## STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT

I.

# OIL CONSERVATION DIVISION P. O. Box 2088 SANTA FE, NEW MEXICO 87501

ADMINIS	TRATIVE	ORDER
NFL	71	

INFILL DRILLING FINDINGS AND WELL-SPACING WAIVER
MADE PURSUANT TO SECTION 271.305(b) OF THE
FEDERAL ENERGY REGULATORY COMMISSION REGULATIONS,
NATURAL GAS POLICY ACT OF 1978 AND OIL CONSERVATION DIVISION
ORDER NO. R-6013

Operator	HCW E	xplo	ration	, Inc.		Well	Name	and No.	R. W.	Cowden	"C" Well	No.	9
Location:	Unit	H	_Sec	31 Twp	23S	Rng	37E	Cty	Lea				<del></del> .
II.				•	-								
THE DIVISION	N FIND	<u>s</u> :						•					
promulgated well to qua find, prior efficiently drained by requirement	l pursu alify a to th drain any ex	ant de cor a poi a poi istim	to the new ons mencem ortion ng well	Natural ( shore proceed of the reconstruction)	Sas Poli Nuction Filling Servoir Chat uni	icy Act well ur , that to c covere it, and	of 19 nder Se the well ed by to must o	78 provid ection 10 ll is nec the prora grant a w	es that 3 of seessary tion unaiver of	t, in ore aid Act, to effect nit which of exist	the Divis ctively and cannot b ing well-s	n infil sion mund nd se so spacing	ıst
(2) That he procedure we Division and	whereby	the	Divisi	ion Direc	tor and	the Di	vision	ivision e Examiner	establi es are	shed an empowere	administra d to act i	ative for the	e
											atTansill		
Rivers (Pro											640	ac	cres.
(4) That a	31 .	Twn.	235 210	acre pro	מבנוסת ו 177	init com	ourrei Currei	ng the ntly dedi	cated t		R. W. Co	wden '	"C"
Well No.													
(5) That t	his prov	orat:	ion uni 7 Order	tis ( )	standa SP-143	ard (X)	nons:	tandard;	if nons	standard	, said uni	t was	
(6) That s well(s) on			ion uni	t is not	being e	effectiv	ely a	nd effici	ently o	drained l	y the exi	sting	
(7) That t the product otherwise b	ion of	an a	additio	completion 179	,700	e well f	or whi	ich a fin s from th	ding is e prora	s sought ation un	should re it which w	esult i would r	in not
(8) That a for which a reservoir c the unit.	findi	na īs	souah	t in nece	ssarv t	o effec	tively	and eff.	icient]	ly drain	a portion	of th	ı <b>e</b> ı
(9) That is application pool.	in orde n shoul	r to d be	permit approv	effectived as an	except:	efficier ion to t	nt dra: :he sta	inage of andard we	said p	roration cing req	unit, the uirements	e subje for th	ect e
IT IS THERE	FORE O	RDER	<u>ED</u> :										
(1) That t infill well for infill and is nece unit which	on th drilli essary cannot	e exi ng gi to po be	isting ranted ermit t effecti	proration by this on the drains vely and	n unit o order is age of a efficie	describe an exc porticently di	ed in Sception of Cained	Section I n to appl the reser by any e	I(4) al icable voir co xistin	bove. The well space overed by well the terms of the term	he authori azing requ y said pro hereon.	ization niremen pration	n nts
(2) That j Division ma					is reta	ained fo	or the					the	
DONE at San	nta Fe,	New	Mexico	o, on this	221	nd day	of_	Februar	У		19 <u>83                                    </u>	•.	
				<i>:</i>	·	הבל	) /ISION	DIRECTOR	an	EXAMINE.	R		
						7,				-			

WILLIAM P. AYCOCK & ASSOCIAT

Petroleum Engineering Consultants 308 WALL TOWERS WEST MIDLAND, TEXAS 79701 PHONE 915/683-5721



وبر احتراف

December 29, 1982

New Mexico Department of Energy and Minerals, Oil Conservation Division P. O. Box 2088 Santa Fe, New Mexico 87501

Attention: Mr. Mike Stogner

Subject: Administrative Application for Infill Well Findings

for HCW Exploration Company's Cowden "C" No. 9 Well,

Section 31, Township 23 South, Range 37 East, 1650' FNL and 800' FEL, Jalmat (Gas) Pool,

Lea County, New Mexico

#### Gentlemen:

Application is hereby made for an administrative infill well finding effective with initial gas deliveries for the described well in accordance with Exhibit "A", Order R-6013-A. The following constitute the requirements of the said Order:

- Rule 5: Attached are copies of the Forms C-101 and C-102.
- Rule 6: The name of the pool in which the infill well has been drilled is the Jalmat Pool, and the standard spacing therefor is 640 acres.
- Rule 7: The non-standard proration unit and unorthodox well location were approved administratively by Order No. NSP-1335, a copy of which is attached hereto.
- Rule 8: See attached Table No. 1, "Summary of Required Information, Rule 8, Exhibit "A", Order No. R-6013-A" for requirements of Sections "a." through "f.". Also required by Section "g." is "a clear and concise statement indicating why the existing well(s) on the proration unit cannot effectively and efficiently drain the portion of the reservoir covered by the proration unit." The Jalmat (Gas) Pool well to which the 320-acres were assigned that included the present 160-acre

New Mexico Department of Energy and Minerals, 0il Conservation Division December 29, 1982 Page 2

non-standard proration unit was the HCW Exploration Company Cowden "C" No. 4; this well was last produced in July, 1980, with an accumulative gas production of 5,743 MMCF. Since July, 1982 and prior to the drilling and completion of the infill HCW Exploration Company Cowden "C" No. 9, there was no gas production from the east one-half of the original 320-acre proration unit which was assigned to the infill well from the Jalmat (Gas) Pool. Accordingly, any gas reserves that would have been recoverable after July, 1982 beneath the 160-acre proration unit would not have been produced unless an infill well had been dilled.

#### Rule 9:

- Section a. Requires that a formation structure map be submitted; attached is a Yates formation structure map of the area including and immediately surrounding the subject 160-acre proration unit.
- Section b. Requires that the "volume of increased ultimate recovery expected to be obtained and a narrative describing how the increase was determined "be submitted. The estimated ultimate gas recovery for the HCW Exploration Cowden "C" No. 9 is 180 MMCF. Since there is no gas to be recovered from the proration unit assigned to this infill well other than anticipated volume of gas, the increased ultimate recovery is 180 MMCF. The estimate of increased recovery for the HCW Exploration Company Cowden "C" No. 9 was accomplished as follows:
  - (1) Well logs for the HCW Cowden "C" No. 9 were analyzed, resulting in the following:

Mean Porosity, Fraction of Bulk Volume 0.171

Mean Connate Water Saturation,
Fraction of Net Effective Pore Volume 0.39

Net Effective Pay Thickness, Feet 39.

Since the gross pay thickness constituting potential gas reservoir for the Cowden "C" No. 9 is 55 feet, the above represents a net effective pay to gross pay ratio of approximately 71 percent.

(2) The production test for the Cowden "C" No. 9 performed on October 15, 1982, was analyzed, resulting in the following:

New Mexico Department of Energy and Minerals, Oil Conservation Division December 29, 1982 Page 3

Stabilized Deliverability Coefficient, MCF/day per psia <sup>2</sup> ,	0.0265022
Initial Stabilized Wellhead Shut-in Pressure (Pc), psia	143.2
Initial Gas Formation Volume Factor scf/rcf	9.68

(3) The results of steps (1) and (2) were then combined, resulting in the following:

Original Gas-in-Place

MMCF/Acre 1.722

MMCF/160 Acres 276.0

Estimated Gas Recovery Factor,
Fraction of Original Gas-in-Place 0.651

Estimated Ultimate Recovery,
MMCF per 160 Acres 179.7

Section c. Other supporting data submitted include the following:

Gas Production History Tabulation and Graph for HCW Exploration Company Cowden "C" No. 4 (the pre-existing well).

Complete New Mexico Oil Conservation Division (NMOCD) Forms on file for both the pre-existing HCW Exploration Company Cowden "C" No. 4 and the Infill HCW Exploration Co. Cowden "C" No. 9.

New Mexico Oil Conservation Division Order No. NSP-1335

New Mexico Department of Energy and Minerals Oil Conservation Division December 29, 1982 Page 4

We believe that the above adequately documents this request and has been prepared in accordance with Exhibit "A", Order R-6013-A; however, we should be pleased to supply anything else which you might require in this connection.

Very truly yours,

Wm. P. Aycock,

WPA/pkm

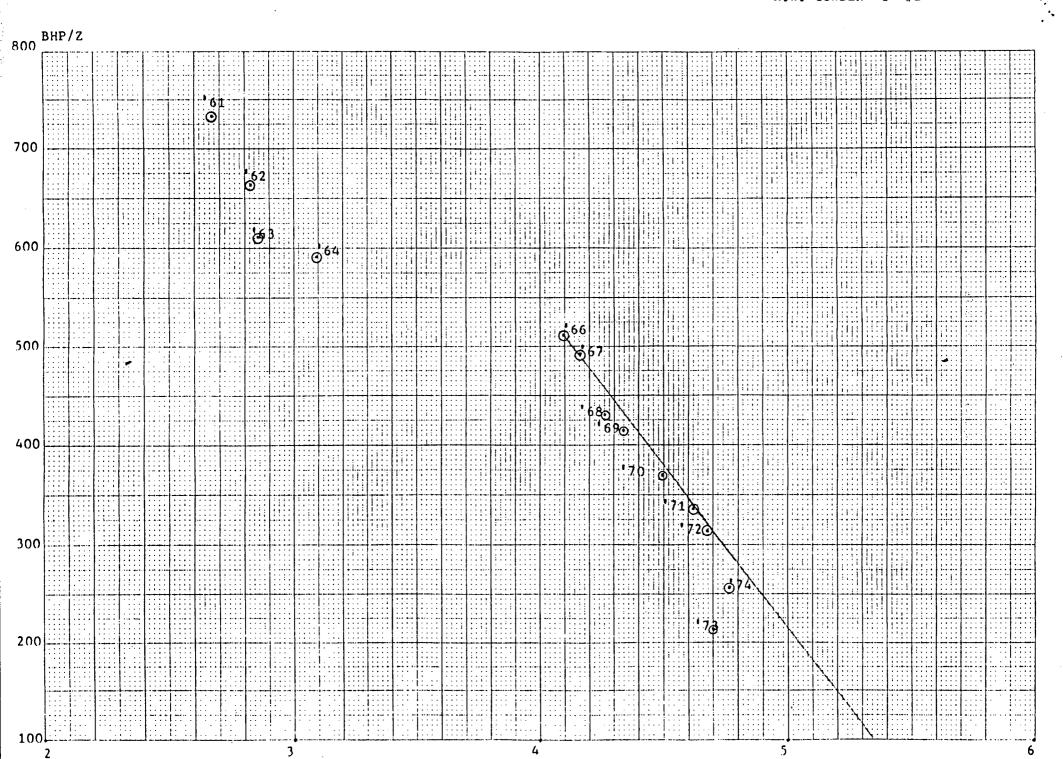
**Enclosures** 

#### TABLE NO. 1

# SUMMARY OF REQUIRED INFORMATION, RULE 8, EXHIBIT "A", ORDER R-6013-A, (Sections "a." through "f.") NATURAL GAS POLICY ACT INFILL FINDINGS, ADMINISTRATIVE PROCEDURE

SECTION OF RULE 8	RULE 8 REQUIREMENT	PRE-EXISTING WELL OPERATOR HCW EXPLORATION COMPANY	· .		INFILL APPLICATION WELL OPERATOR HCW EXPLORATION COMPANY
<b>a.</b>	Lease Name and Well Location	R. W. Cowden "C" No. 4	×		R. W. Cowden "C" No. 9
<b>b</b> •	Spud Date	October 30, 1949	* .		September 10, 1982
c.	Completion Date	November 18, 1949, in Langlie	-Mattix	, and	October 15, 1982
d.	Mechanical Problems	None; PB to Jalmat 11-18-52	1		None.
e.	Current Rate of Production	None; Last produced 68 MCF in June 1982.	4.7 N	38 T	C-105: 494 MCF/day
<b>f.</b>	Date of Plug and Abandonment	Not Plugged. Casing side of dual completic water injection well (Getty C	11		Not Plugged.

