

HOLLAND & HART <sup>LLP</sup>  
AND  
CAMPBELL & CARR  
ATTORNEYS AT LAW

DENVER • ASPEN  
BOULDER • COLORADO SPRINGS  
DENVER TECH CENTER  
BILLINGS • BOISE  
CHEYENNE • JACKSON HOLE  
SALT LAKE CITY • SANTA FE  
WASHINGTON, D.C.

SUITE 1  
110 NORTH GUADALUPE  
SANTA FE, NEW MEXICO 87501-6525  
MAILING ADDRESS  
P.O. BOX 2208  
SANTA FE, NEW MEXICO 87504-2208

TELEPHONE (505) 988-4421  
FACSIMILE (505) 983-6043  
www.hollandhart.com

April 26, 2001

**HAND DELIVERED**

Michael E. Stogner  
Chief Hearing Officer/Engineer  
Oil Conservation Division  
New Mexico Department of Energy,  
Minerals and Natural Resources  
1220 South Saint Francis Drive  
Santa Fe, New Mexico 87505

*Re: Case 12623: Application of Raptor Resources, Inc. for two unorthodox  
infill gas well locations and simultaneous dedication, Lea County, New  
Mexico.*

*~~Case 12624~~: Application of Raptor Resources, Inc. for an unorthodox  
infill gas well location and simultaneous dedication, Lea County, New  
Mexico.*

*Case 12625: Application of Raptor Resources, Inc. for an unorthodox  
infill gas well location and simultaneous dedication, Lea County, New  
Mexico.*

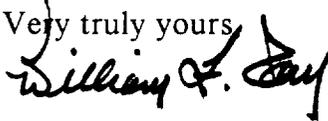
Dear Mr. Stogner:

Pursuant to your request at the April 19, 2001 Examiner hearing on the above referenced applications, enclosed is a new structure map for the proposed State "A" A/C-2 Well No. 79. Mr. Percy has confirmed the location of the State "N" Well No. 5 which is the north offset to the proposed location for the State "A" A/C-1 Well No. 79 from the scout ticket and well log heading attached to this structure map. This map accurately reflects the locations of the subject wells and is a revised Raptor Exhibit No. 24. Further, Raptor has checked each of the plats presented at the April 19 hearing and can advise that they accurately depict all well locations.

Michael E. Stogner  
April 26, 2001  
Page 2

Also enclosed for your consideration, in hard copy and on disc, are Raptor Resources, Inc.'s Proposed Orders in each of the above-referenced cases.

