

**KELLAHIN AND KELLAHIN**

ATTORNEYS AT LAW

EL PATIO BUILDING

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SANTA FE, NEW MEXICO 87504-2265

W. THOMAS KELLAHIN\*

\*NEW MEXICO BOARD OF LEGAL SPECIALIZATION  
RECOGNIZED SPECIALIST IN THE AREA OF  
NATURAL RESOURCES-OIL AND GAS LAW

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JASON KELLAHIN (RETIRED 1991)

May 14, 1996

**HAND DELIVERED**

Mr. David R. Catanach  
Hearing Examiner  
Oil Conservation Division  
2040 South Pacheco  
Santa Fe, New Mexico 87505

**Re: NMOCD CASE 11528**  
*Meridian's Rhodes "B" Federal Well No. 7*  
*Application of Hartman et al, to void*  
*Division Order NSL-3633, for Discovery and*  
*for Contraction and Extension of the Rhodes Oil & Gas Pools,*  
*Eddy County, New Mexico*

Dear Mr. Catanach:

In accordance with your decisions at the pre-hearing discovery conference held on Thursday, May 9, 1996, I am providing the following:

- (1) Donna Williams does not keep a personal file related to the administrative processing of the Rhodes B-7 Well permit.
- (2) Leslyn Swierc occasionally maintains for a temporary period a "personal file" dealing with land transactions while she is working on that file, but in this case, she does not have a personal file different from the Meridian land file in so far as it deals with the administrative processing of the Rhodes B-7 Well.
- (3) For the period from October 1, 1995 to the date the administrative order was issued, Meridian had a "gas-oil contact map" of this area which is submitted to you for your inspection as Exhibit "A". As you advised, you will inspect this map and determine if it should be released to Mr. Hartman.

Mr. David R. Catanach  
Oil Conservation Division  
May 14, 1996  
Page 2.

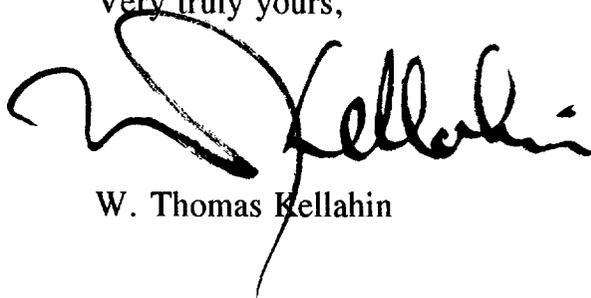
(4) Attached as Exhibit "B" is a 23 page "well package" which Meridian staff submitted to Meridian management for approval to drill the Rhodes B-7 Well. I have blacked out or deleted information and attachments which reflect the reserve calculations and conclusions and supporting documentation along with deleting the AFEs for this well. As you advised, you will inspect this map and determine if it should be released to Mr. Hartman.

(5) The following witnesses are knowledgeable about the locating and permitting of the Rhodes 7-B well and I have indicated if they are available for the June 5-6 hearing date:

(a) R. A. Harp (reservoir engineer)	not available
(b) Michael Metcalf (geologist)	not available
(c) Donna Williams (regulatory)	available
(d) Leslyn Swierc (landman)	available
(e) Bobby Winn (field operations)	available
(f) Chris Settle (reservoir engineer)	available

Please let me know if you need anything further.

Very truly yours,



W. Thomas Kellahin

**cc: without enclosures:**

Rand Carroll, Esq.  
Attorney for Division  
Michael Condon, Esq.  
Attorney for Doyle Hartman  
William F. Carr, Esq.  
Attorney for Texaco  
Meridian Oil Inc.  
Attn: Don Davis