ATHS X 1 LOG CYCLE



STATE OF NEW MEXIC	0	(-)	•.	•	(		30-0X	25-27918
ENERGY AND MINERALS DEPA		OIL	CONSERVAT	ION DIVIS	SION		Form C-101	
DO. 07 109119 ACCESTED						250	Revised 10	-1-78
SANTA FE	-	. SA	P.O. BOX <sub>ë</sub> NTA FE, NEW N	The state of the s	19 4 /V	ا اال	SA. Indicate	Type of Leans
FILE	+			NI	- 4000	][[ [[	STATE	
U.\$.G.\$,				IIII JAN 1	<b>2</b> 1983		.S. State OII	6 Gus Loune No.
DPERATOR			1				mm	mmmm
1 1 -	N FOR PE	RMIT TO	DRILL, DEEPEN	CHAPGANSER!	ATION C	MAISION		
a, Type of Work	N TOK TE		DATE, DEET CH	OKTEOGA	THAY FE		7. Unit Agre	rement Name
DRILL X	ł		DEEPEN [		<b>-</b>	🗂	_	
b. Type of Well			DEFLEY []		PLUG 8	VCK	8. Farm or L	.ease Name
OIL GAS WELL X	ОТНО	n		SINGLE X	MULT	10 E	R. W. (	Cowden "C"
2. Name of Operator					· ·		3. Well No.	
HCW Exploration, I	nc.						9	
P. O. Box 10585		Midland	, Texas 79702	1				d Pool, or Wildoor
Location of Well					<del></del>		Jalmat	(Gas)
UNIT LETT	гаН	, roc	ATED 1650	FEET FROM THE	<u>North</u>	LIRE		
. ND 800 FEET FROM	THE East		t or sec. 31	TWP 23S	;.c. 37E	NEEDIA		
	777777	والكرازي	mmiiini	THITT	TITIT	77777	12. County	<del>777</del> 441
							Lea	
					11111	11111	MITTE	
	777777		777777777777777777777777777777777777777	77777777	777777		7777777	
				3300 s	rah 19	A. Formation	1	20. fictory of C.T.
1. Llevelions (show whether Dr.	KT. etc.)	21 A K 126	& Status Plug. Liond	21B. Drilling Co		Yates	7	Rotary
3329' GR		Blan		To be Det		l		Date Work will stort
23.			···	<del></del>		·	1 //4945	,
			ROPOSED CASING AN	D CEMENT PRO	GRAM			
SIZE OF HOLE	SIZE OF		WEIGHT PER FOO		DEPTH	SACKS OF		EST. TOP
7 7/8"	8 5/8 4 1/2		24#	400		150		Surface
1 1/0	4 1/2	·	10.5#	3300'		500	J	Surface
					į			
•	i			•				
Propose to drill	ll" hole	to 400	)' and run 8 5/	8" casing.	Will	cement v	vith suff	ficient
cement volume to	circulat	e cemer	it to surface.	Nipple up	10" 30	000 psi 1	30P with	pipe
rams and blind r	ams. Dri	11 7 7/	8" hole to app	roximately	2700'	using bi	rine wate	er. Will
drill with mud f	rom 2700'	to 330	00' TD. Run op	en hole lo	gs and	if well	looks pr	roductive,
run 4 1/2" casin attempt to compl	g. Will	try to	circulate ceme	ent to surf	ace on	4 1/2" (	casing.	WILL
accempt to compa	ece well	as late	s yas well.			•		
	•							
¥			· .					
				•	AF	PROVAL V	ALID FOR	180 DAYS
								2/25/83
•						UNLESS I	DRILLING I	UNDERWAY
ABOVE SPACE DESCRIBE PR	IN PROGRAM, IF	CRAMITE	PROPOSAL IS TO DEEPEN	D# PLUG BACK, GIV	VE SAVA ON	PARSENT PAGE		AND PROPOSED NEW PRODUC
ereby centify that the information	n above is tru	e And comp	lete to the best of my h	inpwledge and be	lief.			
Xtue (14)	Steve [	oualas	Tale Division	n Engineer	_		are Augi	ust 20, 1982
ened NOW NOW			7 ure				ute	,
(This space for S	HOLE USEL NE	D βY					Λ۱	JG 25 1982
OKIG	ERRY SEXTO	N					AC	1987 CY DI
PROVED BY		PR	TITLE				ATE	

Getty Oil Co. #60 Myers Langlie-Mattix Unit Queen Producing Oil Well Getty Oil Co. #59 Myers Langlie-Mattix Unit Queen (Injection Well) Getty Oil Co. #73 Myers Langlie-Mattix Unit Queen (Injection Well) Getty Oil Co. #74 Myers Langlie-Mattix Unit Queen Producing Oil|Well 330 1320 1650 1980 2310 2640 1 500 880 1000

Section

31

Linut Letter

Ground Level Elev.

Yes

sion.

Western Gas

3328.8

Date Surveyed

Registered Professional Engineer

AUGUST 17, 1982

and/or Land Surveyo

PATRICK A. ROMERO Ronald J. Eidson



BRUCE KING

#### STATE OF NEW MEXICO

### ENERGY AND MINERALS DEPARTMENT

**OIL CONSERVATION DIVISION** 

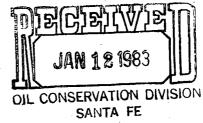
November 15, 1982

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501

(505) 827-2434

HCW Exploration, Inc. P. O. Box 10585 Midland, Texas 79702

Attention: Steve A. Douglas



Administrative Order NSP-1335

Gentlemen:

Reference is made to your application for a 160-acre non-standard proration unit consisting of the following acreage in the Jalmat Gas Pool:

LEA COUNTY, NEW MEXICO
TOWNSHIP 23 SOUTH, RANGE 37 EAST, NMPM
Section 31: NE/4

It is my understanding that this unit is to be dedicated to your R. W. Cowden "C" Well No. 9 located 1650 feet from the North line and 800 feet from the East line of said Section 31.

By authority granted me under the provisions of Rule 5(c)(3) of Order No. R-1670, the above non-standard proration unit is hereby approved.

Sincerely

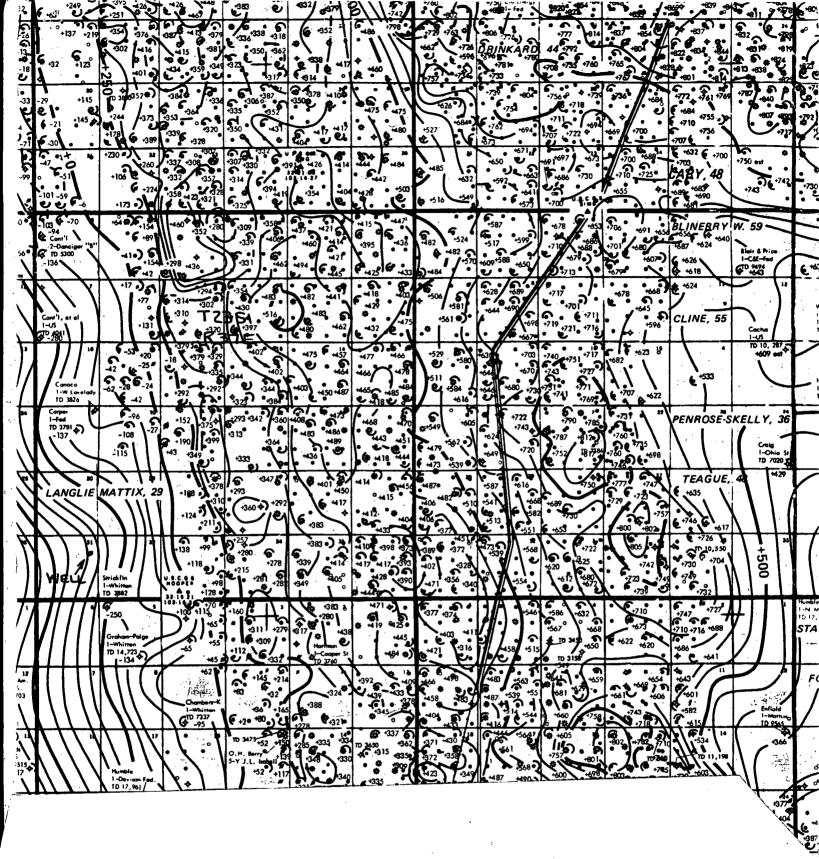
JOE D. RAMEY

Director

JDR/RLS/dr

cc: Oil Conservation Division - Hobbs

Oil & Gas Engineering Committee - Hobbs

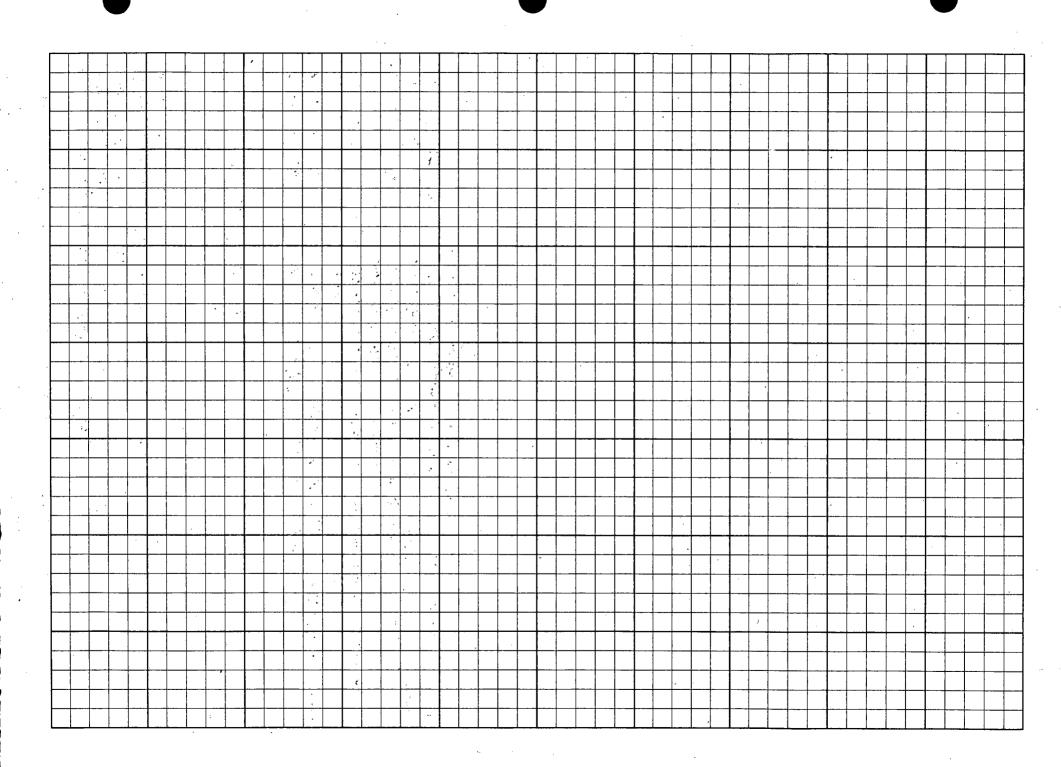


dministrative Application for Intill Well Findin ICW Exploration, Inc. I.W. Cowden "C" Well No. 9 Init N. Seeting 31 Township 28 South Rome 37 t

Unit H. Section 31, Township 23 South, Range 37 East hea County

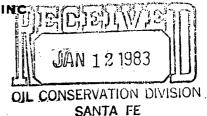
# covence of Events

42-381 50 SHEETS 5 SQUARE 42-382 100 SHEETS 5 SQUARE 42-382 200 SHEETS 5 SQUARE 42-382 200 SHEETS 5 SQUARE



WILLIAM P. AYCOCK & ASSOCIATES, INC

Petroleum Engineering Consultants 308 WALL TOWERS WEST MIDLAND, TEXAS 79701 PHONE 915/683-5721



December 29, 1982

New Mexico Department of Energy and Minerals, Oil Conservation Division P. O. Box 2088 Santa Fe, New Mexico 87501

Attention: Mr. Mike Stogner

Subject: Administrative Application for Infill Well Findings

for HCW Exploration Company's Cowden "C" No. 9 Well,

Section 31, Township 23 South, Range 37 East, 1650' FNL and 800' FEL, Jalmat (Gas) Pool,

Lea County, New Mexico

#### Gentlemen:

Application is hereby made for an administrative infill well finding effective with initial gas deliveries for the described well in accordance with Exhibit "A", Order R-6013-A. The following constitute the requirements of the said Order:

- Rule 5: Attached are copies of the Forms C-101 and C-102.
- Rule 6: The name of the pool in which the infill well has been drilled is the Jalmat Pool, and the standard spacing therefor is 640 acres.
- Rule 7: The non-standard proration unit and unorthodox well location were approved administratively by Order No. NSP-1335, a copy of which is attached hereto.
- Rule 8: See attached Table No. 1, "Summary of Required Information, Rule 8, Exhibit "A", Order No. R-6013-A" for requirements of Sections "a." through "f.". Also required by Section "g." is "a clear and concise statement indicating why the existing well(s) on the proration unit cannot effectively and efficiently drain the portion of the reservoir covered by the proration unit." The Jalmat (Gas) Pool well to which the 320-acres were assigned that included the present 160-acre

New Mexico Department of Energy and Minerals, Oil Conservation Division December 29, 1982 Page 2

non-standard proration unit was the HCW Exploration Company Cowden "C" No. 4; this well was last produced in July, 1980, with an accumulative gas production of 5,743 MMCF. Since July, 1982 and prior to the drilling and completion of the infill HCW Exploration Company Cowden "C" No. 9, there was no gas production from the east one-half of the original 320-acre proration unit which was assigned to the infill well from the Jalmat (Gas) Pool. Accordingly, any gas reserves that would have been recoverable after July, 1982 beneath the 160-acre proration unit would not have been produced unless an infill well had been dilled.

#### Rule 9:

- Section a. Requires that a formation structure map be submitted; attached is a Yates formation structure map of the area including and immediately surrounding the subject 160-acre proration unit.
- Section b. Requires that the "volume of increased ultimate recovery expected to be obtained and a narrative describing how the increase was determined "be submitted. The estimated ultimate gas recovery for the HCW Exploration Cowden "C" No. 9 is 180 MMCF. Since there is no gas to be recovered from the proration unit assigned to this infill well other than anticipated volume of gas, the increased ultimate recovery is 180 MMCF. The estimate of increased recovery for the HCW Exploration Company Cowden "C" No. 9 was accomplished as follows:
  - (1) Well logs for the HCW Cowden "C" No. 9 were analyzed, resulting in the following:

Mean Porosity, Fraction of Bulk Volume 0.171

Mean Connate Water Saturation,
Fraction of Net Effective Pore Volume 0.39

Net Effective Pay Thickness, Feet 39.

Since the gross pay thickness constituting potential gas reservoir for the Cowden "C" No. 9 is 55 feet, the above represents a net effective pay to gross pay ratio of approximately 71 percent.