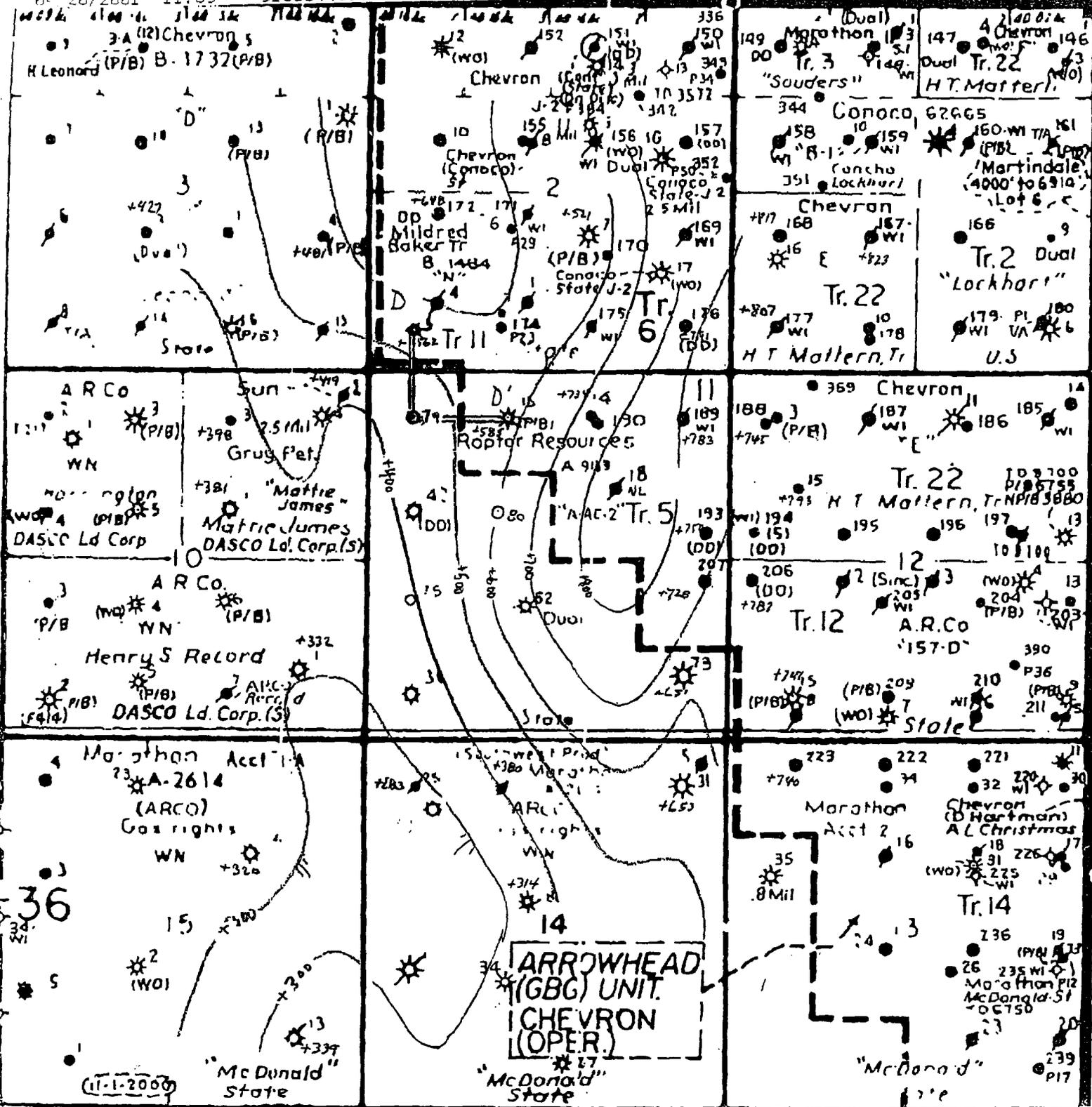
If you need additional information from Raptor for your consideration of these applications, please advise.

Very truly yours,  


William F. Carr

enc.

cc: John Lawrence  
Raptor Resources, Inc.  
Post Office Box 2342  
Midland, Texas 79702



RAPTOR RESOURCES, INC.

---

**JALMAT FIELD**  
LEA COUNTY, NEW MEXICO

---

STRUCTURE  
**TOP YATES SAND**  
SECTION 11, T-23-S, R-38-E

---

CONTOUR INTERVAL: 100'  
1000' 2000' 3000' 301

D. PEARCY 6

SCALE

S

LEA COUNTY NEW MEXICO EDMONT FLD  
Well: CITIES SERVICE OIL CO. #5 State "N" Result: GAS  
Locn: 2-22S-36E, 660' F&W of Sec.

Spud: 5-10-56; Comp: 6-6-56; Elev: 3560' DF; TD: 3515' sd & li  
Casing: 8 5/8" 1510'/650 sx, 5 1/2" 3034'/450 sx  
Prod Zone: T/Pay 3034'; Prod from OH  
IPCAOF: 2,473,000 CWGED thru 31/64" oh on 2" 3410', CP 550%,  
TP 450%  
Comp Info: DST 3460-3510', op 2 hrs, rec 20' GCM; A/2000 gals;  
Flwd 2,473,000 CWGED thru 31/64" oh on 2" 3410'.  
Tops: (EL) Anly 1508', Yates 3002', Seven Rivers 3278'

*John A. ...*  
CIL REPORTS!

Date: 6-27-56 Card No: 11 ME dt

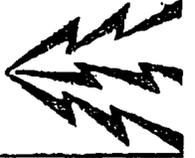


PERFORATING GUNS ATLAS CORP.