LARGE FORMAT  
EXHIBIT HAS  
BEEN REMOVED  
AND IS LOCATED  
IN THE NEXT FILE

## PROJECT ROUTING FOR REVIEW / APPROVAL

**SUBJECT:** Rhodes "B" Federal #7  
Rhodes Gas Pool  
Lea County, New Mexico

**TYPE WORK:** New Drill Well < \$500M

**AREA TEAM:** WEST - Kermit

**PREPARED BY:** AT1 R. Allen Zapp 10/10/95  
 AT2 M. G. Miller 10/10/95  
 AT3 A. J. Bell 10/10/95

**AFE NUMBER:** LR38

ROUTE TO	INITIAL/DATE	REVIEW	RECOMMEND	APPROVE	SPECIAL INSTRUCTIONS
RST1	<u>DWD 10/10/95</u>		X		Sign Memo and Recommend AFE
RST2	<u>Lee 10/10/95</u>		X		Sign Memo and Recommend AFE
RST3	<u>Alm 10/10/95</u>		X		Sign Memo and Recommend AFE
<del>BRLG SLIP</del>				X	Approve Procedure
AMT1	<u>W 10/13</u>			X	Approve AFE
AMT2	<u>BB 10/13/95</u>			X	Approve AFE
AMT3	<u>BB 10/13/95</u>			X	Approve AFE
JANA DICK	<u>JD 10/16/95</u>	X			Assign AFE Number
HORKEY	<u>GH 10/16/95</u>				Distribute

**REMARKS:**  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

**Distribution - Routing plus:**  
 Central Files (Original)  
 Area Foreman  
 B. G. Corrie  
 Hal Lee  
 Area Assistant  
 Originator of Package  
 Pam Holleman  
 K. K. Hamilton

**PARTNER APPROVAL:**

Not required \_\_\_\_\_ Expenditure Limit \$ \_\_\_\_\_

Normal \_\_\_\_\_ Verbal \_\_\_\_\_ Proceed w/out approval \_\_\_\_\_

Meridian Net Maximum Exposure: \$ \_\_\_\_\_

Approval Required for Maximum Exposure: \_\_\_\_\_

Approved: \_\_\_\_\_ Date: \_\_\_\_\_

**Primary Distribution:**  
 Donna Williams





Midland Region  
P.O. Box 51810  
Midland, Texas 79710-1810  
(915) 688-6800

Date: \_\_\_\_\_  
AFE No.: LR 38

**MERIDIAN OIL INC.  
AUTHORITY FOR EXPENDITURE**

Foreman Area Team Name WEST - Kermit

DP No. 59915A

Lease/Well Name: Rhodes "B" Federal #7 Lease No. 012850800

Field/Prospect: Rhodes Gas Pool Region: Midland

Location: 850' FNL & 1750' FEL, Sec 26 C, T26S, R37E County: Lea State: New Mexico

AFE Type: New Drill Well Original  Supplement  Addendum  Cost Center

API Well Type: Dev Operator Meridian Oil Inc.

Objective Formation: Yates Authorized Total Depth (Feet) 3250'

Project Description: Drill, complete, and equip new gas well.

Est. Start Date: 11/95

Prepared By R. A. Harp *R. Allen Harp*  
10/10/95

Est. Completion Date: 11/95

**GROSS WELL COST DATA**

	DRILLING		WORKOVER COMPLETION	CONSTRUCTION OR FACILITY	TOTAL
	DRY HOLE	SUSPENDED			
DAYS: THIS AFE:	<u>[REDACTED]</u>	<u>[REDACTED]</u>	<u>[REDACTED]</u>	<u>[REDACTED]</u>	<u>[REDACTED]</u>
PRIOR AFE's:	<u>[REDACTED]</u>	<u>[REDACTED]</u>	<u>[REDACTED]</u>	<u>[REDACTED]</u>	<u>[REDACTED]</u>
TOTAL COSTS:	<u>[REDACTED]</u>	<u>[REDACTED]</u>	<u>[REDACTED]</u>	<u>[REDACTED]</u>	<u>[REDACTED]</u>

**JOINT INTEREST OWNERS**

COMPANY	WORKING INTEREST PERCENT %	NET \$ EXPENDITURES	
		DRYHOLE \$	COMPLETED \$
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____
MERIDIAN OIL INC.:	100.0000%	<u>[REDACTED]</u>	<u>[REDACTED]</u>
AFE TOTAL:	100.0000%	<u>[REDACTED]</u>	<u>[REDACTED]</u>

**MERIDIAN OIL APPROVAL**

Recommended: *D. W. Davis* Date: 10/10/95 Approved: *[Signature]* Date: 10/13/95  
Recommended: *[Signature]* Date: 10/10/95 Approved: *[Signature]* Date: 10/13/95  
Recommended: *[Signature]* Date: 10/10/95 Approved: *[Signature]* Date: 10/10/95