(2) The production test for the Cowden "C" No. 9 performed on October 15, 1982, was analyzed, resulting in the following:

New Mexico Department of Energy and Minerals, Oil Conservation Division December 29, 1982 Page 3

Stabilized Deliverability Coefficient, MCF/day per psia <sup>2</sup> ,	0.0265022
Initial Stabilized Wellhead Shut-in Pressure (Pc), psia	143.2
Initial Gas Formation Volume Factor scf/rcf	9.68

(3) The results of steps (1) and (2) were then combined, resulting in the following:

Original Gas-in-Place

MMCF/Acre	1.722
MMCF/160 Acres	276.0
Estimated Gas Recovery Factor, Fraction of Original Gas-in-Place	0.651
Estimated Ultimate Recovery, MMCF per 160 Acres	179.7

#### Section c. Other supporting data submitted include the following:

Gas Production History Tabulation and Graph for HCW Exploration Company Cowden "C" No. 4 (the pre-existing well).

Complete New Mexico Oil Conservation Division (NMOCD) Forms on file for both the pre-existing HCW Exploration Company Cowden "C" No. 4 and the Infill HCW Exploration Co. Cowden "C" No. 9.

New Mexico Oil Conservation Division Order No. NSP-1335

New Mexico Department of Energy and Minerals Oil Conservation Division December 29, 1982 Page 4

We believe that the above adequately documents this request and has been prepared in accordance with Exhibit "A", Order R-6013-A; however, we should be pleased to supply anything else which you might require in this connection.

Very truly yours,

Wm. P. Aycock

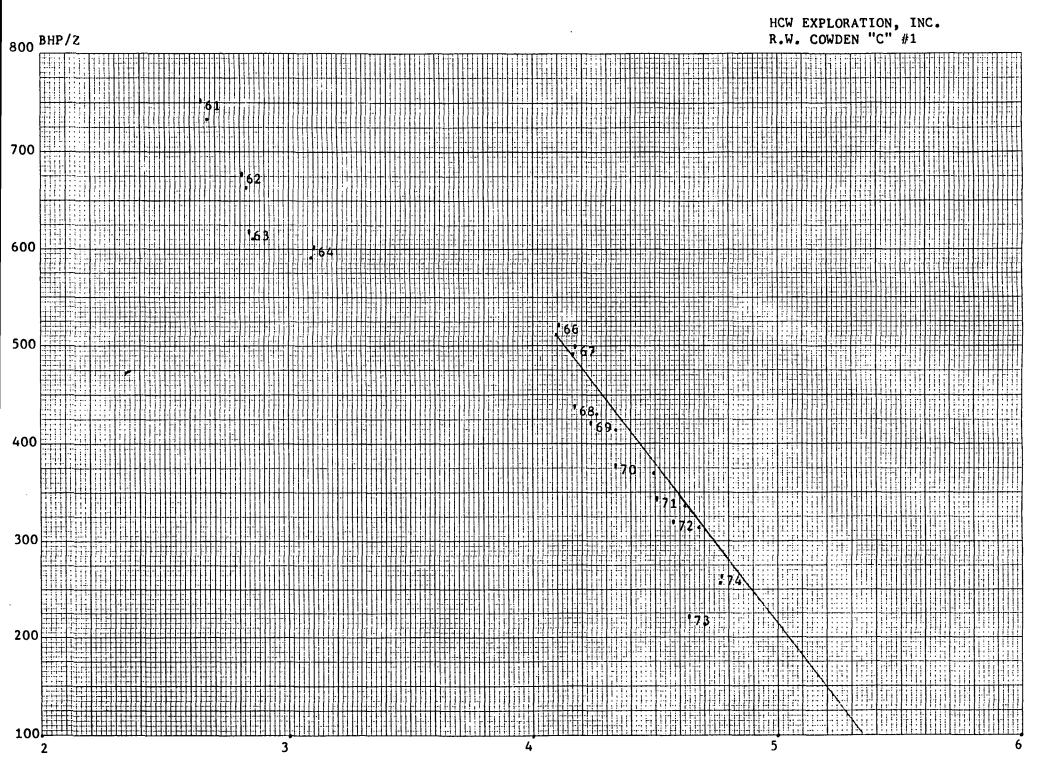
WPA/pkm

Enclosures

#### TABLE NO. 1

## SUMMARY OF REQUIRED INFORMATION, RULE 8, EXHIBIT "A", ORDER R-6013-A, (Sections "a." through "f.") NATURAL GAS POLICY ACT INFILL FINDINGS, ADMINISTRATIVE PROCEDURE

SECTION OF RULE 8	RULE 8 REQUIREMENT	PRE-EXISTING WELL OPERATOR HCW EXPLORATION COMPANY	INFILL APPLICATION WELL OPERATOR HCW EXPLORATION COMPANY
a.	Lease Name and Well Location	R. W. Cowden "C" No. 4	R. W. Cowden "C" No. 9
<b>b.</b>	Spud Date	October 30, 1949	September 10, 1982
c.	Completion Date	November 18, 1949, in Langlie-Mattix	October 15, 1982
d.	Mechanical Problems	None; PB to Jalmat 11-18-52	None.
e.	Current Rate of Production	None; Last produced 68 MCF in June 1982.	C-105: 494 MCF/day
f.	Date of Plug and Abandonment	Not Plugged. Casing side of dual completion as water injection well (Getty Oil Co. Myers Langlie-Mattix Unit No. 61).	Not Plugged.



