

September 11, 2006

Southwestern Energy Production Company
2350 N. Sam Houston Parkway East – Suite 300
Houston, Texas 77032

30-cis-35/35

Attention: J. Alan Grimsley
Alan_Grimsley@SWN.COM

Administrative Order NSL-5446 (BHL)
(Non-Standard Subsurface Location/Producing Area)

Dear Mr. Grimsley:

Reference is made to the following: (i) your application submitted to the New Mexico Oil Conservation Division ("Division") in Santa Fe, New Mexico on August 11, 2006 (*administrative application reference No. pTDS0-622351477*); (ii) Mr. Michael E. Stogner's, Engineer with the Division in Santa Fe, e-mail of Monday morning, September 11, 2006 for verification that the notice requirements for your filing had been complied with; (iii) your electronic reply on Monday afternoon, September 11, 2006, with the necessary information to complete your application; and (iv) the Division's records in Santa Fe, including the files on Division Administrative Orders NSL-5275 (BHL), NSL-5303 (BHL), NSL-5316 (BHL), and NSL-5399 (BHL); all concerning Southwestern Energy Production Company's ("SwEPC") proposed development of the Cherry Canyon "4" Sand formation within a portion of its Karlsbad Corral "11" state lease (*New Mexico State Land Office Lease No. V-03633-0002*) underlying the SE/4 NE/4 (Unit H) and the NE/4 SE/4 (Unit I) of Section 11, Township 25 South, Range 29 East, NMPM, Eddy County, New Mexico, utilizing horizontal drainhole drilling techniques.

The Division Director Finds That:

- (1) The subject application has been duly filed under the provisions of Division Rules 104.F, 111.A (13), 111.C (2), and 1210.A (2) [formerly Division Rule 1207.A (2), see Division Order No. R-12327-A, issued by the New Mexico Oil Conservation Commission in Case No. 13482 on September 15, 2005].
- (2) By Order No. R-10591, issued in Case No. 11530 on May 8, 1996 and made effective on June 1, 1996, the Division created and defined the Northwest Corral Canyon-Delaware Pool (96464) for the production of oil from the Delaware formation; the horizontal limits for this pool comprises the following described lands in Eddy County, New Mexico (see Division Cases No. 11530 and 13540:

TOWNSHIP 25 SOUTH, RANGE 29 EAST, NMPM

Section 2: E/2
Section 11: N/2 and SW/4;

- (3) Currently, the Northwest Corral Canyon-Delaware Pool and that area within one-mile of the pool's boundaries [see *Division Rule 104.A (2) (b)*] are subject to the statewide rules and regulations, as promulgated by Division Rules 104.B (1), 505, and 506, which provides for 40-acre oil spacing and proration units, or drilling units, and requires that wells be located no closer than 330 feet to the outer boundary of a single 40-acre oil spacing and proration unit; each standard 40-acre is assigned a top unit depth bracket allowable of 107 barrels of oil per day and a limiting gas/oil ratio of 2,000 cubic feet of gas per barrel of oil which results in a casinghead gas allowable of 214 MCF per day; this depth bracket allowable was established and set by said Order No. R-10591 to correspond with the top most perforation in the discovery well for the pool, being 5,341 feet in the Santa Fe Energy Resources, Inc. Corral Fly Unit Well No. 1 (API No. 30-015-28576), located 1980 feet from the North and East lines (Unit G) of Section 2, Township 25 South, Range 29 East, NMPM, Eddy County, New Mexico;
 - (4) SwEPC intends to drill its Karlsbad Corral "11" (State) Well No. 4-H from a surface location 1340 feet from the North line and 660 feet from the East line (Unit H) of Section 11, vertically to an approximate measured depth (MD) of 4,913 feet; kick-off to the south and build angle at a rate of 12 degrees per 100 feet until a 90 degree, more or less, deviation off of vertical is achieved at an approximate measured depth of 5,641 feet (MD), or 5,377 feet (TVD); and continue to drill horizontally for an approximate distance of 2,000 feet to a bottomhole location, or end-point, within the Cherry Canyon "4" Sand unit of the Delaware Mountain Group at a targeted subsurface location approximately 1498 feet from the South line and 683 feet from the West line (Unit I) of Section 11 at an approximate total depth (TD) of 7,656 feet (MD), or 5,377 feet (TVD); a 5-1/2 inch production casing string will be set to TD;
 - (5) The top of the Northwest Corral Canyon-Delaware Pool should be intercepted by this well at an approximate depth of 3,200 feet;
 - (6) The proposed 80-acre Project Area (SE/4 NE/4 and NE/4 SE/4 of Section 11), pursuant to Division Rules 111.A (9) and C (3), will be established by combining two standard 40-acre oil spacing and proration units within the designated and Undesignated Northwest Corral Canyon-Delaware Pool comprising these two quarter-quarter sections;
 - (7) The path way of the proposed wellbore vertically from the entry point into the Delaware formation to the kick-off depth, the curved portion, and portions at both ends of the drainhole will be unorthodox pursuant to Division Rules 104.B (1) and 111.A (13);
 - (8) It appearing the applicant has satisfied all of the appropriate requirements prescribed in Rules 111.C (2) and 104.F (2), the subject application based on SwEPC's proposed directional drilling plan, further the proposed 80-acre Project Area should be governed by the provisions contained within this order and all other applicable provisions of Division Rules 111, 505, and 506.
-