**PARTNER APPROVAL**

Company Name: \_\_\_\_\_ Authorized By: \_\_\_\_\_  
Date: \_\_\_\_\_ Title: \_\_\_\_\_

# Project Summary

## Rhodes "B" Federal #7

### Rhodes Gas Pool

### Lea County, New Mexico

#### Recommendation:

We recommend that Meridian Oil Inc. drill, complete, and equip the Rhodes "B" Federal #7 for a total AFE cost of \$271.1M. This well will be located in Section 26 C in T26S, R37E, in Lea County, New Mexico. The proposed well is a 3250' development well in the Rhodes Gas Pool with the Yates formation being the primary objective. Meridian owns 100% WI and 87.5% NRI of the gas rights in this tract down to 4000'. The net risked reserves are [REDACTED]. Project economics yield [REDACTED].

#### Discussion:

This well is being proposed in conjunction with the Rhodes "B" Federal #3, #4, #5, #6, and the Rhodes A #5. The Rhodes "B" Federal #1 and #2, located in Section 26, are currently being drilled and completed. All of these wells are located in Texaco's W.H. Rhodes B Federal lease that is currently under waterflood. The gas sand which we are targeting is located in the upper Yates interval, and the lower Yates formation is currently being waterflooded. Texaco has recently been drilling 20 acre infill wells in this area which have had good gas shows in the upper Yates interval. Since MOI owns 100% of the gas rights down to 4000', we are currently receiving the produced gas (~195 Mcf/d net) from Texaco's waterflood free of expenses. Texaco has not been completing their wells in this upper Yates interval.

The Oil Conservation Division (OCD) views the Yates and Seven Rivers formations as the Rhodes Gas Pool and does not differentiate between the upper and lower Yates intervals. Therefore, since Texaco has already drilled oil wells on 20 and 40 acre spacing in this area, MOI requested and has received OCD approval to drill our gas wells within the same proration intervals. The OCD is granting 40 acre proration units to our gas wells with no allowable restrictions.

#### Economics & Reserves:

The reserve model used for this evaluation includes four productive cases based on offset production in the Rhodes Gas Pool. The Rhodes A #4 and Lineberry "B" Federal #1 were drilled earlier this year, and the Rhodes A #3 and Gregory B #2 were drilled in 1993. The projected flowstreams for each of these wells were utilized in this analysis. The reserve model utilizes a hyperbolic decline ([REDACTED]). The initial production for the four wells has varied significantly from 250 to 1400 Mcf/d based primarily on reservoir pressure and net pay. The initial decline rates have also

varied. The wells with higher IP's typically fall off more steeply as would be expected. The flowstreams for each well are attached in the package. The wells decline hyperbolically until a final exponential decline rate [REDACTED] is reached.

Geology recently generated a net pay isopach of the upper Yates interval located throughout the Rhodes Gas Pool and Rhodes Gas Storage Unit. A porosity cutoff of 12% was used. Based on Texaco's offset well logs from recent drill wells in Section 26, we estimate that the Rhodes "B" Federal #7 has 105' of net pay. This net pay interval is favorable when compared to our four recently drilled offsets in this area {Rhodes A #4 (133'), Rhodes A #3 (115'), Gregory B #2 (154') and the Lineberry B Federal #1 (47')}. The proposed location was selected based on it's good net pay interval.

The aggregate reserves are representative of the overall EUR's located in this area of the Rhodes Gas Pool.

**Economic Yardsticks:**

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**Summary:**

Based on the offset production, geologic analysis, and [REDACTED] economics, we recommend that MOI drill the Rhodes "B" Federal #7.

