STATE OF NEW MEXICO
ENERGY AND MINERALS DEPARTMENT
OIL CONSERVATION DIVISION

IN THE MATTER OF THE HEARING
CALLED BY THE OIL CONSERVATION
DIVISION FOR THE PURPOSE OF
CONSIDERING:

CASE NO. 8176
Order No. R-7534

APPLICATION OF MESA GRANDE RESOURCES,
INC. FOR DOWNHOLE COMMINGLING AND A
DUAL COMPLETION, RIO ARRIBA COUNTY,
NEW MEXICO.

ORDER OF THE DIVISION

BY THE DIVISION:

This cause came on for hearing at 8 a.m. on May 9, 1984, at Santa Fe, New Mexico, before Examiner Richard L. Stamets.

NOW, on this 21st day of May, 1984, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

FINDS:

(1) That due public notice having been given as required by law, the Division has jurisdiction of this cause and the subject matter thereof.

(2) That the applicant, Mesa Grande Resources, Inc., seeks approval for the dual completion (conventional) of its Howard Gavilan Well No. 1, located 1850 feet from the North line and 1650 feet from the West line of Section 23, Township 25 North, Range 2 West, NMPM, Rio Arriba County, New Mexico, in such a manner as to produce hydrocarbons from the Gavilan-Mancos Oil Pool through one string of 2 1/16" integral joint tubing and commingled hydrocarbons from the Greenhorn and Dakota formations through a separate string of 2 1/16" integral joint tubing, with separation of the zones to be achieved by means of a packer set at approximately 7400 feet.

(3) That the reservoir characteristics of the Greenhorn and Dakota zones in the subject well are such that underground waste would not be caused by the proposed commingling.

(4) That the proposed commingling of gas and oil produced from the Greenhorn and Dakota formations will result in the recovery of additional hydrocarbons from each of said zones which would likely otherwise remain unrecovered, thereby preventing waste.

(5) That in order to allocate the commingled production to each of the commingled zones, 76 percent of the commingled oil production and 72 percent of the commingled gas production should be attributed to the Greenhorn formation and 24 percent of the commingled oil production and 28 percent of the commingled gas production should be attributed to the Dakota formation.

(6) That the dual completion of said well in the manner described in Finding No. (2) above is efficient and will not cause waste, provided packer leakage tests are taken periodically to assure that communication between the zones is not occurring.

(7) That the subject application is in the interest of conservation and will not cause waste nor impair correlative rights, and should be approved.

IT IS THEREFORE ORDERED:

(1) That the applicant, Mesa Grande Resources, Inc., is hereby authorized to commingle Greenhorn and Dakota hydrocarbon production in the wellbore of its Howard Gavilan Well No. 1, located 1850 feet from the North line and 1650 feet from the West line of Section 23, Township 25 North, Range 2 West, NMPM, Rio Arriba County, New Mexico, and to complete said well as a dual completion (conventional) to produce said commingled hydrocarbons through one string of tubing and produce oil and gas from the Gavilan-Mancos Oil Pool through a parallel string of tubing, separation of the commingled zones and the Gavilan-Mancos zone to be achieved by means of a packer set at approximately 7400 feet.

PROVIDED HOWEVER, that the applicant shall complete, operate, and produce said well in accordance with the provisions of Rule 112-A of the Division Rules and Regulations insofar as said rule is not inconsistent with this order;

PROVIDED FURTHER, that the applicant shall take packer leakage tests upon completion and annually thereafter during the Annual Gas-Oil Ratio Test Period for the Gavilan-Mancos Oil Pool.

(2) That 76 percent of the commingled Greenhorn-Dakota oil production and 72 percent of the commingled gas production shall be attributed to the Greenhorn formation, and 24 percent of the commingled oil production and 28 percent of the commingled gas production shall be attributed to the Dakota formation.

(3) That jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico, on the day and year hereinabove designated.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

JOE D. RAMEY
Director

S E A L

fd/

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 4/16/84

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

Gentlemen:

I have examined the application dated 4-11-84

for the Mesa Grande Resources, Inc. Gisler-Howard #1 F-23-25N-2W
Operator Lease and Well No. Unit, S-T-R

and my recommendations are as follows:

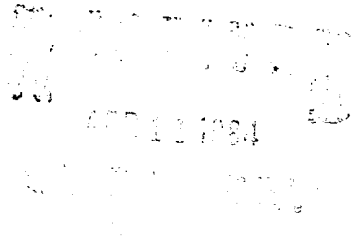
Docket for hearing. Well does not qualify for administrative approval.

