KELLAHIN & KELLAHIN Attorney at Law

W. THOMAS KELLAHIN
706 GONZALES ROAD
SANTA FE, NEW MEXICO 87501

TELEPHONE 505-982-4285
FACSIMILE 505-982-2047
TKELLAHIN@COMCAST.NET

January 17, 2008

Via Federal Express (575) 748-1283

IAN 18 2008 OCD-ARTESIA

Mr. Tim Gum, Supervisor Oil Conservation Division 1301 W. Grand Avenue Artesia, New Mexico 88210

Re:

Deer Canyon "24" Federal Well No. 1H

(API # pending)

District Administrative Application of Chesapeake Operating, Inc., for a Directional Wellbore Pursuant to Division Rule 111.C(1)

Dedication: N/2 Section 24, T20S, R21E

Unorthodox Surface Location: 120 feet FWL x 1310 feet FNL

Standard ("BHL") Subsurface Location: 660 feet FEL x 1980 feet FNL

Eddy County, New Mexico

Dear Mr. Gum:

On behalf of Chesapeake Operating, Inc. please find enclosed the referenced application for approval to drill this well directionally from an unorthodox surface location such that all the producing area will be located within a standard area not less than 660 feet to any outer boundary of this spacing unit.

As set forth in the application, Chesapeake has obtained the BLM's approval of the federal APD and now waits your processing of this application. Please call me if you have any questions.

Thomas Kellahin

Very truly yours,

cfx: Chesapeake Operating, Inc. Attn: Sara Caldwell BRYAN G. ARRANT DISTRICT II GEOLOGIST 30 - 015 - 36038

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

DISTRICT ADMINISTRATIVE APPLICATION OF CHESAPEAKE OPERATING INC. FOR APPROVAL OF A DIRECTIONAL WELLBORE EDDY COUNTY, NEW MEXICO

DISTRICT ADMINISTRATIVE APPLICATION

Comes now Chesapeake Operating, Inc. ("Chesapeake"), by and through its attorneys, Kellahin & Kellahin, and in accordance with Division Rule 111.C(1) applies to the District Supervisor-Artesia, District 2 of the New Mexico Oil Conservation Division for approval for a Directional Wellbore for its Deer Canyon "24" Federal Well No. 1H and in support states:

- (1) Chesapeake proposes to drill its Deer Canyon "24" Federal Well No. 1H for production from the Wolfcamp formation and to dedicate the well to a project area consisting of 320-acre being of the Lots 1, 2, W/2NE/4, NW/4 (N/2 equivalent) of Section 24, T20S, R21E. (See OCD Form C-102 attached as Exhibit 1 and a portion of the federal APD attached as Exhibit 2)
- (2) The N/2 of Section 24 is a single federal oil and gas lease # NM 3570027-001 in which Chesapeake holds 1/3 WIO. Chesapeake has obtained the voluntary agreement of all WIO except for Nearburg Exploration Company and has filed a compulsory pooling case that is set for hearing on January 24, 2008 as Case 14069.
- (3) The well's location will be an unorthodox surface location 120 feet FWL and 13100 feet FNL (Unit D) of Section 24, T20S, R21E and deviated so that when the wellbore penetrates the Wolfcamp formation it will be at a standard subsurface location, 660 Feet FWL and 1416 feet FNL (Unit E) then drilled horizontally in an easterly direction staying within a producing area 660 feet from each of the outer boundaries of this spacing unit and ending at a standard bottom hole location 1980 feet FHL and 660 Feet FEL (Lot 2) of this section.
- (4) This is a Wildcat Wolfcamp spacing unit subject to General Rules 111 that provides a project area (Rule 111.A. (9) with a standard location not closer than 660 feet to the outer boundary of the project area. See Rule 111.C(1).

- (5) The directional wellbore is necessitated in order to allow the applicant the ability to be almost horizontal in the producing formation by the time the wellbore will reach the producing area within the standard boundary set backs providing a longer lateral to test and produce the Wolfcamp formation.
- (6) Chesapeake proposes the following:
 - (a) **Project Area:**

320-acre gas spacing unit dedication insisting of N/2 equivalent of Section 24

(b) Producing Area & Producing Interval:

being within a standard drilling & producing window not less than 660 feet from any other boundary of the 320-acre gas spacing unit

(c) Location:

The well's location will be as set forth in Paragraph 3 above.