# SIMULTANEOUS RADIATION LOG

NATURAL GAMMA RADIATION

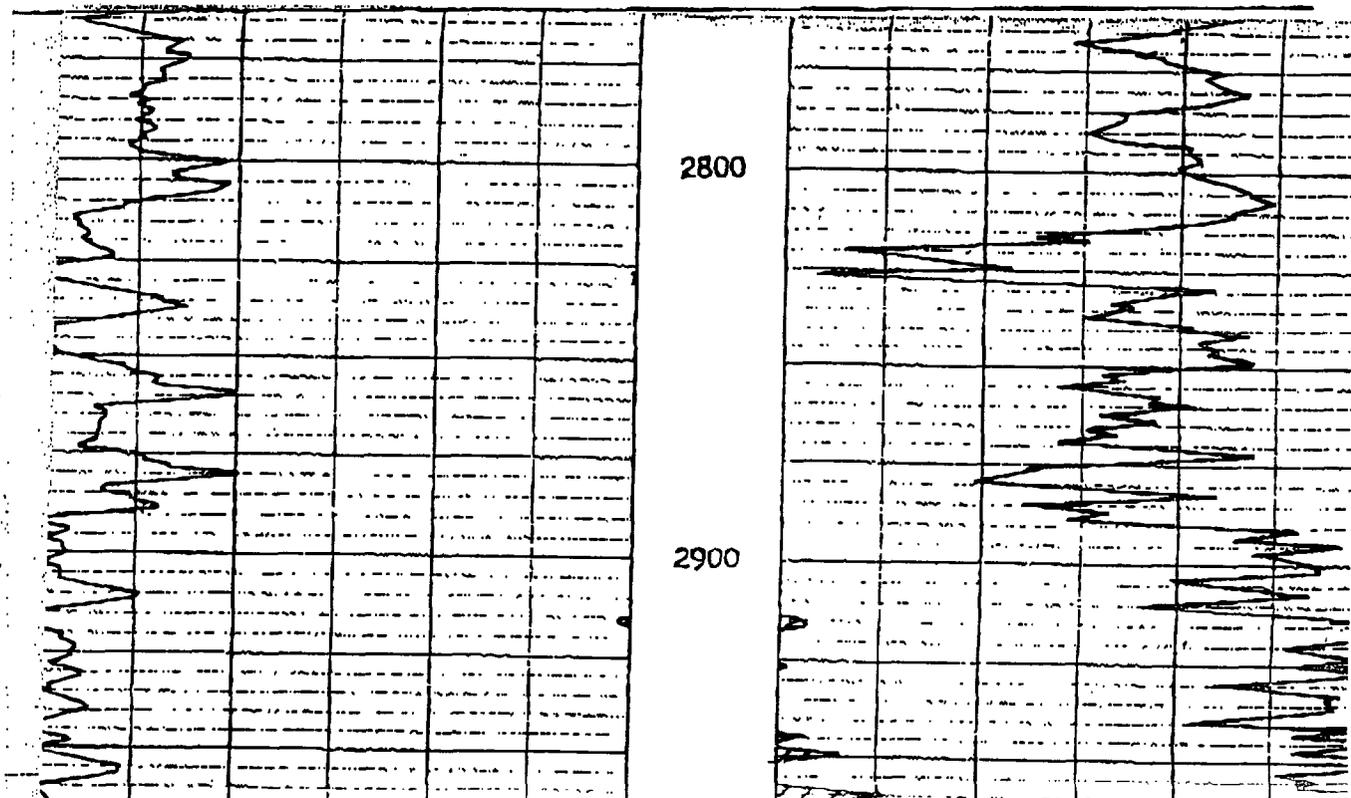
INDUCED NEUTRON RADIATION



LOCATION SEC. 2 TWP. 22-S RQE. 36-E	COMPANY	CITIES SERVICE OIL COMPANY	
	WELL	STATE N #5	
	FIELD	EDMONT	
	COUNTY	LEA	STATE
LOG NO. 12508	SECTION	2	RANGE 36-E
	TOWNSHIP	22-S	
	SURVEY	G.C. # 5 + W D.P. 3562	
LOG MEASURED FROM	TOP OF ROTARY TABLE	ELEVATION	3562
DRIILLING MEASURED FROM	SAME	ELEVATION	3562
PERMANENT DATUM	G.L. (7'10" BELOW TOP OF R.T.)	ELEVATION	3554'2"
TYPE OF LOG	GAMMA RAY	NEUTRONS	
RUN NUMBER	ONE	ONE	
DATE	5-28-56	5-28-56	
TOTAL DEPTH (DRILLER)	3513	3513	
EFFECTIVE DEPTH F. S. A. C.	3515	3515	
TOP OF LOGGED INTERVAL	SURFACE	SURFACE	
BOTTOM OF LOGGED INTERVAL	3510	3514	
TYPE FLUID IN HOLE	MUD	MUD	
FLUID LEVEL	FULL	FULL	
MAXIMUM RECORDED TEMP.			
D. D. OF INSTRUMENT — INCHES	3 5/8	3 5/8	
TIME CONSTANT — SECONDS	C-A	C-A	
LOGGING SPEED — FEET/MINUTE	15-60	15-60	
STATISTICAL VARIATION — INCHES			
COUNTER	F	PH	
RECORDED BY	BRANNEN		
WITNESSED BY	BEMPHILL		