Yours truly,

Brad A. Gray

MESA GRANDE RESOURCES, INC.
1200 PHILTOWER BUILDING
TULSA, OKLAHOMA 74103
(918) 587-8494

April 9, 1984



Mr. Frank T. Chavez
District Supervisor
New Mexico Oil Conservation
Division
1000 Rio Brazos Road
Aztec, New Mexico 87410

Dear Mr. Chavez:

Mesa Grande Resources, Inc. requests administrative approval to downhole commingle the Greenhorn and Dakota formations in its #1 Gavilan-Howard well, SE NW Sec. 23-T25N-R2W, Rio Arriba County, New Mexico. We take this action since we plan to dual complete the well, producing the Mancos formation through the short string of 2 1/16" tubing and the Greenhorn-Dakota interval through the long string of 2 1/16" tubing. We feel that this is the most practical approach to the recovery of hydrocarbons from this well.

As you are aware, a Gavilan Mancos pool has been created by the Division with temporary spacing and operating rules adopted for a three year period commencing March 1, 1984 (Order No. R-7407). The #1 Gavilan-Howard well will be the first dually completed well in this area. The dual completion will serve as a useful means of monitoring the reservoir performance of the isolated Mancos zone as intended by the Division.

Please find attached an annotated induction log of the zones requested to be commingled (a complete log suite will be forthcoming with Form No. C-105). Also find attached a plat showing offset wells and leasehold interest owners. All offset operators have been notified of this request. Note that the only other well to test the Greenhorn in this area is the Northwest Exploration #1-E Gavilan well located in the SW NW Sec. 26-T25N-R2W. In this well, the Dakota, Greenhorn and Mancos formations were commingled.

Below is the test data obtained during completion operations to date:

Date Tested	Formation	Perforations	Results
3/24/84	Graneros-Dakota	Selectively Perfed 7849, 7847, 7845, 7843, 7841, 7832, 7830, 7829, 7827, 7825 7765, 7763, 7733, 7728, 7725, 7665	Est. 923 MCFGPD 20 to 30 barrels Condensate per day Est. 55° API Gravity SITP 2700#
4/06/84	Carlile* - Greenhorn	Selectively Perfed 7647, 7641, 7635, 7631, 7627, 7622, 7615, 7609, 7600 7587, 7566, 7560, 7555, 7546, 7542, 7536, 7531	2340 MCFGPD 102.5 barrels Condensate per day Est. 60° API Gravity SITP 2500#

* The Carlile formation is defined as that interval from the base of the Sanostee formation to the top of the Greenhorn formation.

A prompt reply to this request would be greatly appreciated in order that the well may be put on production at the earliest date.

Sincerely,

Daniel J. Acquaviva
Chief Geologist

DJA:dw
Enclosures

MESA GRANDE RESOURCES, INC.
#1 GAVILAN-HOWARD
SE NW Sec. 23-T25N-R2W
Rio Arriba County, New Mexico

Proposed Allocation of Production

Graneros-Dakota

Gas	28.3%
Oil	19.7%

Carlile-Greenhorn

Gas	71.7%
Oil	80.3%

Method of Calculation:

Graneros-Dakota

Gas $\frac{923}{3263} = .283$

Oil $\frac{25}{127} = .197$

Carlile-Greenhorn:

Gas $\frac{2340}{3263} = .717$

Oil $\frac{102}{127} = .803$

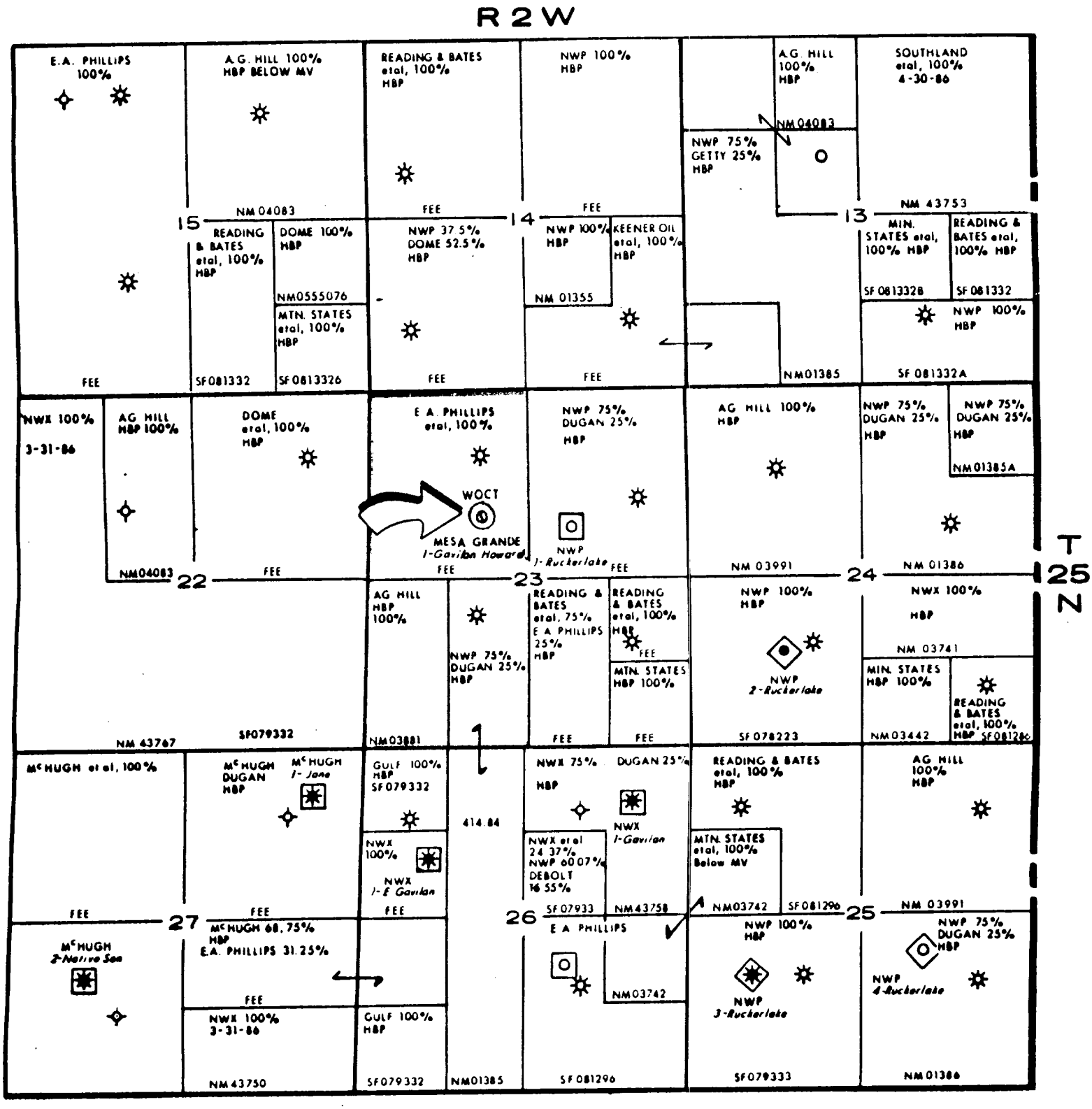
WELL: GAVILAN-HOWARD #1

DATE: 4-9-04

OPR: Mesa Grande Resources, Inc.

LOCATION: Sec. 23, T25N-R2W

COUNTY Rio Arriba STATE New Mexico



Dedicated acreage outlined in yellow.

□ Commingled Mancos-Dakota

◇ Single Mancos

Schlumberger

INDUCTION SPHERICALLY FOCUSED LOG

COMPANY MESA GRANDE RESOURCES, INC.
WELL GAVILAN-HUWARD #1
FIELD WILDCAT
COUNTY RIO ARRIBA STATE NEW MEXICO

LOCATION
Other Services: CNL-FDC
Sec 25 Twp 25N Rge 3W
Permanent Datum GL Elev. 7275
Log Measured From KB 18 Ft. Above Perm. Datum
Drilling Measured From KB Elev. K.B. 7293 G.L. 7275

Run No.	Date	Depth-Driller	Depth-Logger	Bottom Logged Interval	Top Logged Interval	Casing-Driller	Casing-Logger	Bit Size	Type Fluid in Hole	Dens.	Visc.	pH	Fluid Loss	Source of Sample	Rm @ Meas. Temp.	Rmf @ Meas. Temp.	Rmc @ Meas. Temp.	Source of Rmf and Rmc	Rm @ BHT	Time Since Circulation Stopped	Max. Rec. Temp. Deg. F	Equip. No. and Location	Recorded By	Witnessed By
ONE	7-31-79	7795	7795	7795	SURF	9 5/8 @ 230		8 3/4	GEL CHEM	9.2	40	9.5	5.2	MUD PIT	2.15 @ 65	1.61 @ 65	2.75 @ 65	MEAS	1.05 @ 150	5 HRS	150	2195 CHIHUAHUA	MCDONALD	

Elevations: All depth measurements are taken from the KB unless otherwise noted. Elevations: All depth measurements are taken from the KB unless otherwise noted.

