing.

Mati criginal and one copy of this report to the district office of the New Mexico Oli Connervation Division to accordance with Rule 331 and apprepriate pool rules.

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(Signature)

BHP Calculations for the Jack Frost B No. 1E

The BHP of the Dakota and Gallup formations was measured by a 3000 psi Amerada RPG-3 pressure bomb. Each zone was shut-in seven days prior to the BHP measurement. The results of the tests are summarized below:

Date	Depth Stopped	Extension	Pressure	Formation
10 -28- 82	Surface	.293	443 psi	Gallup
10-28-82	5810 ft	.353	534 psi	Gallup
11-5-82	Surface	.567	861 psi	Dakota
11-5-82	6370 ft	.691	1050 psi	Dakota

The Dakota pressure gradient is .0297 psi/ft. The Dakota pressure adjusted to a common datum of 5810 feet with the Gallup is:

Gallup BHP at 5810 ft = 534 psi Dakota BHP at 5810 ft = 1033 psi

Therefore, the Gallup BHP is 51.7 percent that of the Dakota adjusted to a common datum.

04/68/82

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

CHROMATOGRAPHIC GAS ANALYSIS REPORTS

AMOCO PRODUCTION CO. ATTN: O. N. THURSTON 501 AIRPORT DRIVE FARMINGTON, NM & 7401

METER STA 94153
ANAL DATE 04 06 82 METER STATION NAME UPER 0203
JACK FROST B #1E

TYPE CODE SAMPLE DATE EFF. DATE USE MOS. SCALE H2S GRAINS LOCATION

OO 04 05 82 04 08 82 11 4 F 03

NORMAL MOL®

GPM

C 0 2 1.20 .000 .00 H 2 S .000 1.16 .000 NZ METHANE 77.32 .000 ETHANE 12.18 3.256 PRUPANE 5.73 1.576 ISG-BUTANE -68 .222 NURM-BUTANE 1.17 .369 ISU-PENTANE .26 .095 NÜRM-PENTANE .19 . Ü69 HEXANE PLUS .11 .048

TOTALS 100.00 5.635

SPECIFIC GRAVITY .725

MIXTURE HEATING VALUE
(BTU/CF AT 14.73 PSIA,60 DEGREES,DRY) 1,231

KATIO UF SPECIFIC HEATS 1.279

NO TEST SECURED FOR H2S CONTENT

ATTACHMENT NO. 11

10/09/81

EL PASO NATURAL GAS COMPANY MEASUREMENT DEPARTMENT

PUST DEFICE EDX 1492 EL PASO, TEXAS 79999

CHROMATOGRAPHIC GAS ANALYSIS REPORTS

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

SPECIFIC GRAVITY

MIXTURE HEATING VALUE

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(BTU/CF AT 14.73 PSIA,60 DEGREES,DRY)

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-753

1,271

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R. W. Schroeder District Superintendent

April 22, 1982

Amoco Production Company

Minerals Management Services

Farmington, NM 87401

Petroleum Center Building 501 Airport Drive Farmington, New Mexico 87401 505 - 325-8841

Dugan Production Company P.O. Box 208 Farmington, NM 87401

P.O. Box 990

File: WLP-156-986.510.1

El Paso Natural Gas Company Farmington, NM 87401

Proposed Downhole Commingling of Jack Frost B No. 1E, San Juan County, New Mexico

Dear Sir:

This is to advise you that the Farmington District Office of Amoco Production Comapny is requesting administrative approval from the Secretary-Director of the New Mexico Oil Conservation Division to downhole commingle production from the well below:

Jack Frost B No. 1E

Unit M, Section 27, T27N, R10V

Drawer 600

This well has been completed in the Angel Peak Gallup and the Basin Dakota pools.

Enclosed is a wellbore diagram and a map showing location of offset operated wells.

If you, as an offset operator, have no objections to the commingled production of the Angel Peak Gallup and Basin Dakota pools from the subject well, please sign the waiver below and send to:

> New Mexico Oil Conservation Division Attn: Mr. Joe D. Ramey Box 2088 Santa Fe, NM 87501

We would appreciate your sending one executed copy to the undersigned.

Very truly yours, Original Signed By

R. W. SCHROEDER

DWS/tk

Enclosures

Page 2 April 22, 1982 File: WLP-156-986.510.1

WAIVER

We hereby waive any objections to Amoco Production Company's application for commingling production as set forth above.

Company				
Ву				
Date				

9 5/8" 32.3# H-40 ST&C CSA 309' WITH 380 SX CMT

GALLUP PERFORATIONS: 5489'-5782'

DAKOTA PERFORATIONS: 6369'-6508'

MODEL L SLIDING SLEEVE
AT 5828'

SET BAKER LOCK SET MODEL
A-2 @ 5920'

2 3/8" TSA 6509'

7" 26# K-55 ST&C CSA 6615' WITH 1080 SX CMT

PBD 6566' TD 6615'

Amoco Production Company

SCALE

JACK FROST B #1E

1- .5



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

BOX 2088 SANTA FE, NEW MEXICO 87501
DATE Mor. 1) 1982
RE: Proposed MC Proposed DHC
Gentlemen:
I have examined the application dated Mov. 12, 1982
for the Onow Judowt B#12 M-27-27N-10W Operator Lease and Well No. Unit, S-T-R
Operator V Lease and Well No. Unit, S-T-R and my recommendations are as follows: Approve
Yours truly,
3 ml. Com