



**Southwestern Energy
Production Company**

A subsidiary of Southwestern Energy Company

2350 N. Sam Houston Parkway East
Suite 300
Houston, Texas 77032
(281) 618-4700 FAX: (281) 618-4757

December 6, 2005

RECEIVED

Michael E. Stogner
Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, New Mexico 87505

DEC 07 2005

Oil Conservation Division
1220 S. St. Francis Drive
Santa Fe, NM 87505

Dear Mr. Stogner:

Pursuant to Division Rule 104.F.(2), Southwestern Energy Production Company is requesting approval for of an unorthodox oil well location for the following well:

Well: Karlsbad Corral 2 Well No. 5-H
Location: 65 feet FSL & 660 feet FWL
Well Unit: SW $\frac{1}{4}$ SW $\frac{1}{4}$ of Section 2, Township 25 South, Range 29 East,
N.M.P.M., Eddy County, New Mexico

The well will be drilled to test the Cherry Canyon 4 formation (Corral Fly, Delaware Pool). The pool is spaced on 40 acres, with wells to be located no closer than 330 feet to a quarter-quarter section line and for the subject well an exception to this 330' requirement is requested. A form C-102 is attached as Exhibit A.

The proposed location is based on engineering and land conservation reasons. The proposed well, Karlsbad Corral 2 #5-H, will be directionally drilled from an unorthodox surface location 65 feet from the South Line and 660 feet from the West Line of Section 2 to a bottom hole location 2,563 feet from the South Line and 660 feet from the West line.

The well plan consists of drilling a vertical hole to the KOP (kick off point) at 4,838' MD/TVD. The hole will be directional drilled utilizing a build rate of 12°/100' to penetrate the Cherry Canyon 4 Sand at 5,563' MD / 5,315' TVD at 88° of angle. The Cherry Canyon 4 will be intersected at 518' FSL and 660' FWL of Section 2 T25S R29E. The well will continue laterally (90°) for 2000' of vertical displacement. The proposed BHL will be 2,563' FSL & 660' FWL of section 2. The top of the Delaware will be intersected at 3200' MD/TVD at 65' FSL and 660' FWL of Section 2. A drilling prognosis, directional plot, and proposed survey report are attached as Exhibit B.

Production casing will be run and cemented to TD. The Cherry Canyon 4 Sand will be selectively perforated, with all perforations being placed in accordance of a standard location of Section 2 T25S R29E (greater than 330' from any lease line).

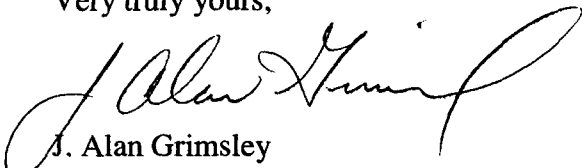
By placing the surface location at 65' FSL and 660' FWL of Section 2, the maximum amount of reservoir rock in the Cherry Canyon 4 Sand in the producing area can be penetrated and produced. The proposed surface location also allows for utilization of one (1) well pad for two wells, the Karlsbad Corral 2 #5-H and the Karlsbad Corral 11 # 2-H. A separate NSL is being applied for the Karlsbad Corral 11 #2-H well. A diagram of the proposed well pad is attached as Exhibit C.

Furthermore, Southwestern Energy Production Company has 100% access to the mineral interests to the Cherry Canyon formation in the Delaware Mountain Group of Section 2 and Section 11 via farmout agreements with Devon Energy (Lease Serial No. V-3361), and EOG (Lease Serial No. 3633-2) , respectfully. A land plat is attached as Exhibit D.

Your timely approval of this unorthodox location is requested.

If you have any questions, I can be reached at 281-618-4068.

