



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 8/26/85

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

Surfco Commings

Gentlemen:

I have examined the application dated 8/22/85
for the Southland Royalty Corp. Wellhead 8 6-15-32-12
Operator Lease and Well No. Unit, S-T-R

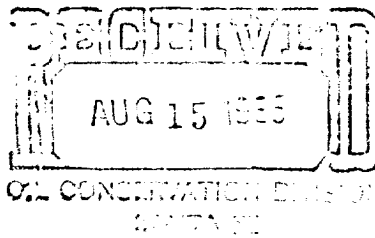
and my recommendations are as follows:

Approve

Yours truly,

Frank D. [Signature]

Attention Frank



Southland Royalty Company

August 13, 1985

Mr. R. L. Stamets
New Mexico Oil Conservation Division
P. O. Box 2088
Santa Fe, New Mexico 87501

RECEIVED
AUG 22 1985
OIL CON. DIV.
DIST. 3

RE: Surface Commingling
SRC - Hubbard #8
G Section 15, T32N, R12W
San Juan County, New Mexico
Blanco Pictured Cliffs/Undesignated Fruitland

Dear Mr. Stamets:

Southland Royalty Company requests permission to surface commingle production from the Fruitland and Pictured Cliffs formations in this dual well. Both zones require a compressor to produce and it is our intent to surface commingle production to facilitate the use of one common compressor and meter run.

The well is producing via separate 2-7/8" production casing to a common wellhead. In 1985 deliverability tests indicated that the Pictured Cliffs would produce 7 MCF/d and the Fruitland would produce 14 MCF/d without compression. The gas produced from each zone is similar and all liquid hydrocarbon production is allocated to the Fruitland formation.

Southland Royalty Company has 100% royalty interest in each formation. A copy of the latest deliverability tests are attached for your information.

If you have any questions in regard to this application, please contact me.

Sincerely,

SOUTHLAND ROYALTY COMPANY

Doug R. Harris
Petroleum Engineer

DRH/eg

Attachments

OIL CONSERVATION DIVISION

P.O. BOX 2088

SANTA FE, NEW MEXICO 87501

Form O-122-A
Revised 10-1-79STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENTWELL DELIVERABILITY TEST REPORT FOR 19 85

POOL NAME	POOL SLOPE	FORMATION	COUNTY
Undesignated	n = .85	Fruitland	San Juan

COMPANY			WELL NAME AND NUMBER		
Southland Royalty Company			Hubbard #8		
UNIT LETTER	SECTION	TOWNSHIP	RANGE	PURCHASING PIPELINE	
G	15	32	12	Southern Union Gathering	
CASING O.D. - INCHES	CASING I.D. - INCHES	SET AT DEPTH - FEET	TUBING O.D. - INCHES	TUBING I.D. - INCHES	TOP - TUBING PERF. - FEET
2.8750	2.4410	2488			
GAS PAY ZONE		WELL PRODUCING THRU		GAS GRAVITY	GRAVITY X LENGTH
FROM 2142	TO 2426	CASING X	TUBING	.600	1285
DATE OF FLOW TEST			DATE SHUT-IN PRESSURE MEASURED		
FROM 6-05-85	TO 6-12-85		6-19-85		

PRESSURE DATA - ALL PRESSURES IN PSIA

(a) Flowing Casing Pressure (DWt)	(b) Flowing Tubing Pressure (DWt)	(c) Flowing Meter Pressure (DWt)	(d) Flow Chart Static Reading	(e) Meter Error (Item c - Item d)	(f) Friction Loss (a - c) or (b - c)	(g) Average Meter Pressure (Integr.)
184		419	442	-23	-235	447
(h) Corrected Meter Pressure (g + e)	(i) Avg. Wellhead Press. $P_t = (h + f)$	(j) Shut-in Casing Pressure (DWt)	(k) Shut-in Tubing Pressure (DWt)	(l) P_c = higher value of (j) or (k)	(m) Del. Pressure $P_d = \frac{80}{100} P_c$	(n) Separator or Dehydrator Pr. (DWt) for critical flow only
424	189	673		673	538	

FLOW RATE CORRECTION (METER ERROR)

Integrated Volume - MCF/D	Quotient of $\frac{\text{Item c}}{\text{Item d}}$	$\sqrt{\frac{\text{Item c}}{\text{Item d}}}$	Corrected Volume
33	.9480	.9736	Q = 32 MCF/D

