



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 10/14/87

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

Surface Commings

Gentlemen:

I have examined the application dated 10/13/87
for the Meridian Meridian 447 #1 N-19-27N-3W
Operator Lease and Well No. Unit, S-T-R

and my recommendations are as follows:

Approve. Meridian will have to file C-111's

Yours truly,

John D. [Signature]

MERIDIAN OIL

October 12, 1987

Oil Conservation Commission
1000 Rio Brazos Road
Aztec, New Mexico
Attn: Mr. Frank Chavez

RE: Jicarilla 447 No. 1

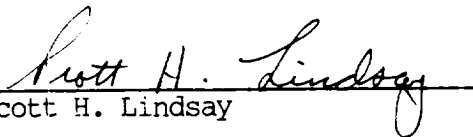
Mr. Chavez;

Meridian Oil Inc. hereby requests administrative approval to surface commingle the above referenced well. Northwest Pipeline has set their metering facilities at a considerable distance from the wellsite. By surface commingling, an existing 4" gathering line can be utilized, thus avoiding the additional expense of pipe and installation.

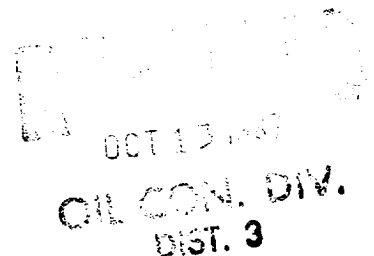
The initial deliverability test run on the Pictured Cliffs side shows a producing gas volume of 390 MCF/D, with a flowing tubing pressure of 344 psia. Oil production on the Pictured Cliffs side is 1.0 BOPD. The initial deliverability test run on the Mesaverde side shows a producing gas volume of 883 MCF/D, with a flowing tubing pressure of 432 psia. Oil production on the Mesaverde side is 6.0 BOPD. Upon approval to surface commingle, this well will be tested once each year for the first three years, and once every other year thereafter.

If you should have any questions regarding this request, please contact me at (505) 326-9718.

Sincerely,


Scott H. Lindsay

SHL/lm
Attachment



OIL CONSERVATION DIVISION

P. O. BOX 2088

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

SANTA FE, NEW MEXICO 87501

Form C-122-A
Revised 10-1-78WELL DELIVERABILITY TEST REPORT FOR 19 87

POOL NAME TAPACITO	POOL SLOPE n = .85	FORMATION PICTURED CLIFFS	COUNTY RIO ARriba
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COMPANY SOUTHLAND ROYALTY COMPANY			WELL NAME AND NUMBER JICARILLA 447 #1		
UNIT LETTER N	SECTION 30	TOWNSHIP 27	RANGE 03	PURCHASING PIPELINE NORTHWEST PIPELINE CORP.	
CASING O.D. - INCHES 4.5000	CASING I.D. - INCHES 4.0520	SET AT DEPTH - FEET 6522	TUBING O.D. - INCHES 1.9000	TUBING I.D. - INCHES 1.6100	TOP - TUBING PERF. - FEET 4014
GAS PAY ZONE FROM 4022 TO 4097		WELL PRODUCING THRU CASING TUBING X		GAS GRAVITY .682	GRAVITY X LENGTH 2738
DATE OF FLOW TEST FROM 08-04-87 TO 08-11-87			DATE SHUT-IN PRESSURE MEASURED 08-18-87		

PRESSURE DATA - ALL PRESSURES IN PSIA

(a) Flowing Casing Pressure (DWt) 377	(b) Flowing Tubing Pressure (DWt) 344	(c) Flowing Meter Pressure (DWt) 295	(d) Flow Chart Static Reading 296	(e) Meter Error (Item c - Item d) -1	(f) Friction Loss (a - c) or (b - c) +49	(g) Average Meter Pressure (Integr.) 327
(h) Corrected Meter Pressure (g + e) 326	(i) Avg. Wellhead Press. $P_t = (h + f)$ 375	(j) Shut-in Casing Pressure (DWt) 777	(k) Shut-in Tubing Pressure (DWt) 772	(l) P_c = higher value of (j) or (k) 777	(m) Del. Pressure $P_d = \frac{70}{\%P_c}$ 544	(n) Separator or Dehydrator Pr. (DWt) for critical flow only