PROPOSE CASING AND CHERRY PROGRAM  SIZE OF HOLE  SIZE OF CASING  WEIGHT PROPOSED CASING AND CHERRY PROGRAM  SIZE OF HOLE  SIZE OF CASING  WEIGHT PROPOSED CASING AND CHERRY PROGRAM  SIZE OF HOLE  SIZE OF CASING  WEIGHT PROPOSED CASING AND CHERRY PROGRAM  SIZE OF HOLE  SIZE OF CASING  WEIGHT PRE PROT SETTING DEPTH SACKS OF CENENT EST. TOP  10' 7/8"  4 1/2"  10 5 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7	TREY AND MINERALS DE  DISTRIBUTION  SANTA FE  FILE  U.S.G.S.  LAND OFFICE  OPERATOR  APPLICAT  Type of Work  Type of Work  CW Exploration,  ddrens of Operator  O. Box 10585  occition of Well  UNIT LET	Inc.  Midla	P. O. BOX SANTA FE, NEW A FO DRILLINGEPEN  OIL CONSERVATION SANTA I  and, Texas 79702	PL TENSION THE NOT	UG BACK	Form C-101 Revised 10  SA. Indicate avave [  3. State Oil  7. Unit Agre  8. Farm or L  R. W. (  9. Well No.  9  10. Field an	-1-78 - Type of Lease - rec X 6 Gus Lesee No rece X -
P. O. DOX 2008    Instrumerion   SANTA FC, NEW MEXICO 87501   SANTA FC, NE	DISTRIBUTION  SANTAFE  FILE  U.S.G.S.  LAND OFFICE  OPERATOR  APPLICAT  Type of Well  OLL GAS WELL  GRIE OF OPERATOR  CW Exploration,  ddress of Operator  O. BOX 10585  occution of Well  UNIT LET	ION FOR PERMIT TO THE MINISTER H.	FO DRILLINGEREN  OIL CONSERVATION  SANTA I  and, Texas 79702	PL TELL FROM THE NOT	MULTIPLE 20NC	SA. Indicate  STATE [  S. State Oil  7. Unit Agre  8. Farm or L  R. W. (  9. Well No.  9  10. Field an	Type of Leane  Type of Leane  Fix X  6 Gus Lesee No.  Fement Name  Fement Name  Cowden "C"
SANTA FE, NEW MEXICO 87501  SANTA FE MEXICO 87501  SA	SANTA FE  FILE  U.S.G.S.  LAND OFFICE  OPERATOR  APPLICAT  Type of Well  OLL GAS  WELL  GRIE OF OPERATOR  CW Exploration,  ddress of Operator  O. Box 10585  ocation of Well  UNIT LET	ION FOR PERMIT TO THE MINISTER H.	OIL COINSERVATIONSAINTA I	PL STATE OF THE MOY	MULTIPLE 20NC	7. Unit Agre  8. Farm or L  R. W. (  9. Well No.  9	6 Gus Lesee No.  cement Name  cease Name  Cowden "C"
APPLICATION FOR PERMIT TO ADRIBUTE SERIES   Description of the company of the com	U.S.G.S.  LAND OFFICE  OPERATOR  APPLICAT  Type of Well  OLL GAS WELL  GRIE OF OPERATOR  CW Exploration,  ddress of Operator  O. Box 10585  occution of Well  UNIT LET	Inc.  Midla	OIL CONSERVATIONSANTA I	PL N THE SECTION THE NOT	MULTIPLE 20NC	7. Unit Agre  8. Farm or L  R. W. ( 9. Well No.  9	Cowden "C"
APPLICATION FOR PERMIT TO JORINUS DEEPEN/ PRINT OF BACK    Control   Control	APPLICATION  APPLICATION  Type of Well  Type of Well  OCCUPATION  CASS  WILL  WILL  CASS  WILL  WILL	Inc.  Midla	OIL CONSERVATIONSANTA I	PL N THE SECTION THE NOT	MULTIPLE 20NC	7. Unit Agre  8. Farm or L  R. W. ( 9. Well No.  9  10. Field an	Cowden "C"
APPLICATION FOR PERMIT TO JOSEPH WILDERPRY OR HILDS EACK    APPLICATION FOR PERMIT TO JOSEPH WILDS EACK   DRILL	APPLICATION  APPLICATION  Type of Well  Type of Well  OFFICE CASE  WILL CASE	Inc.  Midla	OIL CONSERVATIONSANTA I	PL N THE SECTION THE NOT	MULTIPLE 20NC	8. Farm or L R. W. ( 9. Well No. 9 10. Field an	Cowden "C"
Proposed Verial DRILL DEPENDENCE 2 1983  PLUG BACK DRIVE DRILL DEPENDENCE 2 1983  PLUG BACK DRIVE DRILL DEPENDENCE 2 1983  PLUG BACK DRIVE DRILL DRIVE	Type of Work  Type of Well  ONL  CAS  WELL  GAS  WELL	Inc.  Midla	OIL CONSERVATIONSANTA I	PL N THE SECTION THE NOT	MULTIPLE 20NC	8. Farm or L R. W. ( 9. Well No. 9 10. Field an	Cowden "C"
PROPOSE CASING AND CHERRY PROGRAM  SIZE OF HOLE  SIZE OF CASING  WEIGHT PROPOSED CASING AND CHERRY PROGRAM  SIZE OF HOLE  SIZE OF CASING  WEIGHT PROPOSED CASING AND CHERRY PROGRAM  SIZE OF HOLE  SIZE OF CASING  WEIGHT PROPOSED CASING AND CHERRY PROGRAM  SIZE OF HOLE  SIZE OF CASING  WEIGHT PRE PROT SETTING DEPTH SACKS OF CENENT EST. TOP  10' 7/8"  4 1/2"  10 5 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7 8 7	DRILL [ Type of Well  CAS WELL [	Inc.  Midla	OJL CONSERVATIO SAINTA I	PEET FROM THE NOT	MULTIPLE 20NC	8. Farm or L R. W. ( 9. Well No. 9 10. Field an	Cowden "C"
OIL CONSTRUCTION DEBUGNIT PER POOT SETTING DEPTH SACKS OF COMENT EST. TOP  10 S S S S S S S S S S S S S S S S S S S	CW Exploration,  ddress of Operator  O Box 10585  Docation of Well  DMIT LET	Inc.  Midla	OJL CONSERVATIO SAINTA I	PEET FROM THE NOT	MULTIPLE 20NC	R. W. ( 9. Well No. 9 10. Field an	Cowden "C"
OIL CONSTRUCTION DEBUGNIT PER POOT SETTING DEPTH SACKS OF COMENT EST. TOP  10 S S S S S S S S S S S S S S S S S S S	CW Exploration, ddress of Operator . O. Box 10585 occation of Well  WELL CAS WILL CA	Inc. Midla	OJL CONSERVATIO SAINTA I	PEET FROM THE NOT	2046	R. W. ( 9. Well No. 9 10. Field an	Cowden "C"
Consideration of the control of the	CW Exploration, ddress of Operator . O. Box 10585 occition of Well NAIT LE	Inc. Midla	ind, Texas 79702	PEET FROM THE NOT	2046	9. Well No. 9 10. Field an	d Pool, or Wildcat
CM Exploration, Inc.  SANSTAL  10. Field and Peol, or Wildert  Jalmat (Gas)  10. Field and Peol, or Wildert  Jalmat (Gas)  10. Box 10585  Midland, Texas 79702  800  ***Ecc Freedulate** East Line or are: 31 top. 235 ir. 37E Line  12. County  Lea  13. District for the county of C.T.  33. District for the county of C.T.  33. District for the county of C.T.  33. District for the county of C.T.  14. Kind 6 Signus Piop, Isonal 21B, Drilling Contractor  To be Determined  Raugust 1982  ***PROPOSED CASING AND CEMENT PROGRAM  SIZE OF HOLE  SIZE OF HOLE  SIZE OF CASING WEIGHT PER FOOT SETTING DEPTH SACKS OF CEMENT EST. TOP  11"  8 5/8"  VEIGHT PER FOOT SETTING DEPTH SACKS OF CEMENT EST. TOP  11"  8 5/8"  24# 400' 150 Surface  Propose to drill 11" hole to 400' and run 8 5/8" casing. Will cement with sufficient cement volume to circulate cement to surface. Nipple up 10" 3000 psi BDP with pipe rams and blind rams. Drill 7/8" hole to approximately 2700' using brine water. Will drill with mud from 2700' to 3300' TD. Run open hole logs and if well looks productive, run 4 1/2" casing. Will try to circulate cement to surface on 4 1/2" casing. Will attempt to complete well as Yates gas well.  APPROVAL VALID FOR 180 DAYS  PERMIT EXPIRES DIRELING UNDERWAY  ONE STACE DESCRIBE PROPOSED PROGRAMAN IS TRACES OF PLUE ARCA, SIVE 24A ON PRESENT PROGRAM  APPROVAL VALID FOR 180 DAYS  PERMIT EXPIRES DIRELING UNDERWAY  ONE STACE DESCRIBE PROPOSED PROGRAMAN IS TRACES OF PLUE ARCA, SIVE 24A ON PRESENT PROGRAM  APPROVAL VALID FOR 180 DAYS  PERMIT EXPIRES DIRELING UNDERWAY  ONE STACE DESCRIBE PROPOSED PROGRAMAN IS TRACES OF PLUE ARCA, SIVE 24A ON PRESENT PROGRAM  APPROVAL VALID FOR 250 DAYS  PERMIT EXPIRES DIRELING UNDERWAY  ONE STACE DESCRIBE PROPOSED PROGRAMAN IS TRACES OF PLUE ARCA, SIVE 24A ON PROGRAMA DESCRIBE PROGRAMAN IS TRACES OF PLUE ARCA, SIVE 24A ON PROGRAMA DESCRIBE PROGRAMAN IS TRACES OF PLUE ARCA, SIVE 24A ON PROGRAMA DESCRIBE PROGRAMAN IS TRACES OF PLUE ARCA, SIVE 24A ON PROGRAMA DESCRIBE PROGRAMA DESCRIBE PROGRAMA DESCRIBE PROGRAMA	O. BOX 10585  Coation of Well UNIT LE	Midla	ind, Texas 79702	PEET FROM THE NOT	· ·thc	9 10. Field an	d Pool, or Wildeat
O. Box 10585 Midland, Texas 79702 Jalmat (Gas)  Rection of boil ways testers H Leaster 1650 sets from the land (Gas)  Rection of boil ways testers H Leaster 1650 sets from the Morth was set as the profession of boil ways testers H Leaster 1650 sets from the land (Gas)  Rections to boil ways testers H Leaster 1650 sets from the land (Gas)  Rections to boil ways testers sets 1 sets from the land (Gas)  Rections to boil ways testers sets 1 sets from the land (Gas)  Rections to boil ways testers sets 1 sets from the land (Gas)  Rections to boil ways testers sets 1 sets from the land (Gas)  Rections to boil ways testers sets 1	. O. Box 10585	Fact	LOCATED 1650	FEET FROM THE NOT	· th Line	10. Field an	
BOO RECEIPTION THE EAST LINE OF SIZE OF CASING AND CEMENT PROGRAM  SIZE OF HOLE SIZE OF CASING WEIGHT PER FOOT SETTING DEPTH SACKS OF CEMENT STOP SUFface  To 1/8" 4 1/2" 10.5# 3300' 500 Surface  Propose to drill 11" hole to 400' and run 8 5/8" casing. Will cement with sufficient cement volume to circulate cement to surface. Nipple up 10" 3000 psi BOP with pipe rams and blind rams. Drill 7 7/8" hole to approximately 2700' using brine water. Will drill with mud from 2700' to 3300' TD. Run open hole logs and if well looks productive, attempt to complete well as Yates gas well.  APPROVAL VALID FOR PREMIES 125/82 UNLESS OF CEMENT PROGRAM  APPROVAL VALID FOR PREMIES 125/82 UNLESS OF CEMENT PROGRAM  APPROVAL VALID FOR PREMIES 125/82 UNLESS OF CEMENT PROGRAM  APPROVAL VALID FOR PREMIES 125/82 UNLESS OF CEMENT PROGRAM  APPROVAL VALID FOR PREMIES 125/82 UNLESS OF CEMENT PROGRAM PREMIES 125/82 UNLESS OF CEMENT PROGRAM PROGR	Ocation of Well UNIT LE	Fact	LOCATED 1650	FEET FROM THE NOT	· th LINE	Jalmat	(Cac)
BOO PEET PROUTINE EAST LINE OF SIZE 31 TWP, 235 TOTAL LINE LEAD TO BE LINE OF SIZE OF LINE WITH LEAD TO BE LEAD TO BE LEAD TO BE DETERMINED WHICH DEPTH SACKS OF CEMENT EST. TO BE DETERMINED BY A 172" 10.5# 3300' SETTING DEPTH SACKS OF CEMENT EST. TO BE DETERMINED BY A 172" 10.5# 3300' SETTING DEPTH SACKS OF CEMENT EST. TO BE DETERMINED BY A 172" 10.5# 3300' SETTING DEPTH SACKS OF CEMENT EST. TO BE DETERMINED BY A 172" 10.5# 3300' SETTING DEPTH SACKS OF CEMENT EST. TO BE DETERMINED BY A 172" 10.5# 3300' SUFface  Propose to drill 11" hole to 400' and run 8 5/8" Casing. Will cement with sufficient cement volume to circulate cement to surface. Nipple up 10" 3000 psi BOP with pipe rams and blind rams. Drill 7 7/8" hole to approximately 2700' using brine water. Will drill with mud from 2700' to 3300' TD. Run open hole logs and if well looks productive, run 4 1/2" casing. Will try to circulate cement to surface on 4 1/2" casing. Will attempt to complete well as Yates gas well.  APPROVAL VALID FOR SETTING DEPTH SACKS OF CEMENT EST. TO BE DETERMINED WITH EACH SETTING DEPTH SACKS OF CEMENT EST. TO BE DETERMINED WITH SACKS OF CEMENT EST. TO BE DEVELOPED BY A 1/2" Casing. Will coment with sufficient cement volume to circulate cement to surface on 4 1/2" casing. Will attempt to complete well as Yates gas well.  APPROVAL VALID FOR SETTING DEPTH SACKS OF CEMENT EST. TO BE DEVELOPED BY A 1/2" Casing. Will attempt to complete well as Yates gas well.  APPROVAL VALID FOR SETTING DEPTH SACKS OF CEMENT PRODUCTIVE TONE AND PROPOSES SETTING DEPTH SACKS OF CEMENT PRODUCTIVE TONE AND PROPOSES SETTING DEPTH SACKS OF CEMENT PRODUCTIVE TONE AND PROPOSES SETTING DEPTH SACKS OF CEMENT PRODUCTIVE TONE AND PROPOSES SETTING DEPTH SACKS OF CEMENT PRODUCTIVE TONE AND PROPOSES SETTING DEPTH SACKS OF CEMENT SACK	UNIT LE	Fact	•		th LINE	-4-4-4-4-4-4	(Gas)
19. Fripposed Depth		DA THE East	LINE OF SEC. 31	225			THITTIIN THE
19. Fripped Depth   19.		DIN THE	LINE OF SEC.		37F		
Lea						12. County	777/1/1/1/1/1/
August 1982    Size of Hole   Size of Casing   Weight Per Foot   Setting Per   Soot   Soot		سيؤد ولمديرات المستوسطة سياسيان المستوادية بالمستوادية بالمستوادية					
August 1982   21A. Kind & Sizusus Plus. Bond   21B. Drilling Contractor   To be Determined   222. Approx. Date Work will alest 3329   GR   Blanket   To be Determined   August 1982      PROPOSED CASING AND CEMENT PROGRAM   PROPOSED CASING AND CEMENT PROGRAM	,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,,			<i>HHHHHH</i>	7777777	umi.	tillitim
August 1982   21A. Kind & Sizusus Plus. Bond   21B. Drilling Contractor   To be Determined   222. Approx. Date Work will alest 3329   GR   Blanket   To be Determined   August 1982      PROPOSED CASING AND CEMENT PROGRAM   PROPOSED CASING AND CEMENT PROGRAM							
PROPOSED CASING AND CEMENT PROGRAM  SIZE OF HOLE   SIZE OF CASING   WEIGHT PER FOOT   SETTING DEPTH   SACKS OF CEMENT   EST. TOP    11"   8 5/8"   24#   400"   150   Surface    7 7/8"   4 1/2"   10.5#   3300"   500   Surface    Propose to drill 11" hole to 400' and run 8 5/8" casing. Will cement with sufficient cement volume to circulate cement to surface. Nipple up 10" 3000 psi BOP with pipe rams and blind rams. Drill 7 7/8" hole to approximately 2700' using brine water. Will drill with mud from 2700' to 3300' TD. Run open hole logs and if well looks productive, run 4 1/2" casing. Will try to circulate cement to surface on 4 1/2" casing. Will attempt to complete well as Yates gas well.  APPROVAL VALID FOR				•	4	,	·
PROPOSED CASING AND CEMENT PROGRAM  SIZE OF HOLE SIZE OF CASING WEIGHT PER FOOT SETTING DEPTH SACKS OF CEMENT EST. TOP  11" 8 5/8" 24# 400' 150 Surface  7 7/8" 4 1/2" 10.5# 3300' 500 Surface  Propose to drill 11" hole to 400' and run 8 5/8" casing. Will cement with sufficient cement volume to circulate cement to surface. Nipple up 10" 3000 psi BOP with pipe rams and blind rams. Drill 7 7/8" hole to approximately 2700' using brine water. Will drill with mud from 2700' to 3300' TD. Run open hole logs and if well looks productive, run 4 1/2" casing. Will try to circulate cement to surface on 4 1/2" casing. Will attempt to complete well as Yates gas well.  APPROVAL VALID FOR 180 DAYS PERMIT EXPIRES 2/25/83 UNLESS DRILLING UNDERWAY  OVE SPACE DESCRIBE PROPOSED PROGRAM! IF PROPOSAL IS TO DELECT OF PLUE BACK, SIVE DATA ON PROPOSED SET AND ALL CONTROL OF THE PROPOSED SET AND ALL CONTROL OF			TTTTTTTTT				<u></u>
SIZE OF HOLE SIZE OF CASING WEIGHT PER FOOT SETTING DEPTH SACKS OF CEMENT EST. TOP 11" 8 5/8" 24# 400' 150 Surface 77/8" 4 1/2" 10.5# 3300' 500 Surface  Propose to drill 11" hole to 400' and run 8 5/8" casing. Will cement with sufficient cement volume to circulate cement to surface. Nipple up 10" 3000 psi BOP with pipe rams and blind rams. Drill 7 7/8" hole to approximately 2700' using brine water. Will drill with mud from 2700' to 3300' TD. Run open hole logs and if well looks productive, run 4 1/2" casing. Will try to circulate cement to surface on 4 1/2" casing. Will attempt to complete well as Yates gas well.  APPROVAL VALID FOR 180 DAYS PERMIT EXPIRES 2/25/83 UNLESS DRILLING UNDERWAY  ONE SPACE DESCRINE PROPOSED PROGRAM, IT PROPOSAL IS TO BEEPEN OF PLUE BACK, EIVE DATA ON PRESENT PRODUCTIVE EQUE AND PROPOSED SEW PAGE  ONE SPACE DESCRINE PROPOSED PROGRAM, IT PROPOSAL IS TO BEEPEN OF PLUE BACK, EIVE DATA ON PRESENT PRODUCTIVE EQUE AND PROPOSED SEW PAGE  ONE SPACE DESCRINE PROPOSED PROGRAM, IT PROPOSAL IS TO BEEPEN OF PLUE BACK, EIVE DATA ON PRESENT PRODUCTIVE EQUE AND PROPOSED SEW PAGE  ONE SPACE DESCRINE PROPOSED PROGRAM, IT PROPOSAL IS TO BEEPEN OF PLUE BACK, EIVE DATA ON PRESENT PRODUCTIVE EQUE AND PROPOSED SEW PAGE  ONE SPACE DESCRINE PROPOSED PROGRAM, IT PROPOSAL IS TO BEEPEN OF PLUE BACK, EIVE DATA ON PRESENT PRODUCTIVE EQUE AND PROPOSED SEW PAGE  ONE SPACE DESCRINE PROPOSED PROGRAM, IT PROPOSAL IS TO BEEPEN OF PLUE BACK, EIVE DATA ON PRESENT PRODUCTIVE EQUE AND PROPOSED SEW PAGE  ONE SPACE DESCRINE PROPOSED PROGRAM, IT PROPOSAL IS TO BEEPEN OF PLUE BACK, EIVE DATA ON PRESENT PRODUCTIVE EQUE AND PROPOSED SEW PAGE  ONE SPACE DESCRINE PROPOSED PROGRAM, IT PROPOSAL IS TO BEEPEN OF PLUE BACK, EIVE DATA ON PRESENT PRODUCTIVE EQUE AND PROPOSED SEW PAGE  ONE SPACE DESCRINE PROPOSED PROGRAM, IT PROPOSAL IS TO BEEPEN OF PLUE BACK, EIVE DATA ON PRESENT PROPOSED SEW PAGE  ONE SPACE DESCRINE PROPOSED PROGRAM, IT PROPOSAL IS TO BEEPEN OF PLUE BACK, EIVE DATA ON PRESENT PROPOSAL IS TO PROPOSAL IS TO PROPOSAL IS TO P			· 1	<u> </u>			
Propose to drill 11" hole to 400' and run 8 5/8" casing. Will cement with sufficient cement volume to circulate cement to surface. Nipple up 10" 3000 psi BOP with pipe rams and blind rams. Drill 7 7/8" hole to approximately 2700' using brine water. Will drill with mud from 2700' to 3300' TD. Run open hole logs and if well looks productive, run 4 1/2" casing. Will try to circulate cement to surface on 4 1/2" casing. Will attempt to complete well as Yates gas well.  APPROVAL VALID FOR 190 DAYS PERMIT EXPIRES 2/25/83 UNLESS DRILLING UNDERWAY  OVE SPACE DESCRIPE PROPOSED PROGRAMM IF PROPOSAL IS TO DELPEN OF PLUE BACK, SIVE DATA ON PRESENT PRODUCTIVE TONE AND PROPOSED BEN PAGE CONTROLLED BY AUGUST AND PROPOSED BY DRIGHNAL SIGNED BY ORIGINAL SIGNED BY DRIGHNAL SIGNED BY ORIGINAL SIGNED BY DRIGHNAL SIGNED B			PROPOSED CASING AN	D CEMENT PROGRAM			
Propose to drill 11" hole to 400' and run 8 5/8" casing. Will cement with sufficient cement volume to circulate cement to surface. Nipple up 10" 3000 psi BOP with pipe rams and blind rams. Drill 7 7/8" hole to approximately 2700' using brine water. Will drill with mud from 2700' to 3300' TD. Run open hole logs and if well looks productive, run 4 1/2" casing. Will try to circulate cement to surface on 4 1/2" casing. Will attempt to complete well as Yates gas well.  APPROVAL VALID FOR 180 DAYS PERMIT EXPIRES 2/25/83 UNLESS DRILLING UNDERWAY  OVE SPACE DESCRIPE PROPOSED PROGRAM: If PROPOSAL 13 TO DEEPEN OF PLUE BACE, EVE DATA ON PRESENT PROGREETIVE FOR LAND PROPOSED NEW PACES. EVE BACE AND PROPOSED NEW PACES. EVE BACE AND PROPOSED NEW PACES. EVE BACE AND PROPOSED NEW PACES. EVER B		1	G WEIGHT PER FOO	T SETTING DEP	TH SACKS OF	CEMENT	EST. TOP
Propose to drill 11" hole to 400' and run 8 5/8" casing. Will cement with sufficient cement volume to circulate cement to surface. Nipple up 10" 3000 psi BOP with pipe rams and blind rams. Drill 7 7/8" hole to approximately 2700' using brine water. Will drill with mud from 2700' to 3300' TD. Run open hole logs and if well looks productive, run 4 1/2" casing. Will try to circulate cement to surface on 4 1/2" casing. Will attempt to complete well as Yates gas well.  APPROVAL VALID FOR 180 DAYS PERMIT EXPIRES 2/25/83 UNLESS DRILLING UNDERWAY  OVE SPACE DESCRIPE PROPOSED PROGRAMM IN PROPOSAL IS TO DEEPEN OF PLUE BACK, SIVE DAYA ON PRESENT PROGRETIVE EDIE AND PROPOSED NEW PACES. SIVE STATE OF PROPOSED NEW PACES. SIVE DAYA ON PRESENT PROGRETIVE EDIE AND PROPOSED NEW PACES. SIVE DAYA ON PRESENT PROGRETIVE EDIE AND PROPOSED NEW PACES. SIVE DAYA ON PRESENT PROGRETIVE EDIE AND PROPOSED NEW PACES. SIVE DAYA ON PRESENT PROGRETIVE EDIE AND PROPOSED NEW PACES. SIVE DAYA ON PRESENT PROGRETIVE EDIE AND PROPOSED NEW PACES. SIVE DAYA ON PRESENT PROGRETIVE EDIE AND PROPOSED NEW PACES. SIVE DAYA ON PRESENT PROGRETIVE EDIE AND PROPOSED NEW PACES. SIVE DAYA ON PRESENT PROGRETIVE EDIE AND PROPOSED NEW PACES. SIVE DAYA ON PRESENT PROGRETIVE EDIE AND PROPOSED NEW PACES.  APPROVAL VALID FOR JOSE DAYA ON PROPOSED NEW PACES. SIVE DAYA ON PRESENT PROGRETIVE EDIE AND PROPOSED NEW PACES. SIVE DAYA ON PRESENT PROGRETIVE EDIE AND PROPOSED NEW PACES. SIVE DAYA ON PRESENT PROGRETIVE EDIE AND PROPOSED NEW PACES. SIVE DAYA ON PRESENT PROGRETIVE EDIE AND PROPOSED NEW PACES. SIVE DAYA ON PRESENT PROGRETIVE EDIE AND PROPOSED NEW PACES. SIVE DAYA ON PRESENT PROGRETIVE EDIE AND PROPOSED NEW PACES. SIVE DAYA ON PRESENT PROGRETIVE EDIE AND PROPOSED NEW PACES. SIVE DAYA ON PRESENT PROGRETIVE EDIE AND PROPOSED NEW PACES. SIVE DAYA ON PROPOSED NEW PACES. SI							
cement volume to circulate cement to surface. Nipple up 10" 3000 psi BOP with pipe rams and blind rams. Drill 7 7/8" hole to approximately 2700' using brine water. Will drill with mud from 2700' to 3300' TD. Run open hole logs and if well looks productive, run 4 1/2" casing. Will try to circulate cement to surface on 4 1/2" casing. Will attempt to complete well as Yates gas well.  APPROVAL VALID FOR 180 DAYS PERMIT EXPIRES 2/25/83 UNLESS DRILLING UNDERWAY  OVE SPACE DESCRIPE PROPOSED PROGRAM: If PROPOSAL IS TO DEEPEN ON PLUC BACK, GIVE DAYA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PACE CIPC STORE DESCRIPE PROPOSED NEW PACE CIPC STORE DESCRIPE PROGRAM, If AAY.  OVE SPACE DESCRIPE PROPOSED PROGRAM: If PROPOSAL IS TO DEEPEN ON PLUC BACK, GIVE DAYA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PACE CIPC STORE DESCRIPE AND PROPOSED NEW PACE CIPC STORE DESCRIPE BY ORIGINAL SIGNED BY ORIGINAL SIGNED BY SEXTON  AUG 25 1982	/ //8"	4 1/2"	10.5#	3300'	500	)	Surface
cement volume to circulate cement to surface. Nipple up 10" 3000 psi BOP with pipe rams and blind rams. Drill 7 7/8" hole to approximately 2700' using brine water. Will drill with mud from 2700' to 3300' TD. Run open hole logs and if well looks productive, run 4 1/2" casing. Will try to circulate cement to surface on 4 1/2" casing. Will attempt to complete well as Yates gas well.  APPROVAL VALID FOR 180 DAYS PERMIT EXPIRES 2/25/83 UNLESS DRILLING UNDERWAY  OVE SPACE DESCRIPE PROPOSED PROGRAM: If PROPOSAL IS TO DEEPEN OF PLUE BACK, GIVE DAYA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PACE. Give some of proposed between the complete to the best of my knowledge and boilef.  This space for Store Uses NEW Douglas Trile Division Engineer  ORIGINAL SIGNED BY ORIGINAL SIGNED BY ORIGINAL SIGNED BY SEXTON  AUG 25 1982					1		- 
PERMIT EXPIRES	cement volume trams and blind drill with mud run 4 1/2" cast	to circulate cem rams. Drill 7 from 2700' to 3 ing. Will try t	ment to surface. 7/8" hole to app 3300' TD. Run op so circulate ceme	Nipple up 10' proximately 270 pen hole logs a	" 3000 psi   00' using b and if well	BOP with rine wate looks pr	pipe er. Will roductive,
PERMIT EXPIRES 275/83  UNLESS DRILLING UNDERWAY  OVE SPACE DESCRIBE PROPOSED PROGRAM: IF PROPOSAL 13 TO DEEPEN ON PLUG BACK, GIVE DATA ON PRESENT PROGRETIVE ZONE AND PROPOSED NEW PACE ONE. CIVE BLOWGUT PROVINCE PROGRAM, IF ANY.  OF CORRESPONDED BY ORIGINAL SIGNED BY  ORIGINAL SIGNED BY  ORIGINAL SIGNED BY  ORIGINAL SIGNED BY  ORIGINAL SIGNED BY  ORIGINAL SIGNED BY  ORIGINAL SIGNED BY  ORIGINAL SIGNED BY  ORIGINAL SIGNED BY  ORIGINAL SIGNED BY  ORIGINAL SIGNED BY							
PERMIT EXPIRES 2/25/83 UNLESS DRILLING UNDERWAY  OVE SPACE DESCRIBE PROPOSED PROGRAM: IF PROPOSAL IS TO DEEPEN ON PLUC BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PACE ONE. CIVE SLOWGUT PREVENTER PROCRAM, IF ANY.  LY CORRESPONDED BY ORIGINAL SIGNED BY  ORIGINAL SIGNED BY  LEDRY SEXTON		*		4			
OVE SPACE DESCRIBE PROPOSED PROGRAM: IF PROPOSAL IS TO DEEPEN ON PLUC BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PROOF ONE. GIVE BLOWGUT PREVENTER PROGRAM, IF ANY.  By certify that the information above is true and complete to the best of my knowledge and belief.  A True Day State Douglas Title Division Engineer  ORIGINAL SIGNED BY  ORIGINAL SIGNED BY  LEDRY SEXTON					APPROVAL V	VALID FOR	180 DAYS
OVE SPACE DESCRIBE PROPOSED PROGRAM: IF PROPOSAL IS TO DEEPEN ON PLUG BACK, GIVE DATA ON PRESENT PRODUCTIVE ZONE AND PROPOSED NEW PROOF ONE. CIVE OLOWOUT PREVENTER PROGRAM, IF ANY.  By certify that the information above is true and complete to the best of my knowledge and belief.  BY CALLED DATA Steve Douglas Title Division Engineer  ORIGINAL SIGNED BY  ORIGINAL SIGNED BY  LEDRY SEXTON		• .					
AUG 25 1982  AUG 25 1982  AUG 25 1982					UNLESS	ukilliNG (	JNDERWAY .
Steve Douglas Title Division Engineer  ORIGINAL SIGNED BY  ORIGINAL SIGNED BY  LEARY SEXTON  AUG 25 1982	OVE SPACE DESCRIBE	PROPOSED PROGRAMI	IF PROPOSAL 13 TO DEEPEN	ON PLUC BACK, GIVE DAT	A ON PRESENT PRO	SUCTIVE ZONE	AND PROPOSED NEW PRO
ORIGINAL SIGNED BY  LEARY SEXTON  AUG 25 1982	by cestify that the informa	tion above is true and co	omplete to the best of my	inpwiedge and belief.	<del> </del>		
ORIGINAL SIGNED BY  LEARY SEXTON  AUG 25 1982	Steve Do	steve Dougla	as Tule Division	n Engineer	l	oute Augi	ust 20, 1982
OVED BY DATE DATE		State Used NED BY IGINAL SIGNED BY IGDRY SEXTON				AU	JG 25 198 <b>2</b>
	OVED BY	DISTRICT 1 SUPR.	TITLE			) A T E	