- (7) The following additional exhibits are attached:
 - Exhibit 3: Chesapeake's Standard Planning Report dated 17 Dec 2007

vertical oriented plan view and horizontal plan view and the

numerical tabulation of program (total of 5 pages)

WHEREFORE, Applicant requests that this application be approved.

Respectfully submitted,

KELLAHIN & KELLAHIN

W. Thomas Kellahin

706 Gonzales Road

Santa Fe, New Mexico 87501

(505) 982-4285

Attorneys for Applicant

State of New Mexico

DISTRICT I

Energy, Minerals and Natural Resources Department

DISTRICT H

OIL CONSERVATION DIVISION 1220 SOUTH ST. FRANCIS DR. Santa Fe, New Mexico 87505 Form C-102
Revised October 12, 2005
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

DISTRICT III 1000 Rio Brazos Rd., Aztec, NM 87410

DISTRICT IV WELL LOCATION AND ACREAGE DEDICATION PLAT ☐ AMENDED REPORT 1220 S. ST. FRANCIS DR., SANTA FE, NH 67505 Pool Code Pool Name API Number Property Code Well Number Property Name DEER CANYON 24 FEDERAL 1H OGRID No. Operator Name Elevation 7179 CHESAPEAKE OPERATING, INC. 4325

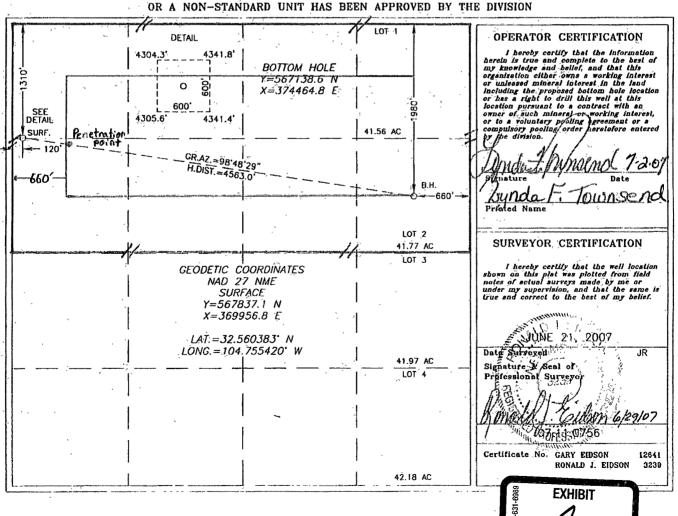
Surface Location

*	UL or lot No.	Section	Township	Range	Lot Idn	Peet from the	North/South line	Feet from the	East/West line	County	١,
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Bottom Hole Location If Different From Surface

UL or lot No.	Section	Townsh	ip '	Range	Lot idn	Feet from the	North/South line	Feet from the	East/West line	County
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Dedicated Acre	Joint o	r Inful	Cor	solidation (Code Or	der No.	<u> </u>		·	***************************************
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION



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From 3160-3 (Figure 2007) UNITED ST	RECEIV	FORM APPROV OMB No. 1004-0 Expires July 31, 2	136
DEPARTMENT OF T BUREAU OF LAND		5. Lease Senal No. NMNM102001	y NOA 10004000000000000000000000000000000000
APPLICATION FOR PERMIT	TO DRILL OR REENTER: UK	6. If Indian, Allottee or Tribe Na	me
1a. Type of Work: ⊠ DRILL ☐ REENTER	CONFIDENTIAL	7. If Unit or CA Agreement, Nat	ne and No.
lb. Type of Well:	her Single Zone Multiple Zone	Lease Name and Well No. DEER CANYON 24 FEDER	RAL 1H
Name of Operator Contact: CHESAPEAKE OPERATING, INC. E-Mail: lgood@	LINDA GOOD chkenergy.com	9. API Well No.	
3a. Address PO BOX 18496 OKLAHOMA CITY, OK 73154-0496	3b. Phone No. (include area,code) Ph: 405-767-4275 Fx: 405-753-5469	10. Field and Pool, or Explorato WILDCAT	ry
4. Location of Well (Report location clearly and in accorded	ance with any State requirements.*)	11. Sec., T., R., M., or Blk. and S	Survey or Area
At surface NWNW 1310FNL 120FWL		Sec 24 T20S R21E Mer	NMP
At proposed prod. zone SENE 1980FNL 660FEL	響義な		
14. Distance in miles and direction from nearest town or post 17 MILES NW OF HOPE, NM	office*	12. County or Parish EDDY	13. State NM
 Distance from proposed location to nearest property or lease line, ft. (Also to nearest drig, unit line, if any) 	16. No. of Acres in Lease	17. Spacing Unit dedicated to th	is well
	647.48	320.00	
18. Distance from proposed location to nearest well, drilling, completed, applied for, on this lease, ft.	19. Proposed Depth ALAS TVD	20. BLM/BIA Bond No. on file	C.
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21 Playetians (Changachar DE VD DT CI ata	22 Ammonimete dete made mill start	22 Entirepted direction	
21. Elevations (Show whether DF, KB, RT, GL, etc. 4360 GL	22. Approximate date work will start	23. Estimated duration	KHIBIT
4360 GL	24. Attachments	5	KHIBIT
	24. Attachments	5	KHIBIT
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APPROVAL SUBJECT TO GENERAL REQUIREMENTS SEE ATTACHED FOR

CONDITIONS OF APPROVAL REVISED AND SPECIAL STIPLINATIONS Carlsbad Field Office

ATTACHED

ATTACHED

Permian District

NM - Eddy - Morrow Project Deer Canyon 24 Fed #1H Well #1 Wellbore #1

Plan: Plan #1

Standard Planning Report

17 December, 2007



Planning Report

Database: Drilling Database

Company: Permian District
Project: NM - Eddy - Morrow Project

Site: Deer Canyon 24 Fed #1H
Well: Well #1
Wellbore: Wellbore #1
Design: Plan #1

Local Co-ordinate Reference:

TVD Reference:
MD Reference:
North Reference:
Survey Calculation Method:

Well Well #1

WELL @ 0.0ft (Original Well Elev)
WELL @ 0.0ft (Original Well Elev)

True

Minimum Curvature

Project NM - Eddy - Morrow Project

Map System: Geo Datum: US State Plane 1927 (Exact solution)

NAD 1927 (NADCON CONUS)

Map Zone: New Mexico East 3001

System Datum:

Ground Level

Tazi (MADOON CONDS)

Site Deer Canyon 24 Fed #1H

Site Position: Northing: m Latitude:
From: None Easting: m Longitude:

Position | Positi

Position Uncertainty: ft Slot Radius: in Grid Convergence:

0.00 °

Well #1

Well Position 0.0 ft Northing: 30° 59' 24.512 N +N/-S 0.00 m Latitude: 0 0 ft 0.00 m 105° 55' 44.137 W +E/-W Easting: Longitude: **Position Uncertainty** ft Wellhead Elevation: Ground Level: 0.0 ft

Wellbore #1

Magnetics Model Name Sample Date Declination Dip Angle Field Strength

(1) (1) (nT)

User Defined 11/2/2007 0.00 0.00 0.00

Design Plan #1

Audit Notes:

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Planning Report

Database: Company: Project:

Drilling Database Permian District

NM - Eddy - Morrow Project

Site: Well: Wellbore: Design:

Deer Canyon 24 Fed #1H Well#1/ [S. Wellbore #1 Plan #1

site in 1960.

WELL @ 0.0ft (Original Well Elev)

WELL @ 0.0ft (Original Well Elev)

True

Survey Calculation Method:

Minimum Curvature

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Planning Report

Database: Company: Project:

Drilling Database Permian District NM - Eddy - Morrow Project Deer Canyon 24 Fed #1H

Site: Well: Well #1 Wellbore: Wellbore #1 Design:

Local Co-ordinate Reference:

TVD Reference: MD Reference:

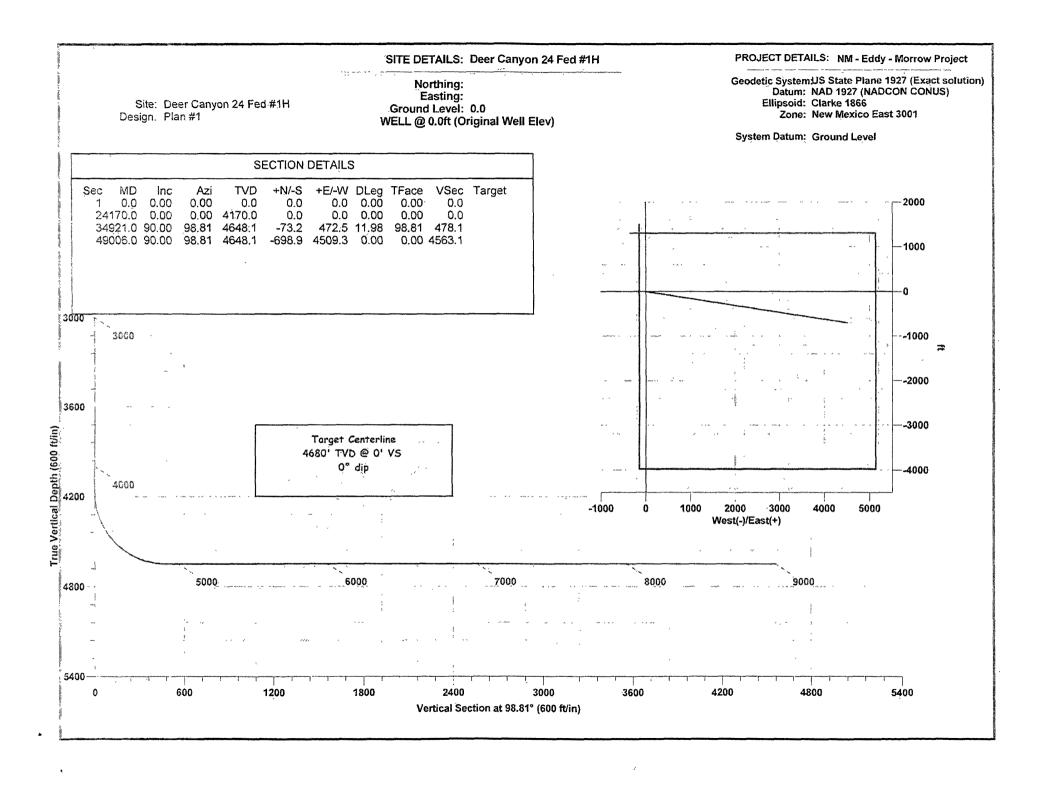
North Reference: Survey Calculation Method:

WELL @ 0.0ft (Original Well Elev)
WELL @ 0.0ft (Original Well Elev)
True

. Minimum Curvature:

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1. W	Measuren		TW. /	,		S. 18 18 18 18		Dogleg	* 229.0 × 1,0000	num Tala
1 %	700 to 700 min out	clination	Azimuth	Depth	+N/-S	+E/-W	Section >	Rate	1.00	Rate
	(ft)	(*)	(*)	(n)	(U)	(ft) ·	(ft)	(°/100ft)	(°/100ft)	(°/100ft)
	5,200.0	90,00	98.81	4,648.1	-116.0	748.2		0.00	0.00	0.00
	5,300.0	90,00	98.81	4,648.1	-131.3	847.0		0.00	0.00	0.00
1	5,400.0	90.00	98.81	4,648.1	-146.6	945.8	957.1	0.00	0 00	0.00
l	5,500.0	90.00	98.81	4,648 1	-161.9	1,044.6	1,057.1	0,00	0 00	0.00
*	5,600.0	90.00	98.81	4,648 1	-177.2	1,143.5	1,157.1	0.00	0 00	0.00
I	5,700.0	90.00	98.81	4;648.1	-192.5	1,242 3	1,257.1	0.00	0.00	0.00
	5,800.0	90.00	.98.81	4,648.1	-207.9	1,341.1	1,357.1	0.00	0.00	0.00
i	5,900.0	90.00	98.81	4,648.1	-223 2	1,439.9	1,457.1	0.00	0.00	0.00
į.	6,000.0	90 00	98.81	4,648.1	-238.5	1,538 7	1,557.1	0.00	0.00	0.00
	6,100.0	90.00	98.81	4,648.1	-253,8	1,637.6	1,657.1	0.00	0.00	0.00
	6,200:0	90 00	98.81	4,648.1	-269.1	1,736.4	1,757.1	0.00	0.00	0 00
	6,300.0	90.00	98 81	4,648.1	-284.4	1,835 2		0.00	0.00	0.00
	6,400.0	90.00	98.81	4,648.1	-299.7	1,934.0	1,957.1	0.00	0.00	0.00
1	6,500.0	90.00	98.81	4,648.1	-315 1	2,032 8	2,057.1	0.00	0.00	0.00
	6,600.0	90.00	98 81	4,648.1	-330 4	2,131.7	2,157.1	0.00	0.00	0.00
	6,700.0	90,00	98 81	4,648.1	-345.7	2,230.5	2,257.1	0.00	0.00	0,00
	6,800.0	90.00	98.81	4,648.1	-361.0	2,329.3	2,357.1	0 00	0.00	0.00
	6,900.0	90.00	98.81	4,648 1	-376.3	2,428.1	,2,457.1	0 00	0.00	0.00
	7,000.0	90.00	98,81	4,648.1	-391.6	2,526.9	2,557 1	0 00	0.00	0.00
	7,100.0	90.00	98.81	4,648.1	-407.0	2,625.8	2,657.1	0.00	0.00	0.00
	7,200.0	90 00	98.81	4,648.1	-422.3	2,724.6	2,757.1	0.00	0 00	0.00
	7,300.0	90.00	98.81	4,648.1	-437.6	2,823 4	2,857.1	0.00	0.00	0.00
	7,400.0	90.00	98.81	4,648.1	-452.9	2,922.2	2,957.1	0.00	0.00	0.00
	7,500.0	90.00	98.81	4,648.1	-468.2	3,021.0	3,057.1	0.00	0.00	0.00
	7,600.0	90.00	98.81	4,648.1	-483.5	3,119.9	3,157.1	0.00	0.00	0.00
	7,700.0	90.00	98:81	4,648.1	-498.9	3,218.7	3,257.1	0.00	0.00	0.00
	7,800 0	90 00	98,81	4,648.1	-514 2	3,317,5	3,357.1	0.00	0.00	0.00
	7,900.0	60.00	98.81	4,648.1	-529 5	3,416.3	3,457.1	0.00	0~00	0.00
1	8,000.0	90.00	98,81	4,648.1	-544 8	3,515.1	3,557.1	0.00	0 00	0.00
	8,100.0	90 00	98,81	4,648.1	-560 1	3,614.0	3,657.1	0.00	0 00	0.00
	8,200 0	90.00	98.81	4,648.1	-575 4	3,712.8	3,757.1	0.00	0.00	0.00
	8,300.0	90 00	98 81	4,648 1	-590.7	3,811 6	3,857.1	0.00	0.00	0.00
1	8,400.0	90.00	98.81	4,648.1	-606.1	3,910 4	3,957,1	0.00	0.00	0.00
¢ ;	8,500 0	90.00	98.81	4,648 1	-621.4	4,009.3	4,057,1	0.00	0.00	0.00
•	8,600 0	90.00	98 81	4,648.1	-636.7	4,108.1	4,157.1	0.00	0.00	0.00
	8,700.0	90.00	98.81	4,648 1	-652.0	4,206 9	4,257.1	0.00	0 00	0.00
	8,800.0	90.00	98 81	4,648.1	-667.3	4,305.7	4,357.1	0.00	0.00	0.00
	8,900 0	90.00	98 81	4,648 1	-682 6	4,404.5	4,457.1	0.00	0.00	0.00
	9,000 0	90.00	98.81	4,648.1	-698.0	4,503.4	4,557.1	0.00	0 00	0.00
	9,006 0	90.00	98.81	4,648.1	-698.9	4,509.3	4,563 1	0.00	0 ,00	0.00

Targets Target Name - hit/miss target - Shape	Dip Angle	Dip Dir.	TVD (ft)	+N/-S	+E/-W (n)	Northing (m)	Easting (m)	Latitude	Longitude
Section 24 - plan misses by 13 - Rectangle (sides V			0.0 0.0 N, 0.0 E	1,308.1	-138.8	399.29	-36.58	30° 59' 37,456 N	105° 55' 45.731 W