**List of Attachments:**

1. [REDACTED]
2. [REDACTED]
3. [REDACTED]
4. [REDACTED]
5. [REDACTED]
6. [REDACTED]
7. [REDACTED]
8. [REDACTED]

**ECONOMIC ASSUMPTIONS**

**MACCT95 - NEW MEXICO**

*Rhodes "B" Federal #7*

**LEA COUNTY, NEW MEXICO**

**WI: 100 % NI 87.5 %**

**EFFECTIVE DATE FOR PROJECT EVALUATION - 7/1/95**

**CONFIDENTIAL**

**RHODES "B" FEDERAL #7  
RHODES GAS POOL  
Lea County, New Mexico**

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**MOI GWI = 100.00%  
MOI NRI = 87.5%**

**DECISION TREE RISK ANALYSIS**

**CONFIDENTIAL**

# GEOSCIENCE SUMMARY

## MOI NO. 7 RHODES "B" FEDERAL Section 26, T26S, R37E (C) Rhodes (Gas) Field Lea County, New Mexico

### Geoscience Recommendation

Geoscience recommends drilling the No. 7 Rhodes "B" Federal (TD 3,250'), so as to produce the gas cap in the Texaco Rhodes Unit in the Rhodes (Gas) Field. Yates sands will be the primary objective at 2,800'. MOI has gas rights to 4,000'.

### Geoscience Location

MOI's No. 7 Rhodes "B" Federal is located on the west flank of the Central basin Platform 7 miles south-southwest of Jal, New Mexico. Rhodes Gas Field is located in the southern end of this northwestern trend of oil and gas fields in the Yates-Seven Rivers-Queen formations. The nature of the trap is a southerly plunging anticlinal feature (trends 50 miles from Hobbs to Jal, New Mexico) with porous sandstones and carbonates that pinch out laterally.

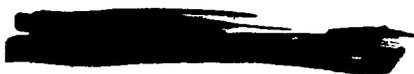
### Reservoir

#### Tansil (2,625')

Tansil formation is made up of back reef facies of mainly dolomite grading basinward (west) into the upper Capitan Reef. Further east, it grades into anhydrite and salt. A section produces from the lower Tansil formation in the No. 14 Farnsworth well in the SE corner of Section 4, T26S, R37E (4.0 miles north).

#### Yates (2,800')

Yates formation is made up of back reef facies of mainly gray and red sands. A few thin beds of dolomite and red and gray shales grade west towards the margins into the middle Capitan. The Texaco #17 Rhodes "B" Federal well has a productive looking section adjacent to this location. MOI expects to find 105 net feet of sand greater than 14% porosity.



**RHODES "B" FEDERAL #7  
RHODES GAS POOL  
Lea County, New Mexico**

**LIST OF TEAM MEMBERS**

Production .....A. L. Billman  
Reservoir .....R. A. Harp  
Geology .....M. G. Metcalf  
Facilities .....J. R. LaPlante  
Landman..... L. M. Swierc  
Drilling .....T. J. Friesenhahn



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**WELL COST ESTIMATE  
FACILITIES / PRODUCTION FACILITIES**

LEASE/WELL NAME: Rhodes "B" Federal No. 7 PREPARED BY: J. R. LaPlante DATE: 7/3/95  
COUNTY/STATE: Lea County, New Mexico PREPARED BY: Bill Rea DATE: 7/6/95  
AFE TYPE: (06) Capital Facilities APPROVED BY: \_\_\_\_\_  
PROPOSED TD: 3,150 feet  
JOB SCOPE: NDW facilities

ACCOUNT NO: \_\_\_\_\_ AFE NOMENCLATURE \_\_\_\_\_  
**247 FACILITIES**

PRODUCTION      FACILITIES      ESTIMATED  
COST

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MERIDIAN OIL INC.  
DRILLING WELL COST ESTIMATE

LEASE WELL: Rhodes "B" Federal No. ~~1~~ 7  
COUNTY/STATE: Lea / New Mexico  
PROPOSED TOTAL DEPTH: -3,150  
FOOTAGE TOTAL DEPTH: 3,150

PREPARED BY: T. J. Friesenhahn DATE: 7/25/95  
APPROVED BY: H. A. Lee DATE: 7/25/95  
AFE TYPE: DEVELOPMENT DRILLING

ACCT	AFE NOMENCLATURE	DRYHOLE COST	SUSPENDED COST
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MERIDIAN OIL INC.  
WELL COST ESTIMATE  
COMPLETION

LEASE/WELL NAME: Rhodes "B" Federal #1 7  
LEASE/WELL TYPE: Rhodes Gas Pool Typical  
AFE TYPE: 7

PREPARED BY: A. L. Billman *ALB*  
APPROVED BY: \_\_\_\_\_  
COST CENTER: \_\_\_\_\_

DATE: 7/24/95  
DATE: \_\_\_\_\_

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**MERIDIAN OIL INC.  
GEOLOGICAL WELL PROGNOSIS**

DATE: October 10, 1995

WELL NAME: Rhodes "B" Federal #7 (Rhodes Field)  
 LOCATION: 850' FNL & 1750' FEL, Section 26-C, T26S- R37E, Lea County, NM  
 NEAREST WELL: W.H Rhodes "B" #17 (800' SW)

NEAREST WELL PENETRATING OBJECTIVE: Same as above.