FILE NUMBER  
 COMPANY CITIES SERVICE OIL COMPANY  
 WELL STATE N #5  
 FIELD EDMONT  
 COUNTY LEA  
 TWP 22-S  
 RQE 36-E  
 STATE NEW MEXICO

CASING RECORD				OPEN HOLE RECORD	
RUN NO.	SIZE IN.	WEIGHT, LB.	INTERVAL	BIT SIZE IN.	INTERVAL
ONE	8 5/8		SURFACE TO 1510	7 7/8 O.H.	





S

LEA COUNTY NEW MEXICO EMMONT FLD  
Well: CITIES SERVICE OIL CO. #5 State "N" Result: GAS  
Locn:

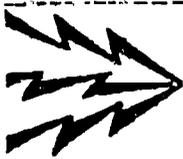
2-22S-36E, 660' FSE/VLS of Seo.

Spud: 5-10-56; Comp: 6-6-56; Elev: 3560' DF; TD: 3515' sd & li  
Casing: 8 5/8" 1510' / 650 sz; 5 1/2" 3034' / 450 sz  
Prod Zone: T/Pay 3034'; Prod from OH  
IPCAOF: 2,473,000 CFPGD thru 31/64" ch on 2" 3410', CP 550%,  
TP 450%

Comp Info: DST 3460-3510', op 2 hrs, rec 20' GCM; A/2000 gals;  
Flwd 2,473,000 CFPGD thru 31/64" ch on 2" 3410'.  
Tops: (EL) Anly 1508', Yates 3002', Seven Rivers 3278'

*Joe Amick*  
CIL REPORTS!

Date: 6-27-56 Card No: 11 NE dt

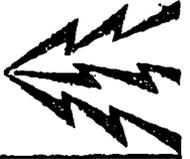


PERFORATING GUNS ATLAS CORP.