FLOW RATE CORRECTION (METER ERROR)

Integrated Volume - MCF/D 538	Quotient of $\frac{\text{Item c}}{\text{Item d}}$.9966	$\sqrt{\frac{\text{Item c}}{\text{Item d}}}$.9983	Corrected Volume Q = 537 MCF/D
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WORKING PRESSURE CALCULATION

$(1 - e^{-n})$.181	$(P_c Q_m)^2 (1000)$ 78128	$R^2 = (1 - e^{-n}) (P_c Q_m)^2 (1000)$ 14141	P_t^2 140625	$P_w^2 = P_t^2 + R^2$ 154766	$P_w = \sqrt{P_w^2}$ 393
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DELIVERABILITY CALCULATION

$D = Q \left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^n =$ 537	$\left[\frac{307793}{448963} \right]^n =$.6856	$\left[\frac{307793}{448963} \right]^n =$.7255	390 MCF/D
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REMARKS:

SUMMARY

Item b	326	Psia
P_c	777	Psia
Q	537	MCF/D
P_w	393	Psia
P_d	544	Psia
D	390	MCF/D

Company **SOUTHLAND ROYALTY COMPANY**
 By **JOHN M. GUNAWAT**
 Title _____
 Witnessed By _____
 Company _____

OIL CONSERVATION DIVISION

P. O. BOX 2088

STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT

SANTA FE, NEW MEXICO 87501

Form C-122-A
Revised 10-1-78WELL DELIVERABILITY TEST REPORT FOR 19 87

POOL NAME BLANCO	POOL SLOPE n = .75	FORMATION MESAVERDE	COUNTY RIO ARRIBA
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85963

COMPANY SOUTHLAND ROYALTY COMPANY			WELL NAME AND NUMBER JICARILLA 447 #1		
UNIT LETTER N	SECTION 19	TOWNSHIP 27	RANGE 03	PURCHASING PIPELINE NORTHWEST PIPELINE CORP.	
CASING O.D. - INCHES 4.5000	CASING I.D. - INCHES 4.0520	SET AT DEPTH - FEET 6522	TUBING O.D. - INCHES 2.3750	TUBING I.D. - INCHES 1.9950	TOP - TUBING PERP. - FEET 6149
GAS PAY ZONE FROM 5727 TO 6301		WELL PRODUCING THRU CASING TUBING X		GAS GRAVITY .682	GRAVITY X LENGTH 4194
DATE OF FLOW TEST FROM 07-13-87 TO 07-20-87			DATE SHUT-IN PRESSURE MEASURED 07-27-87		

PRESSURE DATA - ALL PRESSURES IN PSIA

(a) Flowing Casing Pressure (DWI)	(b) Flowing Tubing Pressure (DWI)	(c) Flowing Meter Pressure (DWI)	(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.)
	432	357	354	+3	+75	334
(h) Corrected Meter Pressure (g + e)	(i) Avg. Wellhead Press. $P_t = (h + f)$	(j) Shut-in Casing Pressure (DWI)	(k) Shut-in Tubing Pressure (DWI)	(l) $P_c =$ higher value of (j) or (k)	(m) Del. Pressure $P_d = \frac{70}{\%P_c}$	(n) Separator or Dehydrator P_{se} (DWI) for critical flow only
337	412		880	880	616	

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
1162	1.0085	1.0042	Q = 1167 MCF/D

WORKING PRESSURE CALCULATION

$(1 - e^{-n})$	$(P_c Q_m)^2 (1000)$	$R^2 = (1 - e^{-n}) (P_c Q_m)^2 (1000)$	P_t^2	$P_w^2 = P_t^2 + R^2$	$P_w = \sqrt{P_w^2}$
.263	120388	31662	169744	201406	449

DELIVERABILITY CALCULATION

$$D = Q \left[\frac{P_c^2 - P_d^2}{P_c^2 - P_w^2} \right]^n = \frac{1167}{\left[\frac{394944}{572994} \right]^n} = \frac{.6893}{.7565} = \frac{883}{1167} \text{ MCF/D}$$

REMARKS:

INITIAL & ANNUAL - 1ST DELIVERED 04-14-87
(Testing was delayed due to pipeline repairs.)