Very truly yours,



J. Alan Grimsley
Southwestern Energy Production Co.

Attachments
CC: District 2

DISTRICT I
1625 N. FRENCH DR., HOBBES, NM 86240

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

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

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

State of New Mexico
Energy, Minerals and Natural Resources Department

OIL CONSERVATION DIVISION
1220 SOUTH ST. FRANCIS DR.
Santa Fe, New Mexico 87505

Form C-102
Revised JUNE 10, 2003
Submit to Appropriate District Office
State Lease - 4 Copies
Fee Lease - 3 Copies

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
Property Code	Property Name KARLSBAD CORRAL 2	Well Number 5H
OGRID No.	Operator Name SOUTHWESTERN ENERGY PRODUCTION COMPANY	Elevation 3035'

Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
M	2	25-S	29-E		65	SOUTH	660	WEST	EDDY

Bottom Hole Location If Different From Surface

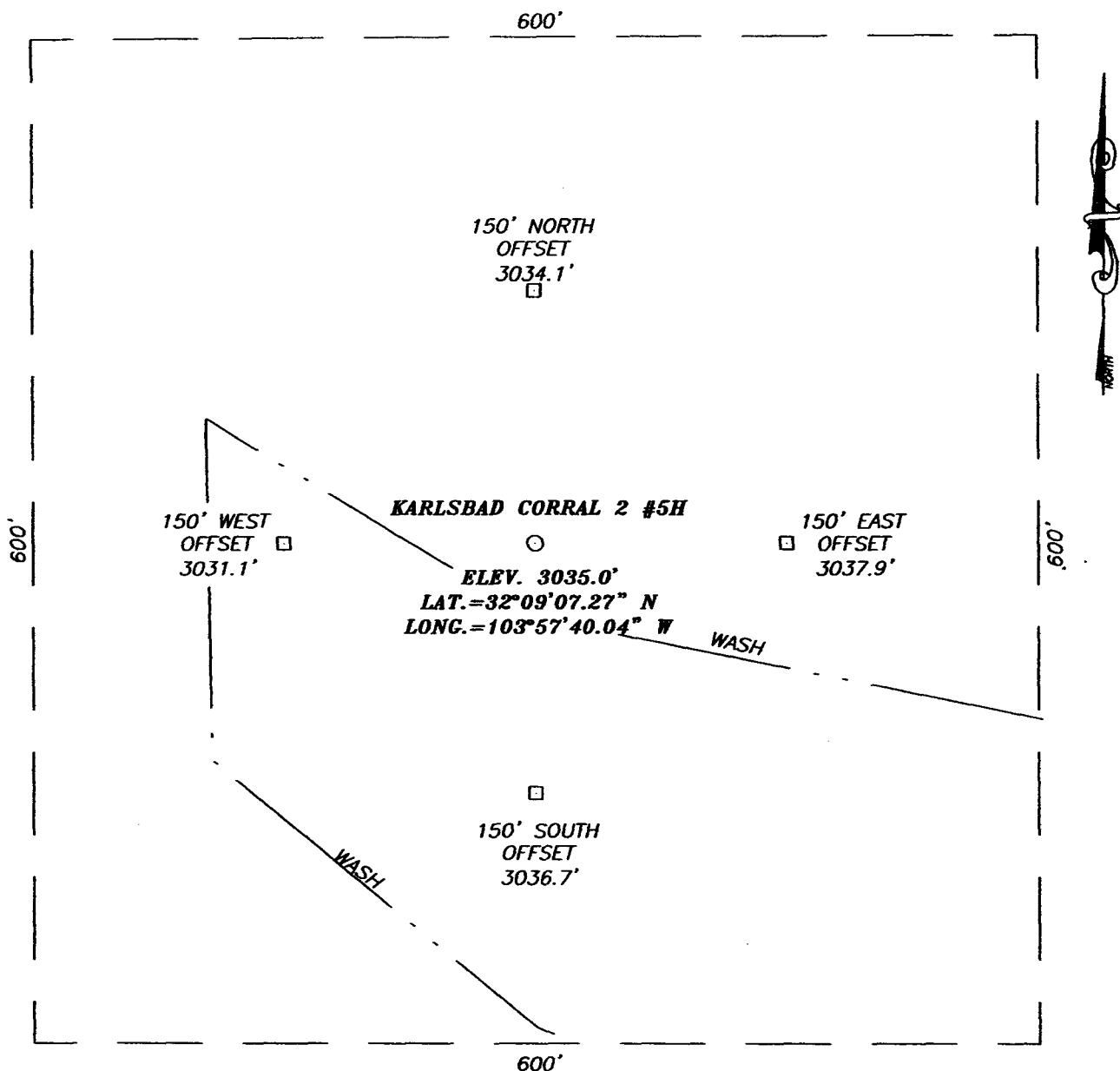
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	2	25-S	29-E		2563	SOUTH	660	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
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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