# SIMULTANEOUS RADIATION LOG

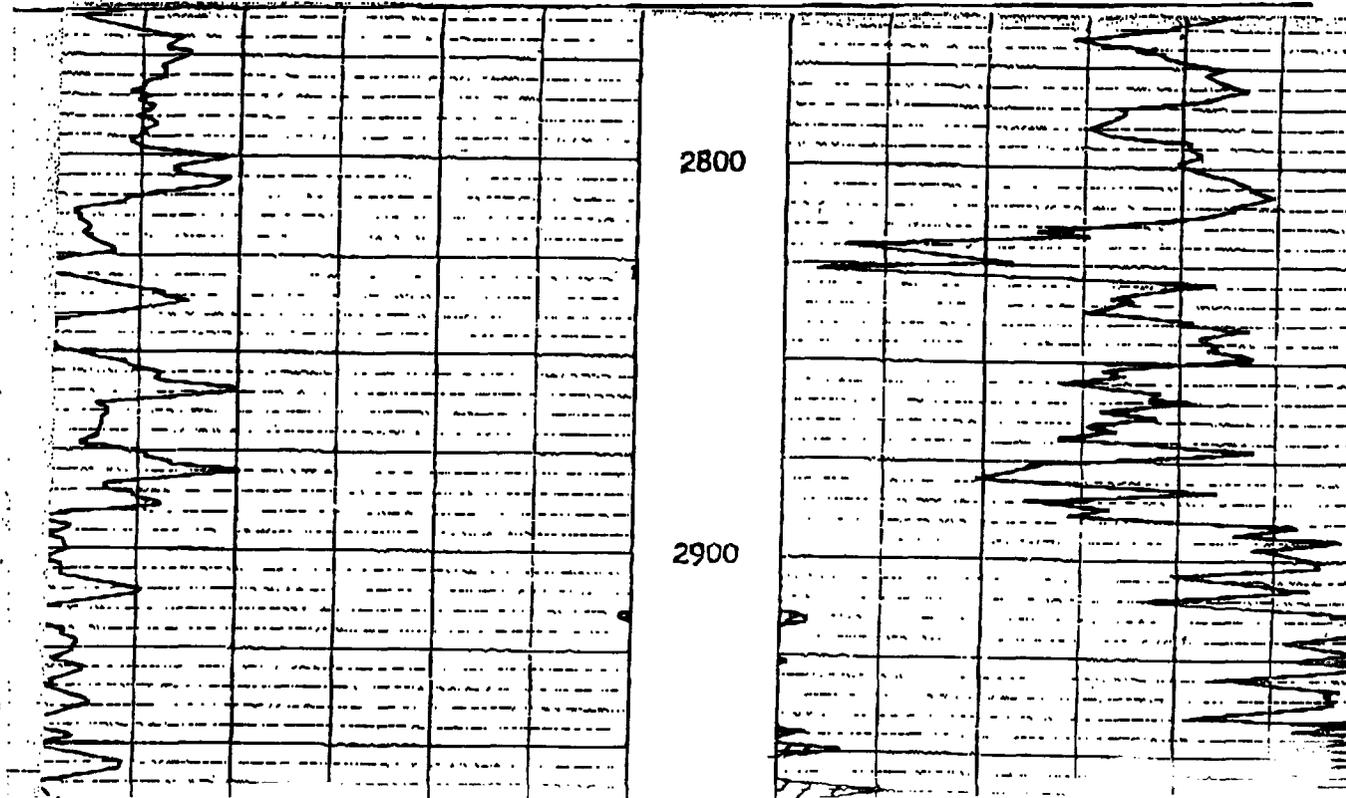
NATURAL GAMMA RADIATION

INDUCED NEUTRON RADIATION



LOCATION  SEC. 2  TWP. 22-S  RQE. 36-E  LOG NO. 12508	COMPANY <u>CITIES SERVICE OIL COMPANY</u> WELL <u>STATE N #5</u> FIELD <u>EDMONT</u> COUNTY <u>LEA</u> STATE <u>NEW MEXICO</u> SECTION <u>2</u> TOWNSHIP <u>22-S</u> RANGE <u>36-E</u> SURVEY <u>660' x 5 + 1/2</u> B.P. 3562	FULL NAME COMPANY <u>CITIES SERVICE OIL COMPANY</u> WELL <u>STATE N #5</u> FIELD <u>EDMONT</u> COUNTY <u>LEA</u> STATE <u>NEW MEXICO</u> SEC. <u>2</u> TWP. <u>22-S</u> R. <u>36-E</u> SURVEY
LOG MEASURED FROM <u>TOP OF ROTARY TABLE</u> ELEVATION <u>3562</u>		
DRILLING MEASURED FROM <u>SAME</u> ELEVATION <u>3562</u>		
PERMANENT DATUM <u>G.L. (7'10" BELOW TOP OF R.T.)</u> ELEVATION <u>3554'2"</u>		
	GAMMA RAY ONE 5-28-56 3513 3515 SURFACE 3510 MUD FULL 3 5/8 C-A 15-60 F	BRONS NEUTRON ONE 5-28-56 3513 3515 SURFACE 3514 MUD FULL 3 5/8 C-A 15-60 PH
RECORDED BY	BRAYNER	
WITNESSED BY	BENPHILL	

CASING RECORD				OPEN HOLE RECORD	
SUN NO.	SIZE IN.	WEIGHT, LB.	INTERVAL	BIT REC. IN.	INTERVAL
ONE	8 5/8		SURFACE TO 1510	7 7/8 O.H.	



**STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION**

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

**CASE NO. 12624  
ORDER NO. R-\_\_\_\_\_**

**APPLICATION OF RAPTOR RESOURCES, INC. FOR AN UNORTHODOX  
INFILL GAS WELL LOCATION AND SIMULTANEOUS DEDICATION, LEA  
COUNTY, NEW MEXICO.**

**RAPTOR RESOURCES, INC.'S  
PROPOSED ORDER OF THE DIVISION**

**BY THE DIVISION:**

This cause came on for hearing at 8:15 a. m. on April 19, 2001, at Santa Fe, New Mexico, before Examiner Michael E. Stogner.