It Is Therefore Ordered That:

(1) Southwestern Energy Production Company ("SwEPC") is hereby authorized to directionally drill its Karlsbad Corral "11" (State) Well No. 4-H from a surface location 1340 feet from the North line and 660 feet from the East line (Unit H) of Section 11, Township 25 South, Range 29 East, NMPM, Eddy County, New Mexico, vertically to an approximate measured depth (MD) of 4,913 feet; kick-off to the south and build angle at a rate of 12 degrees per 100 feet until a 90 degree, more or less, deviation off of vertical is achieved at an approximate measured depth of 5,641 feet (MD), or 5,377 feet (TVD); and continue to drill horizontally for an approximate distance of 2,000 feet to a bottomhole location, or end-point, within the Cherry Canyon "4" Sand unit of the Delaware Mountain Group at a targeted subsurface location approximately 1498 feet from the South line and 683 feet from the West line (Unit I) of Section 11 at an approximate total depth (TD) of 7,656 feet (MD), or 5,377 feet (TVD).

(2) Pursuant to Division Rules 111.A (9) and C (3) an 80-acre Project Area shall will be established by combining two standard 40-acre oil spacing and proration units within the designated and Undesignated Northwest Corral Canyon-Delaware Pool (**96464**) comprising the SE/4 NE/4 (Unit H) and the NE/4 SE/4 (Unit I) of Section 11.

(3) The operator of this 80-acre Project Area shall comply with all applicable requirements and conditions for the Northwest Corral Canyon-Delaware Pool set forth in Division Rules 111, 505, and 506.

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

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

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

MARK E. FESMIRE, P. E.
Director

MEF/ms

cc: New Mexico Oil Conservation Division – Artesia
New Mexico State Land Office – Santa Fe
File: NSL-5275 (BHL)
NSL-5303 (BHL)
NSL-5316 (BHL)
NSL-5399 (BHL)

Arrant, Bryan, EMNRD

From: Alan Grimsley [Alan_Grimsley@SWN.COM]
Sent: Wednesday, August 09, 2006 3:28 PM
To: Arrant, Bryan, EMNRD
Subject: Karlsbad Corral 11 # 4H Plans and Plat

Bryan,
Attached are Form C-102, Directional Plan, and Pit & Location Diagram for the recently submitted Karlsbad Corral 11 #4H well.

Thanks in advance.
Alan

Alan Grimsley
Drilling Engineer
Permian Basin/Gulf Coast Team
Office: (281) 618-4068
Fax: (281) 618-4758
Mobile: (713) 492-1657
email: alan_grimsley@swn.com

Notice: This e-mail may contain privileged and/or confidential information and is intended only for the addressee. If you are not the addressee or the person responsible for delivering it to the addressee, you may not copy or distribute this communication to anyone else. If you received this communication in error, please notify us immediately by telephone or return e-mail and promptly delete the original message from your system.

8/9/2006

DISTRICT I
1626 N. FRENCH DR., HOBBS, NM 88240

State of New Mexico
Energy, Minerals and Natural Resources Department

DISTRICT II
1301 W. GRAND AVENUE, ARTESIA, NM 88210

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
1220 S. ST. FRANCIS DR., SANTA FE, NM 87505

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
Property Code	Property Name KARLSBAD CORRAL 11	Well Number 4H
OGRID No.	Operator Name SOUTHWESTERN ENERGY PRODUCTION COMPANY	Elevation 3089'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	11	25-S	29-E		1340	NORTH	660	EAST	EDDY

Bottom Hole Location If Different From Surface

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
I	11	25-S	29-E		1498	SOUTH	683	EAST	EDDY

Dedicated Acres 80	Joint or Infill	Consolidation Code	Order No.
------------------------------	-----------------	--------------------	-----------