Arrant, Bryan, EMNRD

From: Arrant, Bryan, EMNRD

Sent: Tuesday, January 22, 2008 7:24 AM

To: 'Tom Kellahin'

Cc: 'Itownsend@chkenergy.com'; 'Craig Barnard'; 'Linda Good'
Subject: RE: Chesapeake's Deer Canyon 14 Federal Well No. 1H

Good Morning Tom,

In review of Chesapeake Operating, Inc's plan to drill a directionally well bore in order to test the Wolfcamp formation for gas production I need to go over a few interpretations/concerns:

After review of the directional drill plan submitted with your application, I am somewhat confused as it is my interpretation that the the top of the Wolfcamp formation will

be at a depth of somewhere @ 4560'. I am basing my top from an offset well -Trilogy Operating, Inc.'s Mad Max # 2 well.

This well is located in unit (O) of the same section to the southeast.

Not to 'quibble' over a few feet of difference on deciding the tops of formations or how many feet away the Wolfcamp top will come

Not to 'quibble' over a few feet of difference on deciding the tops of formations or how many feet away the Wolfcamp top will come in from the lease line when directionally drilled, I need to be sure that everyone is of the understanding as to where the OCD recognizes formation tops.

If I am understanding my math correctly, I'm looking at the penetration point of the Wolfcamp to come in @ at a measured depth from 4560' to 4600'.

This projects the well bore to be 179' from the surface or @ 300' from the lease line. Just 30 ' shy.

As you maybe aware, formation tops starting at the Wolfcamp down though the Pennsylvanian formation were decided by a group of industry personnel back in the 70's. The OCD has copies old 'falling part' regional cross sections that industry created and along with other electric logs that aid in my correlation purposes.

Before the horizontal drilling in the Wolfcamp play really got kicked off in Eddy and Chaves Counties a number of industry personnel meet with me and we came to a understanding as to where the Wolfcamp formation top would be picked. This helped in not having operators complete their wells in the lower Abo and limit them with only 160 acre spacing.

Please note that long ago Mr. Stogner gave me guidance and wisdom in having the District offices some latitude in deciding matters themselves such as this.

The purpose was to not waste time with all involved in a paper work mire. I have already assigned an API'd to this well (30-015-36038) and will include your letter with imaging.

Yours truly,

Bryan G. Arrant
District II Geologist
New Mexico Oil Conservation Division
1301 West Grand Ave.
Artesia, NM 88210
505-748-1283 Ext. 103

From: Tom Kellahin [mailto:tkellahin@comcast.net]

Sent: Sunday, January 20, 2008 9:12 AM

To: Arrant, Bryan, EMNRD

Cc: Brooks, David K., EMNRD; Lynda F. Townsend

Subject: Chesapeake's Deer Canyon 14 Federal Well No. 1H

Bryan,

Thank you for the phone message on Friday-I was out. You called to make sure I had sent a copy to OCD-Santa Fe.

I have not--for clarification of why I filed a horizontal application with the District rather than with OCD-Santa Fe, I have the following:

1/22/2008

Background:

- (a) Although the wellbore will start at an unorthodox surface location, by the time it reaches the Wolfcamp target it will be standard and will remain so for all of the producing interval ("Producing Area")
- (b) Rule 111.C(1) provides that the District may approve a Directional wellbore ("horizontal") in two situations: Either if the unorthodox location is approved by Santa Fe OR if the producing interval is entirely within the producing area.
- (c) When Mike Stogner was process NSLs, I was directed to file with the District for this type of NSL. I did not find an example for your District, but I found one that Chris Williams approved in the Hobbs District. See API # 30-025-35190 for the Shelby 14-1 Wellbore--Letter attached

Request:

Despite the foregoing, if you want me to file at the OCD-Santa Fe, please let me know, and I will refile it with Mr. Brooks.

Regards,

Tom Kellahin Kellahin & Kellahin Attorneys at Law 706 Gonzales Road Santa Fe, NM 87501 ph 505-982-4285 fx 505-982-2047 tkellahin@comcast.net

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