NOW, on this \_\_\_\_ day of April, 2001, the Division Director, having considered the testimony, the record, and the recommendations of the Examiner, and being fully advised in the premises,

**FINDS THAT:**

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

(2) The applicant, Raptor Resources, Inc. ("Raptor") seeks an exception to the well location requirements of the Special Pool Rules and Regulations for the Jalmat Gas Pool, as promulgated by Division Order No. R-8170, as amended, for an unorthodox Jalmat infill gas well location for its State "A" A/C-1 Well No. 133 to be drilled 660 feet from the North and West lines of Section 24, Township 23 South, Range 36 East, NMPM, Lea County, New Mexico, with an existing non-standard 480-acre spacing and proration unit in the Jalmat Gas Pool comprised of the W/2 and SE/4 of said Section 24 will be dedicated to the well.

The applicant, pursuant to the rules governing the Jalmat Gas Pool and the Stipulated Declaratory Judgment issued by the First Judicial District Court in Santa Fe County, New Mexico on December 15, 2000, in Hartman v. Oil Conservation Division, Cause No. D-0101-CV-9902927 (“the Stipulated Declaratory Judgment”), also seeks to simultaneously dedicate Jalmat production to this 480-acre non-standard unit from all Jalmat gas wells on this non-standard gas spacing and proration unit.

(3) By Division Order No. R-9073, dated December 14, 1989, as amended by Division Order No. R-9073-B, a 480-acre spacing and proration unit in the Jalmat Gas Pool comprised of the W/2 and SE/4 of Section 24 was approved (Raptor Exhibit No. 8). The following Jalmat gas wells have been dedicated to this spacing and proration unit:

- A. State “A” A/C-1 Well No. 17 (**API No. 30-025-09401**), located at an unorthodox gas well location 660 feet from the South and East lines (Unit P) of Section 24 (*NSL-2722-D-80, dated September 22, 1999*);
- B. State “A” A/C-1 Well No. 24 (**API No. 30-025-09402**), located at a standard gas well location 990 feet from the South line and 1650 feet from the West line (Unit N) of Section 24 (*Order No. R-9073, dated December 14, 1989, as amended (Exhibit A, paragraph 17) , plugged and abandoned*);
- C. State “A” A/C-1 Well No. 25 (**API No. 30-025-09403**), located at a standard gas well location 1650 feet from the North and West lines (Unit F) of Section 24 (*Order No. R-9073, dated December 14, 1989, as amended (Exhibit A, paragraph 17), plugged and abandoned*);
- D. State “A” A/C-1 Well No. 32 (**API No. 30-025-09404**), located at a standard gas well location 1650 feet from the South and East lines (Unit J) of Section 24 (*Order No. R-9073, dated December 14, 1989, as amended (Exhibit A, paragraph 17)*);
- E. State “A” A/C-1 Well No. 50 (**API No. 30-025-09405**), located at an unorthodox gas well location 660 feet from the South line and 1980 feet from the East line (Unit O) of Section 24 (*NSL-2722, dated December 6, 1989*);

- F. State "A" A/C-1 Well No. 52 (**API No. 30-025-9406**), located at an unorthodox gas well location 1980 feet from the South and West lines (Unit K) of Section 24 (*NSL-2722-A, dated January 26, 1990*);
- G. State "A" A/C-1 Well No. 53 (**API No. 30-025-09407**), located at an unorthodox gas well location 1980 feet from the North line and 660 feet from the West line (Unit E) of Section 24 (*Order No. R-9073, dated December 14, 1989, as amended(Exhibit A, paragraph 17)*);
- H. State "A" A/C-1 Well No. 54 (**API No. 30-025-09409**), located at an unorthodox gas well location 1980 feet from the South and 660 feet from the East line (Unit I) of Section 24 (*NSL-2722-B, dated July 1, 1991*);
- I. State "A" A/C-1 Well No. 107 (**API No. 30-025-20975**), located at an unorthodox gas well location 1980 feet from the South line and 660 feet from the West line (Unit L) of Section 24 (*NSL-2722, dated December 6, 1989*);
- J. State "A" A/C-1 Well No. 108 (**API No. 30-025-20976**), located at an unorthodox gas well location 660 feet from the South and West lines (Unit M) of Section 24 (*NSL-2722-C, dated January 13, 1992*); and
- K. State "A" A/C-1 Well No. 126 (**API No. 30-025-31045**), located at a standard gas well location 990 feet from the North line and 1650 feet from the West line (Unit C) of Section 24 (*NSL-2722-D(SD), dated September 22, 1999*).

(4) Raptor acquired interests in the Jalmat Gas Pool in 1998 and embarked on a redevelopment program which included the drilling of 14 wells during calendar years 1999 and 2000. The results of this program demonstrate that there are substantial recoverable reserves in the Jalmat Gas Pool which cannot be recovered by the existing wells in this pool. (*Raptor Exhibit Nos. 2, 4, 5 and 6; Testimony of Lawrence*).