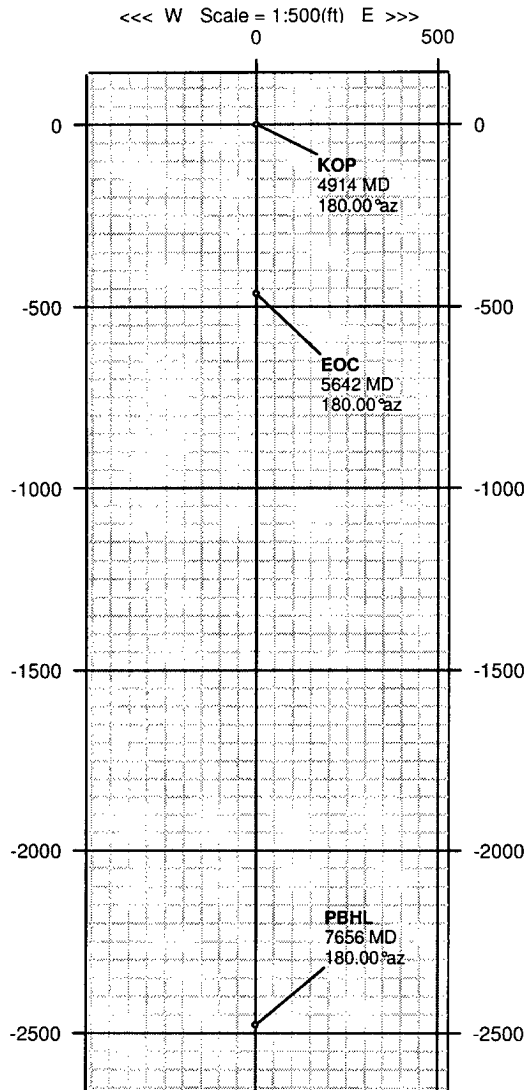
NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

<p>GEODETIC COORDINATES NAD 27 NME Y=417827.5 N X=619178.9 E LAT.=32°08'53" N LONG.=103°56'54" W</p> <p>Project Area</p> <p>Producing Area</p> <p>BOTTOM HOLE Y=415350.1 N X=619178.9 E</p>	<p>SL</p> <p>GRID AZ.=180°00'00" HORIZ. DIST.=2478.0'</p> <p>BH</p> <p>1340'</p> <p>660'</p> <p>683'</p> <p>1498'</p>	<p>OPERATOR CERTIFICATION</p> <p>I hereby certify that the information herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p><i>J. Alan Grimsley</i> 8/8/06 Signature Date J. ALAN GRIMSLEY Printed Name</p> <p>SURVEYOR CERTIFICATION</p> <p>I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.</p> <p>JULY 25, 2006</p> <p>Date Surveyed REV:08/08/06 Signature & Seal of Professional Surveyor MR</p> <p><i>Ronald J. Eidson</i> 8/08/06 06.11.12635</p> <p>Certificate No. GARY EIDSON 12841 RONALD J. EIDSON 3239</p>
---	---	--

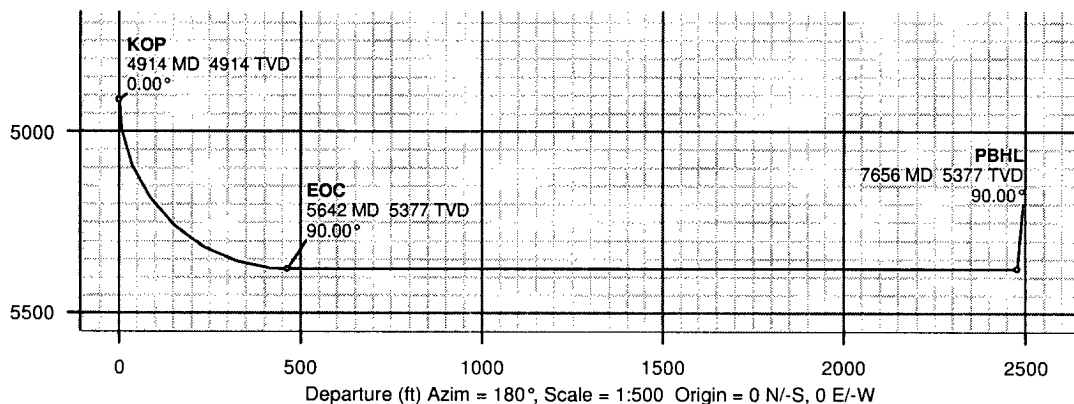
SEECO

WELL	FIELD	STRUCTURE
Karlsbad Corral 11 #4H	Eddy County, NM	Karlsbad Corral 11 #4H