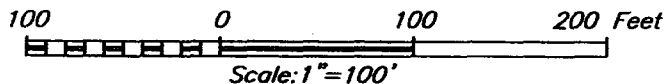
	OPERATOR CERTIFICATION I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief. <i>James Alan Grimsley</i> Signature JAMES ALAN GRIMSLEY Printed Name Drilling Engineer Title 12/6/05 Date
SURVEYOR CERTIFICATION I hereby certify that the well location 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. OCTOBER 13, 2005 Date Surveyed LA REV: 10/24/05 Signature of Professional Surveyor Professional Surveyor RONALD J. ELLISON 10/24/05 Certificate No. RONALD J. ELLISON 3239	

SECTION 2, TOWNSHIP 25 SOUTH, RANGE 29 EAST, N.M.P.M.,
 EDDY COUNTY, NEW MEXICO



DIRECTIONS TO LOCATION

FROM THE INTERSECTION OF ST. HWY. #128 AND BUCK JACKSON RD. GO SOUTHWEST ON BUCK JACKSON RD. APPROX. 16.5 MILES TO THE INTERSECTION OF BUCK JACKSON ROAD AND TWIN WELLS RD. TURN RIGHT ON TWIN WELLS RD. AND GO APPROX. 500 FEET. TURN LEFT AND GO SOUTHWEST APPROX. 3.0 MILES. TURN RIGHT AND GO NORTHWEST APPROX. 1.4 MILES. TURN RIGHT AND GO NORTH APPROX. 4.1 MILES KARLSBAD CORRAL 2 #1H WELL. TURN LEFT AND GO WEST APPROX. 0.6 MILES. THIS LOCATION IS APPROX. 1047 FEET NORTH OF ROAD.