WORKING PRESSURE CALCULATION

$(1 - e^{-R})$	$(P_c Q_m)^2 (1000)$	$R^2 = (1 - e^{-R}) (P_c Q_m)^2 (1000)$	P_t^2	$P_w^2 = P_t^2 + R^2$	$P_w = \sqrt{P_w^2}$
.089	32	3	35721	35724	189

DELIVERABILITY CALCULATION

$D = Q \left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^n =$	32	$\left[\frac{163485}{417208} \right]^n =$	$\left(\frac{.3919}{.4510} \right)^n =$	.4510	$=$	14	MCF/D
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REMARKS:

Initial and Annual Deliverability Test
Well is on a compressor.

SUMMARY

Item b	424	Psia
P_c	673	Psia
Q	32	MCF/D
P_w	189	Psia
P_d	538	Psia
D	14	MCF/D

Company Southland Royalty Company
 By R. E. Zilde
 Title District Manager
 Witnessed By _____
 Company _____
 July 17, 1985

OIL CONSERVATION DIVISION

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENTP. O. BOX 2088
SANTA FE, NEW MEXICO 87501Form C-122-A
Revised 10-1-78WELL DELIVERABILITY TEST REPORT FOR 19 85

POOL NAME	POOL SLOPE	FORMATION	COUNTY
Blanco	n=.85	Pictured Cliffs	San Juan

COMPANY			WELL NAME AND NUMBER		
Southland Royalty Company			Hubbard #8		
UNIT LETTER	SECTION	TOWNSHIP	RANGE	PURCHASING PIPELINE	
G	15	32	12	Southern Union Gathering	
CASING O.D. - INCHES	CASING I.D. - INCHES	SET AT DEPTH - FEET	TUBING O.D. - INCHES	TUBING I.D. - INCHES	TOP - TUBING PERF. - FEET
2.8750	2.4410	2488			
GAS PAY ZONE		WELL PRODUCING THRU		GAS GRAVITY	GRAVITY & LENGTH
FROM 2142	TO 2426	CASING X	TUBING	.660	1414
DATE OF FLOW TEST			DATE SHUT-IN PRESSURE MEASURED		
FROM 03-13-85	TO 03-20-85		03-27-85		

PRESSURE DATA - ALL PRESSURES IN PSIA

(a) Flowing Casing Pressure (DWt)	(b) Flowing Tubing Pressure (DWt)	(c) Flowing Meter Pressure (DWt)	(d) Flow Chart Static Reading	(e) Meter Error (Item c - Item d)	(f) Friction Loss (a - c) or (b - c)	(g) Average Meter Pressure (Integr.)
119		379	387	-8	-260	393
(h) Corrected Meter Pressure (a + e)	(i) Avg. Wellhead Press. $P_t = (h + f)$	(j) Shut-in Casing Pressure (DWt)	(k) Shut-in Tubing Pressure (DWt)	(l) P_c = higher value of (j) or (k)	(m) Del. Pressure $P_d = \frac{80}{100} P_c$	(n) Separator or Dehydrator Pr. (DWt) for critical flow only
385	125	759		759	607	

FLOW RATE CORRECTION (METER ERROR)

Integrated Volume - MCF/D	Quotient of $\frac{\text{Item c}}{\text{Item d}}$	$\sqrt{\frac{\text{Item c}}{\text{Item d}}}$	Corrected Volume
16	.9793	.9896	Q = 16 MCF/D

WORKING PRESSURE CALCULATION

$(1 - e^{-x})$	$(F_c Q_m)^2 (1000)$	$R^2 = (1 - e^{-x}) (F_c Q_m)^2 (1000)$	P_t^2	$P_w^2 = P_t^2 + R^2$	$P_w = \sqrt{P_w^2}$
.098	8	1	15625	15626	125

DELIVERABILITY CALCULATION

$Q = Q \left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^n = 16 \left[\frac{207632}{560455} \right]^n = \left(\frac{.3705}{.4300} \right)^n = .4300 = 7 \text{ MCF/D}$

REMARKS:

Initial and Annual Deliverability Test

Well is on a compressor.

SUMMARY

Item b	385	Psia
P_c	759	Psia
Q	16	MCF/D
P_w	125	Psia
P_d	607	Psia
D	7	MCF/D

Company Southland Royalty Company
 By R.E. Fildes
 Title District Manager
 Witnessed By _____
 Company _____

APR 10 1985