## NE EXICO OIL CONSERVATION COMMISSION

ATJAN 12 1983

Form C-102 Supersedes C-128 Elective 14-65

SANTA FE EXPLORATION INC. R.W. COWDEN " Unit Letter Section Township 144 B 45 C 23-SOUTH **37-EAST** LEA Actual Footage Location of Well: feet from the EAST leet from the Producing Formation Ground Level Elev. Dedicated Acreage: 3328.8 Yates Jalmat (Gas) Acres 1. Outline the acreage dedicated to the subject well by colored pencil or hachure marks on the plat below. 2. If more than one lease is dedicated to the well, outline each and identify the ownership thereof (both as to working interest and royalty). 3. If more than one lease of different ownership is dedicated to the well, have the interests of all owners been consolidated by communitization, unitization, force-pooling. etc? . If answer is "yes," type of consolidation If answer is "no," list the owners and tract descriptions which have actually been consolidated. (Use reverse side of this form if necessary.)\_ No allowable will be assigned to the well until all interests have been consolidated (by communitization, unitization, forced-pooling, or otherwise) or until a non-standard unit, eliminating such interests, has been approved by the Commission. CERTIFICATION Western Gas R.W. Cowden #1 (P+A) I hereby certify that the information con-HCW EXPLORATION, INC. tained herein is true and complete to the R. W. Cowden "C" #4 best of my knowledge and belief. Jalmat (Gas) Well Steve A. Douglas Getty Oil Co. #60 800 Myers Langlie-Mattix Unit <u>Division</u> Engineer Queen Producing Oil Well Getty Oil Co. #59 HCW Exploration, Inc. Myers Langlie-Mattix Unit Queen (Injection Well) August 20, 1982 Getty Oil Co. #73 Myers Langlie-Mattix Unit I heraby certify that the well location Queen (Injection Well) NGINEER notes of actual surveys made by me or Getty Oil Co. #74 under my supervision, and that the same Myers Langlie-Mattix Unit is true and correct to the best of my Queen Producing Oil Well knowledge and belief. AUGUST 17, 1982 Date Surveyed Registered Professional Engineer and/or Land Surveyor PATRICK A. ROMERO

1800

1000

Ronald J. Eidson

330

660

1320 1660

1880 2310

26 40



#### STATE OF NEW MEXICO

#### ENERGY AND MINERALS DEPARTMENT

**OIL CONSERVATION DIVISION** 

BRUCE KING GOVERNOR November 15, 1982

POST OFFICE BOX 2088
STATE LAND OFFICE BUILDING
SANTA FE, NEW MEXICO 87501
(505) 827-2434

HCW Exploration, Inc. P. O. Box 10585 Midland, Texas 79702

Attention: Steve A. Douglas

Administrative Order NSP-1335

Gentlemen:

Reference is made to your application for a 160-acre non-standard proration unit consisting of the following acreage in the Jalmat Gas Pool:

LEA COUNTY, NEW MEXICO
TOWNSHIP 23 SOUTH, RANGE 37 EAST, NMPM
Section 31: NE/4

It is my understanding that this unit is to be dedicated to your R. W. Cowden "C" Well No. 9 located 1650 feet from the North line and 800 feet from the East line of said Section 31.