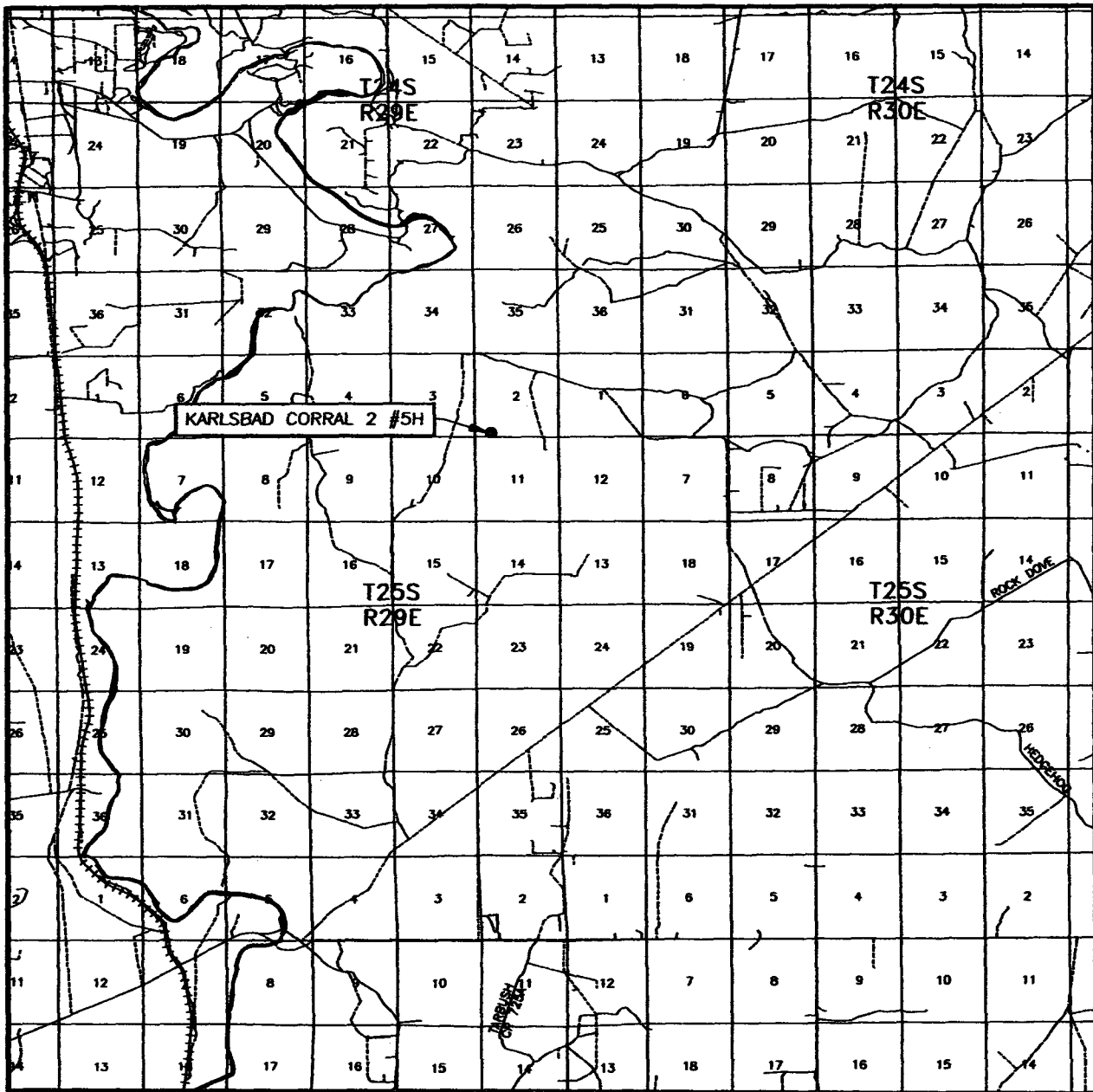
SOUTHWESTERN ENERGY PRODUCTION COMPANY

KARLSBAD CORRAL 2 #5H WELL
 LOCATED 65 FEET FROM THE SOUTH LINE
 AND 660 FEET FROM THE WEST LINE OF SECTION 2,
 TOWNSHIP 25 SOUTH, RANGE 29 EAST, N.M.P.M.,
 EDDY COUNTY, NEW MEXICO.

Survey Date: 10/13/05	Sheet 1 of 1 Sheets
W.O. Number: 05.11.1580	Dr By: LA
Date: 10/19/05	Disk: CD#4
05111580	Scale: 1"=100'

PROVIDING SURVEYING SERVICES
 SINCE 1948
JOHN WEST SURVEYING COMPANY
 412 N. DAL PASO
 HOBBS, N.M. 88240
 (505) 383-3117

VICINITY MAP



SCALE: 1" = 2 MILES

SEC. 2 TWP. 25-S RGE. 29-E

SURVEY N.M.P.M.