**NOTICE**

- (5) The Stipulated Declaratory Judgment provides in part that:

- A. “The approval of drilling an additional well or wells on a spacing unit (“infill drilling”) in the Eumont or Jalmat Gas Pools shall be administered in a manner that affords due process to affected parties, including notice, an opportunity to object and in the case of objection a right to public hearing in accordance with Division Rule 104.
- B. In accordance with those principles, it is provided that in the event an operator files an application with the Division for approval of an additional well or wells in the Eumont Gas Pool or the Jalmat Gas Pool, which if allowed would result in spacing of less than 160 acres per well on a proration unit, the infill well or wells may be permitted only after notice pursuant to Division Rule 1207A(2) and opportunity for hearing for affected persons.”

(6) Raptor presented evidence that showed that it notified all affected persons of this application in accordance with Division Rules 104 and 1207A(2) by providing a copy of this application by certified mail to all offsetting Division designated operators and working interest owners in adjoining spacing units. Further, Raptor testified that in all offsetting spacing units which it operates, the working interest ownership is identical to the ownership in the subject spacing and proration unit and all working interest owners have been notified of this application. (*Raptor Exhibit 14; Testimony of Keithly*).

**FINDING:** Raptor provided notice of the application in this case in accordance with the provisions of the Stipulated Declaratory Judgment and Division Rules 104 and 1207A(2).

(7) No interest owner objected to this application or appeared at the hearing in this application.

**NEED FOR ADDITIONAL JALMAT GAS WELLS**

(8) The Stipulated Declaratory Judgment also provides that an application for approval of an additional well or wells in the Jalmat Gas Pool, which if allowed would result in spacing of less than 160 acres per well on a proration unit “...must be supported by evidence that the additional well or wells are necessary to efficiently and economically drain the proration unit, will prevent waste and protect correlative rights” (emphasis added).

(9) Raptor presented geological evidence which shows:

- A. there is substantial geologic discontinuity in the Jalmat Gas Pool under the NW/4 of Section 24 on which this proposed infill well is to be drilled;
- B. with only one well drilled on each 160-acre spacing unit, sands containing producible reserves can be missed and the reserves left in the ground; and
- C. Development of the Jalmat Gas Pool on less than 160-acre spacing is needed to assure that as many producible sands as possible are intersected by a wellbore. (*Raptor Exhibits 22 and 23; Testimony of Percy*).

(10) The engineering evidence presented by Raptor showed that substantial reserves have not been recovered by existing wells due to inadequate completion practices in older wells including inadequate treatment of perforated intervals and incomplete perforating of productive intervals which has resulted in many of the productive intervals in the Yates and Seven Rivers formations, as well as other productive zones through the pool, have been by passed and not produced. (*See, Raptor Exhibits 28 through 32, Testimony of Lawrence*).

(11) Without redevelopment, the properties in the Raptor 1999 and 2000 program would have produced approximately 3.1 million cubic feet of gas per day. However, as a result of the Raptor redevelopment program, these properties now produce at more than twice that rate. (*Testimony of Lawrence*).

(12) Raptor's engineering evidence also included information on the wells located on all 40-acre tracts offsetting the State "A" A/C-1 Well No. 133. Although six wells offsetting the State "A" A/C-1 Well No. 133 produce from the Jalmat Gas Pool, all produce at marginal rates and cannot drain the NW/4 of Section 24. (*Raptor Exhibit 30; Testimony of Lawrence*).

(13) The drilling of the Raptor Resources, Inc. State "A" A/C-1 Well No. 133 will enable applicant to recover reserves which otherwise will not be recovered.

(14) Raptor also testified that due to the heterogeneous nature of the Yates and Seven Rivers formations and the limited offsetting production, the State "A" A/C-1 Well No. 133 is needed to efficiently drain remaining reserves from this proration unit. (*Testimony of Percy and Lawrence*).

**FINDING: The State "A" A/C-1 Well No. 133 is necessary to efficiently drain remaining recoverable reserves from this proration unit.**

(15) Raptor presented economic information on its redevelopment program which showed that it will obtain an acceptable economic return from the new infill Jalmat wells it drills in Jalmat Gas Pool. (*Raptor Exhibit No. 7, Testimony of Lawrence*).