Magnetic Parameters Model: KRF 2005	Dip: 63.172° Mag Dec: +8.319°	Date: August 04, 2008 PS: 49055.7 mT	Surface Location Lat: N32 8 53.359 Lon: W103 56 53.734	NAD27 New Mexico State Planes, Eastern Zone, US Feet Northing: 417827.50 NUS Easting: 619175.80 NUS Grid Conv: -0.20490390° Scale Fact: 0.999253587	Miscellaneous Site: Karlsbad Corral 11 #4H Plan: Karlsbad Corral 11 #4H .r2	TVD Ref: RKB (0.00 m above) Snow Date: Wed 03:29 PM August 06, 2008
--	----------------------------------	---	--	---	---	--



Critical Points								
Critical Point	MD	INCL	AZIM	TVD	YSEC	N(+) / S(-)	E(+) / W(-)	DLS
Tie-In	0.00	0.00	180.00	0.00	0.00	0.00	0.00	0.00
KOP	4913.50	0.00	180.00	4913.50	0.00	0.00	0.00	0.00
EOC	5641.67	90.00	180.00	5377.06	463.57	-463.57	0.00	12.36
PBHL	7655.56	90.00	180.00	5377.00	2477.46	-2477.46	0.00	0.00



INTREPID
Directional Drilling Specialists



Proposal

Report Date: August 9, 2006 Client: SEECO Field: Eddy County, NM Structure / Slot: Karlsbad Corral 11 #4H / Karlsbad Corral 11 #4H Well: Karlsbad Corral 11 #4H Borehole: Karlsbad Corral 11 #4H UWI/API#: Survey Name / Date: Karlsbad Corral 11 #4H_r2 / August 9, 2006 Tort / AHD / DDI / ERD ratio: 90.002° / 2477.46 ft / 5.502 / 0.461 Grid Coordinate System: NAD27 New Mexico State Planes, Eastern Zone, US Feet Location Lat/Long: N 32 8 53.299, W 103 56 53.734 Location Grid N/E Y/X: N 417827.500 ftUS, E 619178.900 ftUS Grid Convergence Angle: +0.20490390° Grid Scale Factor: 0.99992536	Survey / DLS Computation Method: Minimum Curvature / Lubinski Vertical Section Azimuth: 180.000° Vertical Section Origin: N 0.000 ft, E 0.000 ft TVD Reference Datum: RKB TVD Reference Elevation: 0.0 ft relative to Sea Bed / Ground Level Elevation: 0.000 ft relative to Magnetic Declination: 8.319° Total Field Strength: 49056.677 nT Magnetic Dip: 60.172° Declination Date: August 04, 2006 Magnetic Declination Model: IGRF 2005 North Reference: Grid North Total Corr Mag North -> Grid North: +8.114° Local Coordinates Referenced To: Well Head
---	---

Comments	Measured Depth (ft)	Inclination (deg)	Azimuth (deg)	TVD (ft)	Vertical Section (ft)	NS (ft)	EW (ft)	Closure (ft)	Closure Azimuth (deg)	DLS (deg/100 ft)	Tool Face (deg)
Tie-In	0.00	0.00	180.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	180.00M
KOP	4913.50	0.00	180.00	4913.50	0.00	0.00	0.00	0.00	0.00	0.00	180.00M
	5000.00	10.69	180.00	4999.50	8.05	-8.05	0.00	8.05	180.00	12.36	0.00G
	5100.00	23.05	180.00	5095.01	37.01	-37.01	0.00	37.01	180.00	12.36	0.00G
	5200.00	35.41	180.00	5182.11	85.75	-85.75	0.00	85.75	180.00	12.36	0.00G
	5300.00	47.77	180.00	5256.75	152.01	-152.01	0.00	152.01	180.00	12.36	0.00G
	5400.00	60.13	180.00	5315.48	232.70	-232.70	0.00	232.70	180.00	12.36	0.00G
	5500.00	72.49	180.00	5355.58	324.10	-324.10	0.00	324.10	180.00	12.36	0.00G
	5600.00	84.85	180.00	5375.19	421.96	-421.96	0.00	421.96	180.00	12.36	0.00G
EOC	5641.67	90.00	180.00	5377.06	463.57	-463.57	0.00	463.57	180.00	12.36	0.00G
PBHL	7655.56	90.00	180.00	5377.00	2477.46	-2477.46	0.00	2477.46	180.00	0.00	0.00G

Karlsbad Corral 11 #4-H Generic Location and Pit Diagram