By authority granted me under the provisions of Rule 5(c)(3) of Order No. R-1670, the above non-standard proration unit is hereby approved.

Sincerely

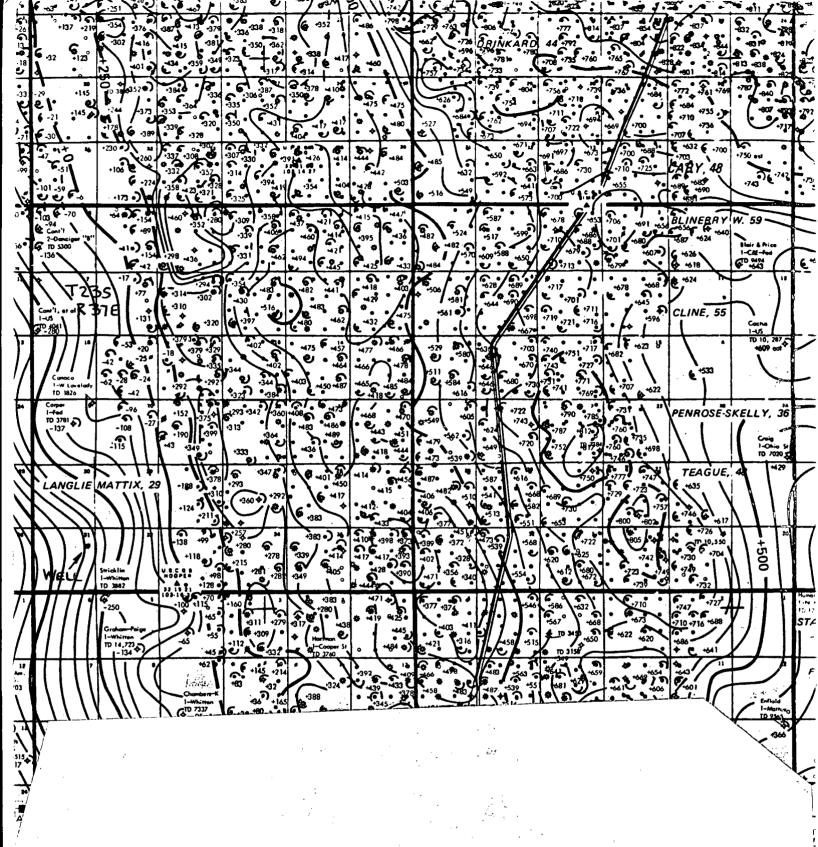
JOE D. RAMEY

Director

JDR/RLS/dr

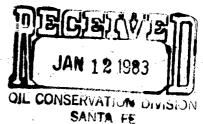
cc: Oil Conservation Division - Hobbs

Oil & Gas Engineering Committee - Hobbs



#### WILLIAM P. AYCOCK & ASSOCIATES, INC.

Petroleum Engineering Consultents 308 WALL TOWERS WEST MIDLAND, TEXAS 79701 PHONE 915/883-5721



December 29, 1982

New Mexico Department of Energy and Minerals, Oil Conservation Division P. O. Box 2088 Santa Fe, New Mexico 87501

Attention: Mr. Mike Stogner

Subject: Administrative Application for Infill Well Findings

for HCW Exploration Company's Cowden "C" No. 9 Well,

Section 31, Township 23 South, Range 37 East, 1650' FNL and 800' FEL, Jalmat (Gas) Pool,

Lea County, New Mexico

#### Gentlemen:

Application is hereby made for an administrative infill well finding effective with initial gas deliveries for the described well in accordance with Exhibit "A", Order R-6013-A. The following constitute the requirements of the said Order:

- Rule 5: Attached are copies of the Forms C-101 and C-102.
- Rule 6: The name of the pool in which the infill well has been drilled is the Jalmat Pool, and the standard spacing therefor is 640 acres.
- Rule 7: The non-standard proration unit and unorthodox well location were approved administratively by Order No. NSP-1335, a copy of which is attached hereto.
- Rule 8: See attached Table No. 1, "Summary of Required Information, Rule 8, Exhibit "A", Order No. R-6013-A" for requirements of Sections "a." through "f.". Also required by Section "g." is "a clear and concise statement indicating why the existing well(s) on the proration unit cannot effectively and efficiently drain the portion of the reservoir covered by the proration unit." The Jalmat (Gas) Pool well to which the 320-acres were assigned that included the present 160-acre

New Mexico Department of Energy and Minerals, Oil Conservation Division December 29, 1982 Page 2

non-standard proration unit was the HCW Exploration Company Cowden "C" No. 4; this well was last produced in July, 1980, with an accumulative gas production of 5,743 MMCF. Since July, 1982 and prior to the drilling and completion of the infill HCW Exploration Company Cowden "C" No. 9, there was no gas production from the east one-half of the original 320-acre proration unit which was assigned to the infill well from the Jalmat (Gas) Pool. Accordingly, any gas reserves that would have been recoverable after July, 1982 beneath the 160-acre proration unit would not have been produced unless an infill well had been dilled.

#### Rule 9:

- Section a. Requires that a formation structure map be submitted; attached is a Yates formation structure map of the area including and immediately surrounding the subject 160-acre proration unit.
- Requires that the "volume of increased ultimate recovery expected to be obtained and a narrative describing how the increase was determined "be submitted. The estimated ultimate gas recovery for the HCW Exploration Cowden "C" No. 9 is 180 MMCF. Since there is no gas to be recovered from the proration unit assigned to this infill well other than anticipated volume of gas, the increased ultimate recovery is 180 MMCF. The estimate of increased recovery for the HCW Exploration Company Cowden "C" No. 9 was accomplished as follows:
  - (1) Well logs for the HCW Cowden "C" No. 9 were analyzed, resulting in the following:

Mean Porosity, Fraction of Bulk Volume 0.171

Mean Connate Water Saturation,
Fraction of Net Effective Pore Volume 0.39

Net Effective Pay Thickness, Feet 39.

Since the gross pay thickness constituting potential gas reservoir for the Cowden "C" No. 9 is 55 feet, the above represents a net effective pay to gross pay ratio of approximately 71 percent.

(2) The production test for the Cowden "C" No. 9 performed on October 15, 1982, was analyzed, resulting in the following:

New Mexico Department of Energy and Minerals, 011 Conservation Division December 29, 1982 Page 3

Stabilized Deliverability Coefficient, MCF/day per psia <sup>2</sup> ,	0.0265022
Initial Stabilized Wellhead Shut-in Pressure (Pc), psia	143.2
Initial Gas Formation Volume Factor scf/rcf	9.68

(3) The results of steps (1) and (2) were then combined, resulting in the following:

Original Gas-in-Place

MMCF/Acre	1.722
MMCF/160 Acres	276.0
Estimated Gas Recovery Factor, Fraction of Original Gas-in-Place	0.651
Estimated Ultimate Recovery, MMCF per 160 Acres	179.7

Section c. Other supporting data submitted include the following:

Gas Production History Tabulation and Graph for HCW Exploration Company Cowden "C" No. 4 (the pre-existing well).

Complete New Mexico Oil Conservation Division (NMOCD) Forms on file for both the pre-existing HCW Exploration Company Cowden "C" No. 4 and the Infill HCW Exploration Co. Cowden "C" No. 9.

New Mexico Oil Conservation Division Order No. NSP-1335

New Mexico Department of Energy and Minerals Oil Conservation Division December 29, 1982 Page 4

We believe that the above adequately documents this request and has been prepared in accordance with Exhibit "A", Order R-6013-A; however, we should be pleased to supply anything else which you might require in this connection.

Very truly yours,

Wm. P. Aycock

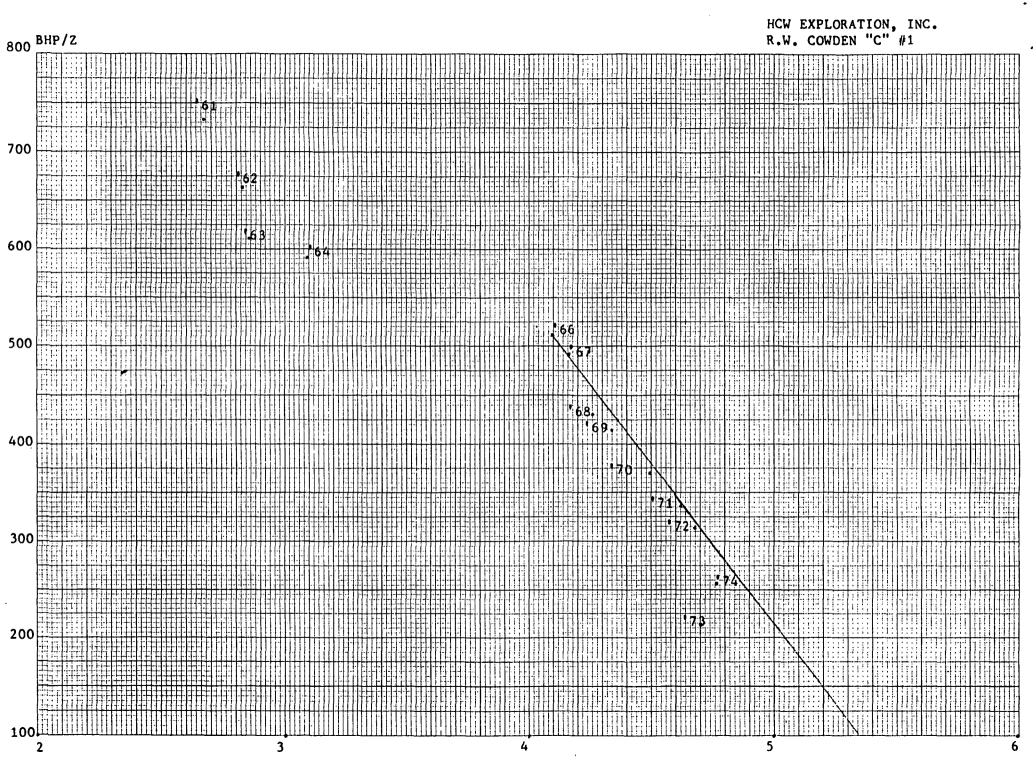
WPA/pkm

**Enclosures** 

#### TABLE NO. 1

# SUMMARY OF REQUIRED INFORMATION, RULE 8, EXHIBIT "A", ORDER R-6013-A, (Sections "a." through "f.") NATURAL GAS POLICY ACT INFILL FINDINGS, ADMINISTRATIVE PROCEDURE

	en e		INFILL APPLICATION WELL
SECTION OF RULE 8	RULE 8 REQUIREMENT	PRE-EXISTING WELL OPERATOR HCW EXPLORATION COMPANY	OPERATOR HCW EXPLORATION COMPANY
a.	Lease Name and Well Location	R. W. Cowden "C" No. 4	R. W. Cowden "C" No. 9
<b>b.</b>	Spud Date	October 30, 1949	September 10, 1982
c.	Completion Date	November 18, 1949, in Langlie-Mattix	October 15, 1982
d•	Mechanical Problems	None; PB to Jalmat 11-18-52	None.
<b>e.</b>	Current Rate of Production	None; Last produced 68 MCF in June 1982.	C-105: 494 MCF/day
f.	Date of Plug and Abandonment	Not Plugged. Casing side of dual completion as water injection well (Getty Oil Co. Myers Langlie-Mattix Unit No. 61).	Not Plugged.



STATE OF NEW MEXI	ICO (	•			30-02	25-27918
ENERGY AND MINERALS DEPA		CONSERVATION	and the same and the same state of the same of the sam		Form C-101	
DISTRIBUTION	SA SA	NTA FE. NEW MI		<b>1</b> 11	Revised 10 SA, Indicate	Type of Loone
SANTA FE FILE					STATE	
U.S.G.S.		J	AN 121983		S. State OII	6 Gas Leans No.
OPTRATOR			SERVATION DIVIS	ION	TITTE	
APPLICATION A. Type of Work	ON FOR PERMIT TO	DRILL, DEEPEN, (	DRSALIMA PECK		Z Unu Agra	ement Name
DRILL X	Ŋ	DEEPEN 🗌	PLUC	BACK -	ri cami rigie	ement Mana
b. Type of Well  OIL GAS WELL WELL	<del>-</del>			LTIPLE	8. Faim or L	
. Name of Operator		<del>,</del>	ZONE [A]	2046	R. W. (	Cowden "C"
HCW Exploration, I	Inc.		·		9	
P. O. Box 10585	Midland	l, Texas 79702			10. Field an Jalmat	d Pool, or Wildcat
. Location of Well UNIT LETT		ATED 1650	LET FROM THE North	LINE		1111111111
800	Eac+	•	wp. 23S icc 37			
000 FEET PROP				-4-4-4-4-4	12. County	mithilities.
					Lea	
				19A. Formation	777777	20. fieldly or C.T.
1. Lleve:lons (Show whether Di	F. KT. etc.) 21 A. King	& Status Plug. Bond 21	3300 s	Yates	22 1	Rotary  Date Work will stort
3329' GR	Blar		To be Determine	ed	August	
3.	. Б	ROPOSED CASING AND	CEMENT PROGRAM			
SIZE OF HOLE	SIZE OF CASING	WEIGHT PER FOOT	SETTING DEPTH	SACKS OF	CEMENT	EST. TOP
7 7/01	8 5/8"	24#	400'	150		Surface
7 7/8"	4 1/2"	10.5#	3300'	500		Surface
•	1	ŀ	!	l	. 1	•
cement volume to rams and blind r drill with mud 1 run 4 1/2" casir	I ll" hole to 400 o circulate cement rams. Drill 7 7, from 2700' to 330 ng. Will try to lete well as Yate	nt to surface. /8" hole to appr 00' TD. Run ope circulate cemen	Nipple up 10" 3 oximately 2700' n hole logs and	3000 psi B ' using br I if well	OP with ine wate looks pi	pipe er. Will roductive,
				APPROVALIV	ALID EOD	/80 DAYS
•				PERMIT EX		
•	•			UNLESS D	RILLING	UNDERWAY
VE ZONE. GIVE BLOWOUT PREVENT	ROPOSED PROGRAM: IF	· 	·	N PRESENT PROC	DCTIVE ZONE	AND PROPOSED WEW PRODUC
ereby certify that the informati	on above is true and comp	sicle to the best of my kny	owinge and bolief.			
rned Steve Day	Steve Douglas	Title Division	Engineer	Do	Augi	ust 20, 1982
(This space for	Store Used NED BY SINGLE SIGNED BY BERRY SEXTON	TuleDivision	Engineer	D <sub>0</sub>		ust 20, 1982 IG 25 198 <b>2</b>

.