**FINDING: The State "A" A/C-1 Well No. 133 will economically drain recoverable reserves from this proration unit.**

**FINDING: Raptor has met the conditions of the Stipulated Declaratory Judgment for applications for approval of additional wells in the Jalmat Gas Pool which if allowed would result in spacing of less than 160 acres per well on a proration unit.**

(16) Raptor testified that to be able to selectively perforate individual zones within the Jalmat Gas Pool which have not previously been produced to depletion, new wells need to be drilled instead of attempting recompletions old existing wellbores. (*See, Log of Raptor State "A" A/C-1 Well No. 127 on Raptor Exhibit No. 19, Testimony of Percy and Lawrence*).

### **UNORTHODOX WELL LOCATIONS**

(17) The Special Pool Rules and Regulations for the Jalmat Gas Pool provide for wells on 480-acre spacing and proration units to be located no closer than 990 feet from the outer boundary of the spacing unit (*Rule 4(b)2, Order No. R-8170*). Accordingly, the State "A" A/C-1 Well No. 133 is too close to the outer boundary of the acreage dedicated thereto than permitted by the Special Rules and Regulations of the Jalmat Gas Pool.

(18) Raptor testified that to intersect portions of the reservoir not previously drained, well locations must be determined based upon the geologic and reservoir characteristics at the proposed location and an engineering evaluation of the prior completions and past and current production from offset wells. (*Testimony of Lawrence*).

(19) The geological and engineering data presented in support of the well location for the State "A" A/C-1 Well No. 133 demonstrates that the proposed unorthodox well location is necessary to enable the applicant to recover remaining reserves under this spacing and proration unit thereby preventing waste.

**FINDING: The proposed unorthodox gas well locations for the State "A" A/C-1 Well No. 133 will protect correlative rights and prevent waste and should be approved.**

**SIMULTANEOUS DEDICATION**

(20) All wells capable of producing Jalmat reserves from the subject spacing and proration unit are necessary to recover the remaining reserves under this unit.

(22) To efficiently produce the remaining recoverable reserves from the Jalmat Gas Pool under this 480-acre nonstandard spacing and proration unit, all Jalmat Gas Pool production from the State "A" A/C-1 Well Nos. 17, 32, 50, 52, 53, 54, 107, 108, 126, and 133 should be simultaneously dedicated to this spacing and proration unit.

**FINDING: The application for the simultaneous dedication of the State "A" A/C-1 Well Nos. 17, 32, 50, 52, 53, 54, 107, 108, 126, and 133 to the subject 480-acre non-standard gas spacing and proration unit should be approved.**

(23) Approval of this application and the drilling of the Raptor Resources, Inc. State "A" A/C-1 Well No. 133 will result in the recovery of hydrocarbons which will otherwise not be recovered thereby preventing waste and will otherwise be in the best interest of conservation and protection of correlative rights.

**FINDING: The drilling of the Raptor Resources, Inc. State "A" A/C-1 Well No. 133 at an unorthodox infill location 660 feet from the North and West lines of Section 24 is necessary to efficiently and economically drain the 480-acre spacing and proration unit comprised of the W/2 and SE/4 of Section 24, Township 23 South, Range 36 East, NMPM, Lea County, New Mexico and should be approved.**

**IT IS THEREFORE ORDERED THAT:**

(1) The application of Raptor Resources, Inc. ("Raptor") for an exception to the well location requirements of the Special Pool Rules and Regulations for the Jalmat Gas Pool, as promulgated by Division Order No. R-8170, as amended, for the Raptor State "A" A/C-1 Well No. 133 to be drilled at an unorthodox infill gas location 660 feet from the North and West lines of Section 24 within an existing non-standard 480-acre

Case No. 12624

Order No. R- \_\_\_\_\_

Page 8

---

spacing and proration unit in the Jalmat Gas Pool comprised of W/2 and SE/4 Section 24, Township 23 South, Range 36 East, NMPM, Lea County, New Mexico is hereby granted.

(2) Applicant, pursuant to the rules governing the Jalmat Gas Pool and the Stipulated Declaratory Judgment is authorized to simultaneously dedicate Jalmat production to this 480-acre non-standard unit from all of the above described State "A" A/C-1 Well Nos. 17, 32, 50, 52, 53, 54, 107, 108, 126, and 133.

(3) Jurisdiction is hereby 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

LORI WROTENBERY  
Director

S E A L