OCT 13 1987

OIL CON. DIV.
DIST. 3

SUMMARY

Item b	337	Pela
	880	Pela
P_c	1167	MCF/D
Q	449	Pela
P_w	616	Pela
P_d	883	MCF/D
D		MCF/D

Company **SOUTHLAND ROYALTY COMPANY**
By **SCOTT A. LINDSAY**
Title _____
Witnessed By _____
Company _____

1167

Tech Inc.
333 E. Main St.
Farmington, NM 87401

DATE: 1 September 1987

Gas Analysis

Company: Meridian Oil Co.

Well Name: Jicarilla 447 #1

Formation: Picture Cliffs

Well Location :

Submitted by : Cliff Scott

County/State:

Date sampled: 31 August 1987

CYLINDER NO. :

Depth (ft):

Sample temp. (deg F):

Est. Production Rate (MCFD):

Sample Pressure (PSIG):

Analysis date: 31 August 1987

Sampled by:

Gas	Mole %	B.T.U.	G.P.M.	Sp. Gr.
Oxygen	0.000	0.000	0.000	0.0000
Nitrogen	0.000	0.000	0.000	0.0000
Methane	82.965	837.690	0.000	0.4595
CO2	0.160	0.000	0.000	0.0024
Ethane	8.899	157.390	0.000	0.0923
Propane	4.842	121.880	1.330	0.0737
iso-Butane	0.746	24.260	0.243	0.0149
Butane	1.177	38.390	0.015	0.0236
iso-Pentane	0.359	14.350	0.131	0.0089
n-Pentane	0.277	11.100	0.100	0.0069
n-Hexanes	0.575	27.340	0.236	0.0171
Totals	100.000	1232.400	2.410	0.6993

Net (dry) heating value per cu. ft. @ 14.696 PSIA.

Note: B.T.U., G.P.M., and Sp. Gr. are calculated values based on ideal gas constants in the Engineering Data Book of the GPSSA, 1981. Saturated gross heating value @ 14.696 PSIA may be determined by multiplying by 0.9826.

Tech Inc.
333 E. Main St.
Farmington, NM 87401

DATE: 1 September 1987

Gas Analysis

Company: Meridian Oil Co.

Well Name: Jicarilla 447 #1

Formation: Mesa Verde

Well Location :

Submitted by : Cliff Scott

County/State:

Date sampled: 31 August 1987

CYLINDER NO. :

Depth (ft):

Sample temp. (deg F):

Est. Production Rate (MCFD):

Sample Pressure (PSIG):

Analysis date: 31 August 1987

Sampled by:

Gas	Mole %	B.T.U.	G.P.M.	Sp. Gr.
1 Oxygen	0.000	0.000	0.000	0.0000
2 Nitrogen	0.000	0.000	0.000	0.0000
3 Methane	83.018	838.230	0.000	0.4598
4 CO2	0.870	0.000	0.000	0.0132
5 Ethane	9.272	163.990	0.000	0.0962
6 Propane	3.855	97.030	1.059	0.0586
7 iso-Butane	0.754	24.520	0.246	0.0151
8 Butane	1.008	32.880	0.015	0.0202
9 iso-Pentane	0.370	14.790	0.135	0.0092
10. Pentane	0.286	11.460	0.103	0.0071
11. Hexanes	0.568	27.010	0.233	0.0168
Totals	100.001	1209.910	2.093	0.6962

Net (dry) heating value per cu. ft. @ 14.696 PSIA.

RECEIVED

OCT 13 1987

OIL CON. DIV.
DIST. 3

Note: B.T.U, G.P.M., and Sp. Gr. are calculated values based on ideal gas constants in the Engineering Data Book of the GPSA, 1981. Saturated gross heating value @ 14.696 PSIA may be determined by multiplying by 0.9826.