STATE OF NEW MEXICO

#### ENERGY AND MINERALS DEPARTMENT

OIL CONSERVATION DIVISION

BRUCE KING

JAN 1 2 1983

OIL CONSERVATION DIVISION SANTA FE

POST OFFICE BOX 2088 STATE LAND OFFICE BUILDING SANTA FE, NEW MEXICO 87501 (505) 827-2434

HCW Exploration, Inc. P. O. Box 10585 Midland, Texas 79702

Attention: Steve A. Douglas

Administrative Order NSP-1335

Gentlemen:

Reference is made to your application for a 160-acre non-standard proration unit consisting of the following acreage in the Jalmat Gas Pool:

LEA COUNTY, NEW MEXICO
TOWNSHIP 23 SOUTH, RANGE 37 EAST, NMPM
Section 31: NE/4

It is my understanding that this unit is to be dedicated to your R. W. Cowden "C" Well No. 9 located 1650 feet from the North line and 800 feet from the East line of said Section 31.

By authority granted me under the provisions of Rule 5(c)(3) of Order No. R-1670, the above non-standard proration unit is hereby approved.

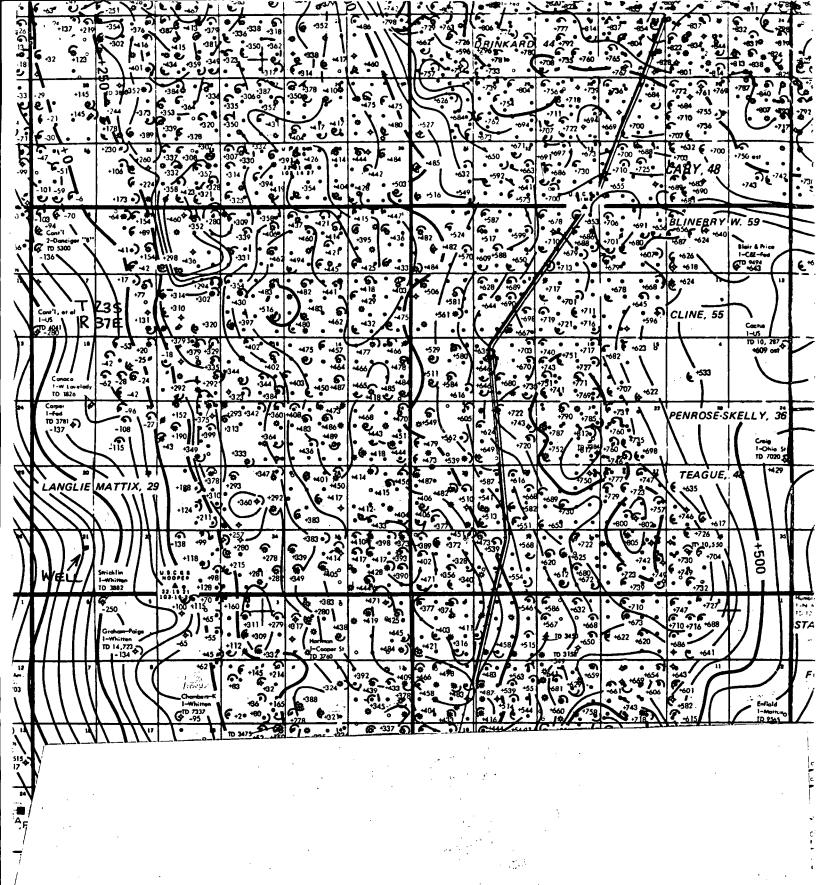
Sincerely

JOE D. RAMEY, Director

JDR/RLS/dr

cc: Oil Conservation Division - Hobbs

Oil & Gas Engineering Committee - Hobbs



#### STATE OF NEW MEXICO



#### ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

**OIL CONSERVATION DIVISION** 

2040 S. PACHECO SANTA FE, NEW MEXICO 87505 (505) 827-7131

September 16, 1996

Doyle Hartman, Oil Operator Attention: Don Mashburn P. O. Box 10426 Midland, Texas 79702

Roca Production, Inc. Attention: Steven Douglas, President P. O. Box 10139 Midland, Texas 79702

Administrative Order NSP-143-B(L)(SD)

Dear Messrs. Mashburn and Douglas:

Reference is now made to: (i) the application filed by Doyle Hartman, Oil Operator ("Hartman") by letter dated June 20, 1996; (ii) the Division's initial response to said application from Mr. Michael E. Stogner by letter dated June 25, 1996; (iii) to the letter dated August 7, 1996 from Mr. Don Mashburn of Hartman's office in Midland, Texas; (iv) Division Administrative Order NSP-143-A(L)(SD), dated August 14, 1996; and, (v) to the application filed by Roca Production, Inc. ("Roca") by letter dated August 21, 1996: all of which pertain to both parties requests to divide the existing 315.98-acre non-standard gas spacing and proration unit ("GPU") in the Jalmat Gas Pool comprising Lots 1 and 2, the NE/4, and the E/2 NW/4 (N/2 equivalent) of Section 31, Township 23 South, Range 37 East, N.M.P.M., Lea County, New Mexico, into two separate gas spacing and proration units to comprise:

- (a) the 235.98 acres consisting of Lots 1 and 2 (being the W/2 NW/4 equivalent), the W/2 NE/4, and the E/2 NW/4 of said Section 31; and,
- (b) the 80 acres consisting of the E/2 NE/4 of said Section 31.

Said 315.98-acre GPU was authorized by Division Administrative Order NSP-143, dated June 8, 1996 and had dedicated thereon the Doyle Hartman R. W. Cowden "C" Well No. 4/OXY USA, Inc. Myers Langlie Mattix Unit Well No. 61 (API No. 30-025-10903), located at a standard gas well location for the 315.98-acre GPU 990 feet from the North line and 1980 feet from the West line (Unit C) of said Section 31, and, by Division Administrative Order NFL-71, dated February 22, 1983, the R. W. Cowden "C" Well No. 9 (API No. 30-025-27918), located at a standard gas well location 1650 feet from the North line and 800 feet from the East line (Unit H), now operated by Roca Production, Inc., was simultaneously dedicated to said 315.98-acre GPU.

It is our understanding by the subject applications and related correspondence that:

- (1) Hartman will be operator of the proposed 235.98-acre non-standard GPU comprising Lots 1 and 2, the W/2 NE/4, and the E/2 NW/4 of said Section 31 in which said acreage is to be simultaneously dedicated to the aforementioned R. W. Cowden "C" Well No. 4 and to the proposed R. W. Cowden "C" Well No. 10 to be drilled at an unorthodox gas well location 1650 feet from the North line and 330 feet from the West line (Lot 2/Unit E) of said Section 31, and,
- (2) the remaining 80 acres comprising the E/2 NE/4 of said Section 31 is to be operated by Roca Production, Inc. and have dedicated to it the above-described R. W. Cowden "C" Well No. 9 now located at an unorthodox gas well location for the resulting 80-acre GPU.

The Division finds at this time that, both of the subject applications filed by Doyle Hartman, Oil Operator and Roca Production, Inc. have been duly filed under the provisions of Rule 104.F of the General Rules and Regulations of the New Mexico Oil Conservation Division ("Division"), revised by Division Order No. R-10533, issued by the Oil Conservation Commission in Case 11,351 on January 18, 1996 and Rule 2(d) of the "General Rules for the Prorated Gas Pools of New Mexico/Special Rules and Regulations for the Jalmat Gas Pool", as promulgated by Division Order No. R-8170, as amended. Pursuant to said rules no objection to the subject applications have been received within the required 20-day waiting periods.

Therefore, by the authority granted me under the provisions of the aforementioned rules applicable in this matter, it is hereby ordered:

- (a) that Doyle Hartman, Oil Operator ("Hartman") be designated the operator of the 235.98 acres, comprising Lots 1 and 2, the W/2 NE/4, and the E/2 NW/4 of said Section 31, thereby forming a non-standard gas spacing and proration unit ("GPU") within the Jalmat Gas Pool in which is to be simultaneously dedicated to the existing R. W. Cowden "C" Well No. 4/OXY USA, Inc. Myers Langlie Mattix Unit Well No. 61 (API No. 30-025-10903), located at a standard Jalmat gas well location for the 235.98-acre GPU 990 feet from the North line and 1980 feet from the West line (Unit C) of said Section 31 and to its proposed R. W. Cowden "C" Well No. 10 to be drilled at an unorthodox gas well location 1650 feet from the North line and 330 feet from the West line (Lot 2/Unit E) of said Section
- 31. Also, Hartman is hereby authorized to simultaneously dedicate Jalmat gas production from the proposed R. W. Cowden "C" Well No. 10 with the existing R. W. Cowden "C" Well No. 4. <u>Furthermore</u>, Hartman is permitted to produce the allowable assigned the subject GPU from both wells in any proportion; and,
- (b) that Roca Production, Inc. ("Roca") be authorized to operate the

remaining 80 acres comprising the E/2 NE/4 of said Section 31, as a nonstandard gas spacing and proration unit ("GPU") within the Jalmat Gas Pool in which is to be dedicated to the existing R. W. Cowden "C" Well No. 9 (API No. 30-025-27918), located at an unorthodox gas well location for the subject 80-acre GPU 1650 feet from the North line and 800 feet from the East line (Unit H) of said Section 31.

Division Administrative Orders NSP-143, NFL-71, NSP-143-A(L)(SD) shall be placed in abeyance until further notice.

Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

Sincerely.

William J. LeMay

Director

WJL/MES/kv

New Mexico Oil Conservation Division - Hobbs cc:

U. S. Bureau of Land Management - Carlsbad

File:

NSP-143 NFL-71

NSP-1335

NSP-143-A(L)(SD)



## STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

#### **OIL CONSERVATION DIVISION**

2040 S. PACHECO SANTA FE, NEW MEXICO 87505 (505) 827-7131

August 14, 1996

Doyle Hartman, Oil Operator Attention: Don Mashburn P. O. Box 10426 Midland, Texas 79702

Roca Production, Inc. Attention: James C. Brown P. O. Box 10139 Midland, Texas 79702

Administrative Order NSP-143-A(L)(SD)

#### Dear Messrs. Mashburn and Brown:

Reference is made to: (i) the application filed by Doyle Hartman, Oil Operator ("Hartman") by letter dated June 20, 1996; (ii) the Division's initial response to said application from Mr. Michael E. Stogner by letter dated June 25, 1996; and, (iii) to the letter dated August 7, 1996 from Mr. Don Mashburn of Hartman's office in Midland, Texas; for authorization to divide the existing 315.98-acre non-standard gas spacing and proration unit ("GPU") in the Jalmat Gas Pool comprising Lots 1 and 2, the NE/4, and the E/2 NW/4 (N/2 equivalent) of Section 31, Township 23 South, Range 37 East, N.M.P.M., Lea County, New Mexico, into two separate gas spacing and proration units comprising 235.98 acres and 80 acres.

Said 315.98-acre GPU was authorized by Division Administrative Order NSP-143, dated June 8, 1996 and had dedicated thereon the Doyle Hartman R. W. Cowden "C" Well No. 4/OXY USA, Inc. Myers Langlie Mattix Unit Well No. 61 (API No. 30-025-10903), located at a standard gas well location for the 315.98-acre GPU 990 feet from the North line and 1980 feet from the West line (Chi. 2) Order Section 21, and, by Division Administrative Order NFL-71, dated February 22, 1983, the R. W. Cowden "C" Well No. 9 (API No. 30-025-27918), located at a standard gas well location 1650 feet from the North line and 800 feet from the East line (Unit H), now operated by Roca Production, Inc., was simultaneously dedicated to said 315.98-acre GPU.

120

It is our understanding by the subject application and related correspondence that:

- (1) Hartman will be operator of the proposed 235.98-acre non-standard GPU comprising Lots 1 and 2, the W/2 NE/4, and the E/2 NW/4 of said Section 31 in which said acreage is to be simultaneously dedicated to the aforementioned R. W. Cowden "C" Well No. 4 and to the proposed R. W. Cowden "C" Well No. 10 to be drilled at an unorthodox gas well location 1650 feet from the North line and 330 feet from the West line (Lot 2/Unit E) of said Section 31, and.
- (2) the remaining 80 acres comprising the E/2 NE/4 of said Section 31 is to be operated by Roca Production, Inc. and have dedicated to it the above-described R. W. Cowden "C" Well No. 9 now located at an unorthodox gas well location for the resulting 80-acre GPU.

The Division finds at this time that, the subject application of Doyle Hartman, Oil Operator has been duly filed under the provisions of Rule 104.F of the General Rules and Regulations of the New Mexico Oil Conservation Division ("Division"), revised by Division Order No. R-10533, issued by the Oil Conservation Commission in Case 11,351 on January 18, 1996 and Rule 2(d) of the "General Rules for the Prorated Gas Pools of New Mexico/Special Rules and Regulations for the Jalmat Gas Pool", as promulgated by Division Order No. R-8170, as amended. Pursuant to said rules no objection to the subject application has been received within the required 20-day waiting period. It should be further noted that Roca Production, Inc. has not responded to either Hartman's application or to the Division's letter dated June 25, 1996.