JN NO.
Service Order No.
Mud Level
Viscosity, PPM Cl

LANE
379317

SCALE CHANGES

Type Log	Depth	Scale Up Hole	Scale Down Hole

REMARKS:

CREW:HALL, MCDONALD
SP SCALE CHANGES AT 7795 AND 3000

EQUIPMENT NUMBERS-

DIS 1598 DIC 280 IEM 431 1.5"STANDOFF
CPU 552

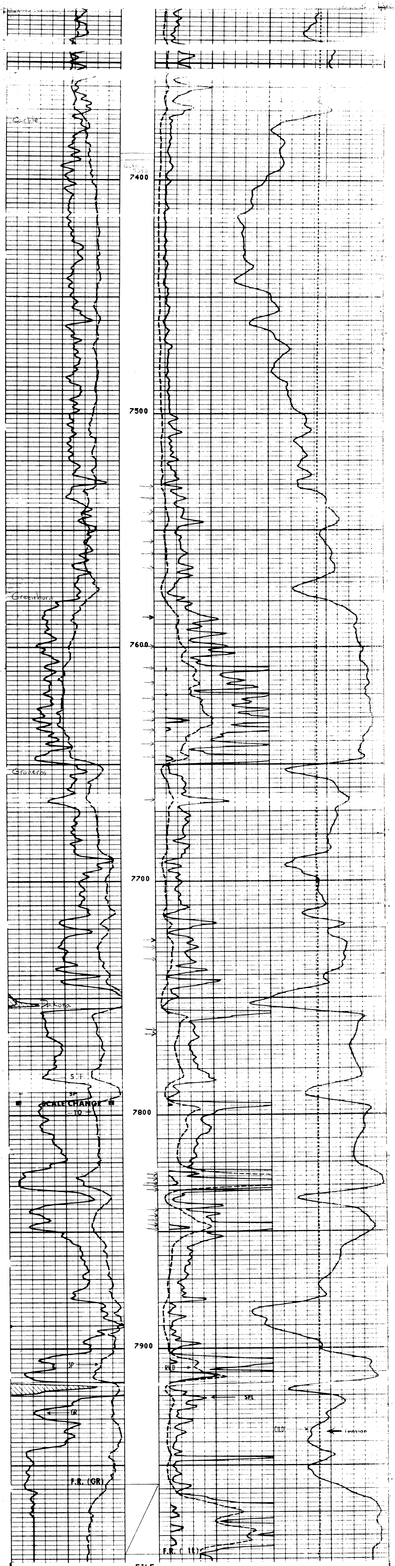
FILE
103

AFTER SURVEY TOOL CHECK SUMMARY

PERFORMED: 03/10/30
PROGRAM FILE: DNGR (VERSION 24.2 00/00/00)

DITD TOOL CHECK

	BEFORE	AFTER	BEFORE	AFTER	UNITS
ILD	0.0	0.0	504.8	503.3	MMHO
ILM	-0.0	0.0	504.5	503.9	MMHO
SFL	0.0	-0.0	400.0	400.0	OHMM



FILE
101

GR (GAPI)		ILD (OHMM)		TENSION
0.0	200.00	0.0	100.00	0.0
SP (MV)		SFLU(OHMM)		5000.0
-80.00	20.000	0.0	100.00	0.0
		400.00	CILD(MMHO)	0.0

SENSOR MEASURE POINT TO TENSION REFERENCE POINT

ILD	9.4 FEET	GR	32.9 FEET
ILM	5.8 FEET	SFL	6.4 FEET
SPAR	.0 FEET	SP	2.5 FEET
TENS	.0 FEET		

PARAMETERS

NAME	VALUE	UNIT	NAME	VALUE	UNIT
DSEC	7.00000	MMHO	BS	7.87500	IN
MSEC	7.50000	MMHO	SBR	1.00000	OHMM
DD	0.0	F	BHS	OPEN	
PP	RECO				

TAPE NOT MADE