ELEVATION: \_\_\_\_\_ GROUND LEVEL: \_\_\_\_\_ KELLY BUSHING: 3000' (est)

TOTAL DEPTH: 3250' CRITICAL DATES: \_\_\_\_\_

FORMATION TOPS:	Lithology	Drill Depth	Sea Level
Red Beds	Red Ss	*± 350'	+
Rustler	Anhy	1050'	+ 1950'
Salado	Anhy & Salt	1400'	+ 1600'
Tansil	Anhy & Dolo	2625'	+ 375'
Yates	Ss & Dolo	2800'	+ 200'
Seven Rivers	Gyp, Ss & Dolo	3220'	- 220'

MAIN PAY: Yates @ 2800' (+200')  
 OTHER ZONES: Tansil

MUDLOGGING UNIT: 2600' to TD  
 WELLSITE GEOLOGIST: Mike Metcalf: (915) 688-6870/work; [REDACTED]  
 RESERVOIR ENGINEER: Allen Harp: (915) 688-6828/work; [REDACTED]  
 SAMPLES: Catch 10' samples from 2600' to TD.  
 DRILL STEM TESTS: None.  
 CORING: None.  
 LOGGING PROGRAM: Western-Atlas: CNL-Density, DLL/MSFL.  
 Pull GR/Neutron to surface; Dual Laterolog/MSFL, TD to 2400'.

REMARKS:  
 (a) Mud-up Depth: T/Pay Ss @ 2800'.  
 (b) Problem Zones: Salt section is from 1400' to 2700'.  
 (c) Other: \*Need to set surface casing 50' into red beds.  
 NOTE: See X-section F-F' (XS-3559).

CRITICAL DATE: \_\_\_\_\_

Distribution List: Prepared by : M. G. Metcalf  
 MOI Operations (2 copies), Well File, Mudlogger, Geologic Prospect  
 File, Geologist, Read File.

[REDACTED]

**MERIDIAN OIL  
MIDLAND REGION  
NOTICE OF INTENT TO: Drill/Workover/Recomplete/Commingle  
REQUEST FOR DP NUMBER ASSIGNMENT**

Estimated Spud Date 12-19-95  
Date Required 10-16-95  
Oil  Gas  Inj

New Well  Workover  Recomplete  Commingle

Lease, Well Name, Well No. Rhodes "B" Federal #7  
Operator (Originating Co.) Meridian Oil Inc.  
Proposed Field Name Rhodes Gas Pool API Well Type \_\_\_\_\_  
Surface Location 330' FNL & 1320' FWL, Sec. 26 C, T26S, R37E  
(Footage, Section, TWN, RNG, UL, BLK, Survey)  
Bottom Hole Location (if different) \_\_\_\_\_  
County Lea State New Mexico Proposed TD 3,250'  
Objective(s) Upper Yates SS (Gas)  
Engineer & Phone Allen Harp, 688-6828  
Geologist & Phone Mike Metcalf, 688-6870  
Geophysicist & Phone \_\_\_\_\_

Comments: Could move 100' South or East or West

*We have prepared our analysis of the subject well and as a result recommend approval of the Authorization for Expenditure to fund this proposal. The formal recommendation package is currently routing for final approval, and in order to expedite the commencement of operations we would like to request that all necessary Title Opinions and Permit Work be finalized at this time.*

*Dennis J. Maurine* Date: 10/10/95  
RST1

*John P. [Signature]* Date: 10/10/95  
RST2

*D.W. [Signature]* Date: 10/10/95  
RST3

**Distribution:**

M. Frampton D. E. Sledge  
A. T. Evans RST4  
D. J. Williams (Original) RST5  
C. C. Henry RST6