It is therefore ordered, by the authority granted me under the provisions of said rules, that Doyle Hartman, Oil Operator ("Hartman") is hereby authorized to operate the 235.98 acres, comprising Lots 1 and 2, the W/2 NE/4, and the E/2 NW/4 of said Section 31, as a non-standard gas spacing and proration unit ("GPU") within the Jalmat Gas Pool in which is to be simultaneously dedicated to the existing R. W. Cowden "C" Well No. 4/OXY USA, Inc. Myers Langlie Mattix Unit Well No. 61 (API No. 30-025-10903), located at a standard Jalmat gas well location for the 235.98-acre GPU 990 feet from the North line and 1980 feet from the West line (Unit C) of said Section 31 and to its proposed R. W. Cowden "C" Well No. 10 to be drilled at an unorthodox gas well location 1650 feet from the North line and 330 feet from the West line (Lot 2/Unit E) of said Section 31.

Also, Hartman is hereby authorized to simultaneously dedicate Jalmat gas production from the proposed R. W. Cowden "C" Well No. 10 with the existing R. W. Cowden "C" Well No. 4. Furthermore, Hartman is permitted to produce the allowable assigned the subject GPU from both wells in any proportion.

It is further ordered that the remaining 80 acres comprising the E/2 NE/4 of said Section 31, operated by Roca Production, Inc.: (i) is no longer dedicated to producing Jalmat acreage; (ii) that the existing R. W. Cowden "C" Well No. 9 is producing without a proper assignment of allowable; and, (iii) that said well is considered to be at an unapproved unorthodox Jalmat gas well location. It is ordered however that Roca Production, Inc. is granted a temporary 45-day authorization to produce its R. W. Cowden "C" Well No. 9 with an acreage factor of 0.50 to be ascribe against the Jalmat allowable for said well. If however no formal application from Roca Production, Inc. has been submitted to the Division within this 45-day period, the temporary allowable shall be canceled and the well ordered to be shut-in until such application has been submitted and approved.

Said Division Orders NSP-143 and NFL-71 shall be placed in abeyance until further notice.

Jurisdiction of this cause is retained for the entry of such further orders as the Division may deem necessary.

Sincerely,

e 25 .

William J. LeMay

Director

WJL/MES/kv

cc: Oil Conservation Division - Hobbs

Michael E. Stogner, Chief Hearing Officier - OCD, Santa Fe

U. S. Bureau of Land Management - Carlsbad

File:

NSP-143

NFL-71

NSP-1335



## NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**BILL RICHARDSON** 

Governor

August 4, 2006

Mark E. Fesmire, P.E.

Director

Oil Conservation Division

164 (4.27)

WELTH

Joanna Prukop

Cabinet Secretarying transcoperator with translations (GZ) (CF 9 of 1967 tolon) reduction and translations (GZ)

Plantation Operating, L.L.C. 2203 Timberloch Place, Suite 229

The Woodlands, Texas 77380 Texas 77380 ilida unitari at incapared unatherari interior in the ari to are incumentari in the incum

Attention: John Allred, P.E. - Country of the control of the contr

AMENDED Division Administrative Order NSP-143-B (L) (SD)

Consider telephone Circlan MSE (1997) (1997) in along some

Dear Mr. Allred: To (U) and the selection and the provisions of Rules 4 (B) and (U) of Post on Allred: Leavest of the Post of Post of the Post of the

Reference is made to the following: (i) your initial application submitted to the New Mexico Oil Conservation Division ("Division") in Santa Fe, New Mexico on June 8, 2006 (administrative application reference No. pMES0-621637048); (ii) your letter dated June 22, 2006 with supplemental information to support this application; (iii) your e-mail of June 26, 2006 checking on the status of this application; and (iv) the Division's records in Hobbs and Santa Fe, including the files on Division Administrative Orders NSP-143, NSP-143-A (L) (SD), NSP-143-B (L) (SD), NSP-1335 and NFL-71: all concerning Plantation Operating, L.L.C.'s ("Plantation") request to amend both Division Administrative Orders NSP-143-A (L) (SD), dated August 14, 1996, and NSP-143-B (L) (SD), dated September 16, 1996, to reflect a location change for one of the wells that was the subject of the 235,98-acre non-standard Jalmat gas spacing unit comprising Lots 1 and 2, the W/2 NE/4, and the E/2 NW/4 of Section 31, Township 23 South, Range 37 East, NMPM, Jalmat Gas Pool (79240), Lea County, New Mexico, established in part by these orders.

Division Administrative Order NSP-143-A (L) (SD) split a previously approved 315.98-acre nonstandard Jalmat gas spacing unit comprising the N/2 equivalent of Section 31 (see Division Administrative Order NSP-143, dated June 8, 1955) into two separate units comprising: Mark E. Masmus, P. E.

- the above-described 235.98-acre unit to be operated by Doyle (a) Hartman, Oil Operator ("Hartman") and simultaneously dedicated to the existing R. W. Cowden "C" Well No. 4 (API No. 30-025-10903), located at a standard gas well location 990 feet from the North line and 1980 feet from the West-line (Unit C) of Section 3145 (2005) and the proposed R. W. Cowden "C" Well No. 10 to be drilled at an unorthodox gas well location 1650 feet from the North line and 330 feet from the West line (Lot 2/Unit E) of Section 31; and
- the remaining 80 acres comprising the E/2 NE/4 to be operated by **(b)** Roca Production, Inc. ("Roca") and dedicated to the existing R. W. Cowden "C" Well No. 9 (API No. 30-025-27918), located at an unorthodox gas well location 1650 feet from the North line and 800 feet from the East line (Unit H) of Section 31.

Division Administrative Order NSP-143-B (L) (SD) formalized this arrangement and placed division Administrative Order NSP-143-A (L) (SD) in abeyance.

According to your application and the Division's records, Hartman never drilled the R. W. Cowden "C" Well No. 10 at the proposed unorthodox Jalmat infill well location in Unit "E" of Section 31. It is Plantation's intent at this time however, as successor operator to the Hartman acreage, to drill its R. W. Cowden "C" Well No. 10 (API No. 30-025-36771) at a standard infill gas well location within the 235.98-acre non-standard unit 990 feet from the North line and 660 feet from the West line (Lot 1/Unit D) of Section 31.

By the authority granted me under the provisions of Rules 4 (B) and (D) of the special rules governing the Jalmat Gas Pool, Division Administrative Order NSP143-B (L) (SD) is hereby amended, authorizing Plantation to simultaneously dedicate Jalmat gas production to the 235.98-acre non-standard Jalmat gas spacing unit from its above-described R. W. Cowden "C" Well No. 4 (API No. 30-025-10903) in Unit "C" of Section 31 and proposed R. W. Cowden "C" Well No. 10 (API No. 30-025-36771) in Lot 1 (Unit C) of Section 31.

All provisions of Division Administrative Order NSP-143-B (L) (SD) not in conflict with this order shall remain in full force and affect until further notice.

Jurisdiction of this matter shall be further retained for the entry of any such subsequent orders, as the Division may deem necessary.

or first of succession to a man enough to be rangeral over the bit indicates the control of the

201 Callow Trans Love Ne to forth objects the historic was also to

4 gen Provincia de la Colora Paris de Joden N. Leo de Leo de General D. N. Correba de La Colora De Carrella D. Correba de La Colora De Carrella De

South Songs II find Shifted lideled the best (2009) La County, they stade made

EN 1997, Paris Companyantha novel del ; Organis esperi, en espaining regionale los munes una en espaso (1904), com llande EN 1998, en 190

Sincerely.

Mark E. Fesmire, P. E.

Director

MEF/ms

cc: New Mexico Oil Conservation Division - Hobbs

Roco Production Inc. -: Midland, Texas the application of the subtime of

File: WNSP-143 (Company of the Company of the Compa

the golf NSP-143-A (E) (SD) Takk reducted from the color decoration

Let NSP-143-B (L) (SD) HEX to by Later to be recent to be of the

NFL-71

of the NSP-1335 and the set administration and primer of the

名 医感觉 海口精 植物种类原物 化二硫 医睫状术

#### STATE OF NEW MEXICO ENERGY AND MINERALS DEPARTMENT

I.

# OIL CONSERVATION DIVISION P. O. Box 2088 SANTA FE, NEW MEXICO 87501

الله كان المناوية الله معاولة المناهم المناهم المناهم المناهم المناهم المناهم المناهم المناهم المناهم المناهم

DMIN	CSTRATIVE	ORDER
NFL	71	

INFILL DRILLING FINDINGS AND WELL-SPACING WAIVER
MADE PURSUANT TO SECTION 271.305(b) OF THE
FEDERAL ENERGY REGULATORY COMMISSION REGULATIONS,
NATURAL GAS POLICY ACT OF 1978 AND OIL CONSERVATION DIVISION
ORDER NO. R-6013

Operator HCW Exploration, Inc. Well Name and No. R. W. Cowden "C" Well No. 9
Location: Unit H Sec. 31 Twp. 23S Rng. 37E Cty. Lea
II.
THE DIVISION FINDS:
(1) That Section 271.305(b) of the Federal Energy Regulatory Commission Interim Regulations promulgated pursuant to the Natural Gas Policy Act of 1978 provides that, in order for an infill well to qualify as a new onshore production well under Section 103 of said Act, the Division must find, prior to the commencement of drilling, that the well is necessary to effectively and efficiently drain a portion of the reservoir covered by the proration unit which cannot be so drained by any existing well within that unit, and must grant a waiver of existing well-spacing requirements.
(2) That by Order No. R-6013, dated June 7, 1979, the Division established an administrative procedure whereby the Division Director and the Division Examiners are empowered to act for the Division and find that an infill well is necessary.
(3) That the well for which a finding is sought is to be completed in the JalmatTansillYatesSev
Rivers (ProratedGas) Pool, and the standard spacing unit in said pool is 640 acre
(4) That a 316-acre proration unit comprising the N/2
of Sec. 31 , Twp. 23S , Rng. 37E , is currently dedicated to the R. W. Cowden "C"
Well No. 4 located in Unit C of said section.
(5) That this proration unit is ( ) standard ( $X$ ) nonstandard; if nonstandard, said unit was previously approved by Order No. NSP-143
(6) That said proration unit is not being effectively and efficiently drained by the existing well(s) on the unit.
(7) That the drilling and completion of the well for which a finding is sought should result in the production of an additional 179,700 MCF of gas from the proration unit which would not otherwise be recovered.
(8) That all the requirements of Order No. R-6013 have been complied with, and that the well for which a finding is sought in necessary to effectively and efficiently drain a portion of the reservoir covered by said proration unit which cannot be so drained by any existing well within the unit.
(9) That in order to permit effective and efficient drainage of said proration unit, the subject application should be approved as an exception to the standard well spacing requirements for the pool.
IT IS THEREFORE ORDERED:
(1) That the applicant is hereby authorized to drill the well described in Section I above as an infill well on the existing proration unit described in Section II(4) above. The authorization for infill drilling granted by this order is an exception to applicable well spacing requirements and is necessary to permit the drainage of a portion of the reservoir covered by said proration unit which cannot be effectively and efficiently drained by any existing well thereon.
(2) 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 this 22nd day of February , 19 83 .
DIVISION DIRECTOR PRAMINER

Note to File (NSP-1335)

This NFL Order negated NSP-1335.

The original 320-acre, miner less, NSP a spherized by

NSP-143, dated 6-8-1955, is still in effect.



## NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

**BILL RICHARDSON** 

August 21, 2006

Mark E. Fesmire, P.E.
Director
Oil Conservation Division

Governor

Joanna Prukop

Cabinet Secretary

Plantation Operating, L.L.C. 2203 Timberloch Place, Suite 229 The Woodlands, Texas 77380

Attention:

John Allred, P.E.

jallred@plantationpetro.com

REVISED: AMENDED Division Administrative Order NSP-143-B (L) (SD)

Dear Mr. Allred:

Reference is made to the following: (i) your e-mail to Mr. Michael E. Stogner, Staff Engineer with the New Mexico Oil Conservation Division ("Division") in Santa Fe, New Mexico Wednesday, August 16, 2006, which is hereby entered into the Division's administrative database as administrative application reference No. pMES0-623355598; and (ii) the Division's records in Hobbs and Santa Fe: all concerning AMENDED Division Administrative Order NSP-143-B (L) (SD) issued on Division administrative application reference No. pMES0-621637048 and dated August 4, 2006.

The API Number for Plantation Operating, L.L.C.'s proposed R. W. Cowden "C" Well No. 10 as shown in the second and third paragraphs on page 2 of said Division administrative order as "30-025-36771" shall revised to accurately read "30-025-37969."

The revision set forth in this order shall be entered retroactively as of August 4, 2006; further, all other provisions of AMENDED Division Administrative Order NSP-143-B (L) (SD) issued by the Division on August 4, 2006 shall remain in full force and effect until further notice.

Jurisdiction of this matter shall be further retained for the entry of any such subsequent orders, as the Division may deem necessary.

Sincerely,

Mark E. Fesmire, P. E.

Director

MEF/ms

cc:

New Mexico Oil Conservation Division – Hobbs

Roco Production Inc. - Midland, Texas

File: NSP-143 – Division reference No. pNSP0-001432002

NSP-143-A (L) (SD) – Division reference No. p2002-NSP000143 NSP-143-B (L) (SD) – Division reference No. p2002-nsp00014b

AMENDED NSP-143-B (L) (SD) - Division reference No. pMES0-621637048

NFL-71 NSP-1335