COUNTY EDDY

DESCRIPTION 65' FSL & 660' FWL

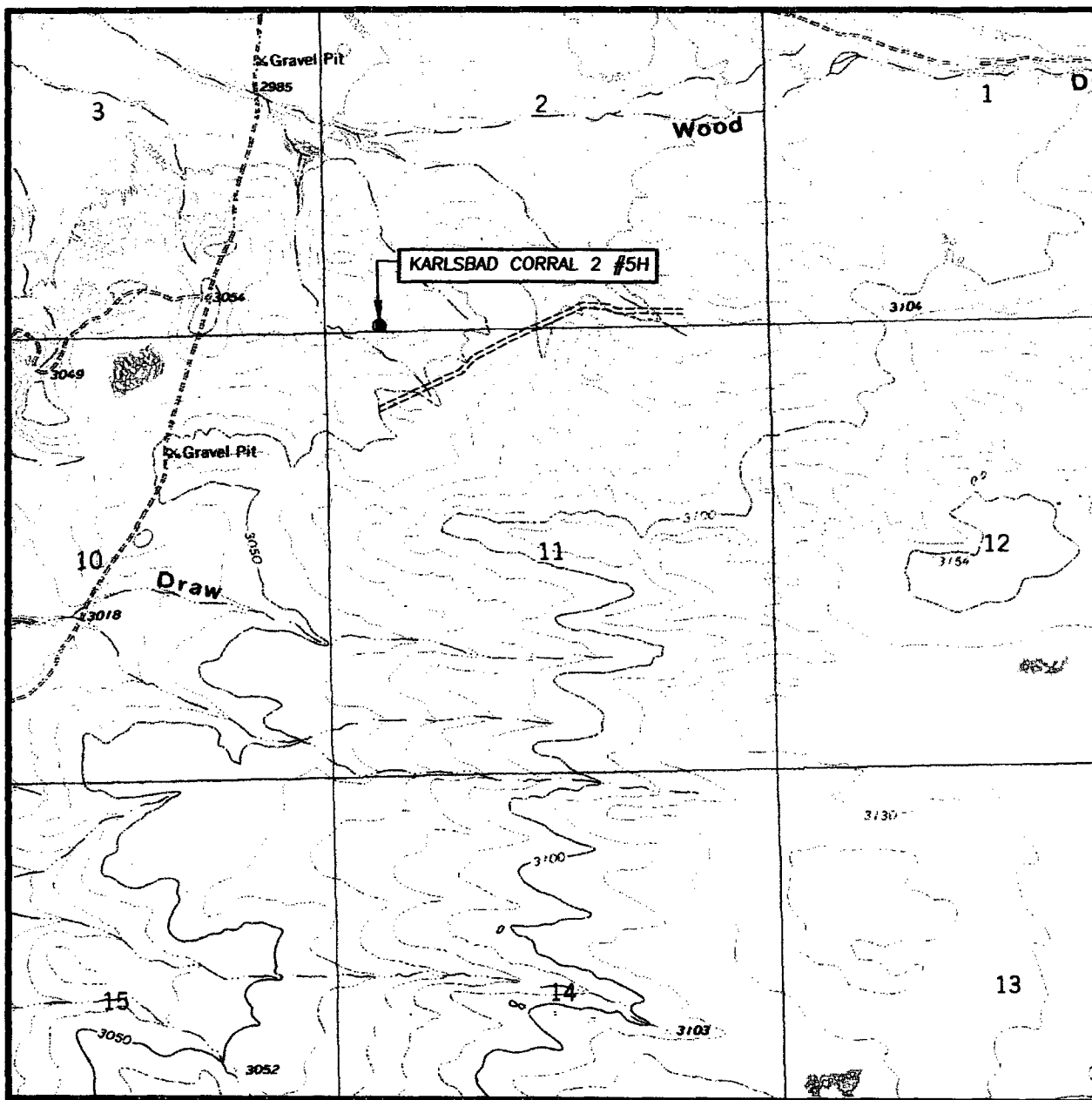
ELEVATION 3035'

OPERATOR SOUTHWESTERN ENERGY PRODUCTION COMPANY

LEASE KARLSBAD CORRAL 2

PROVIDING SURVEYING SERVICES
SINCE 1946
JOHN WEST SURVEYING COMPANY
412 N. DAL PASO
HOBBS, N.M. 88240
(505) 393-3117

LOCATION VERIFICATION MAP



SCALE: 1" = 2000'

CONTOUR INTERVAL:
PIERCE CANYON, N.M. - 10'

SEC. 2 TWP. 25-S RGE. 29-E

SURVEY N.M.P.M.

COUNTY EDDY

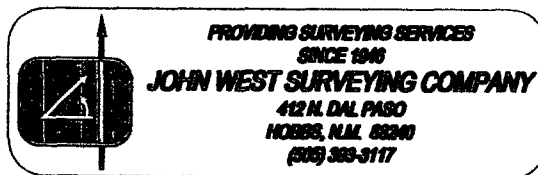
DESCRIPTION 65' FSL & 660' FWL

ELEVATION 3035'

OPERATOR SOUTHWESTERN ENERGY
PRODUCTION COMPANY

LEASE KARLSBAD CORRAL 2

U.S.G.S. TOPOGRAPHIC MAP
PIERCE CANYON, N.M.





Southwestern Energy Production Company

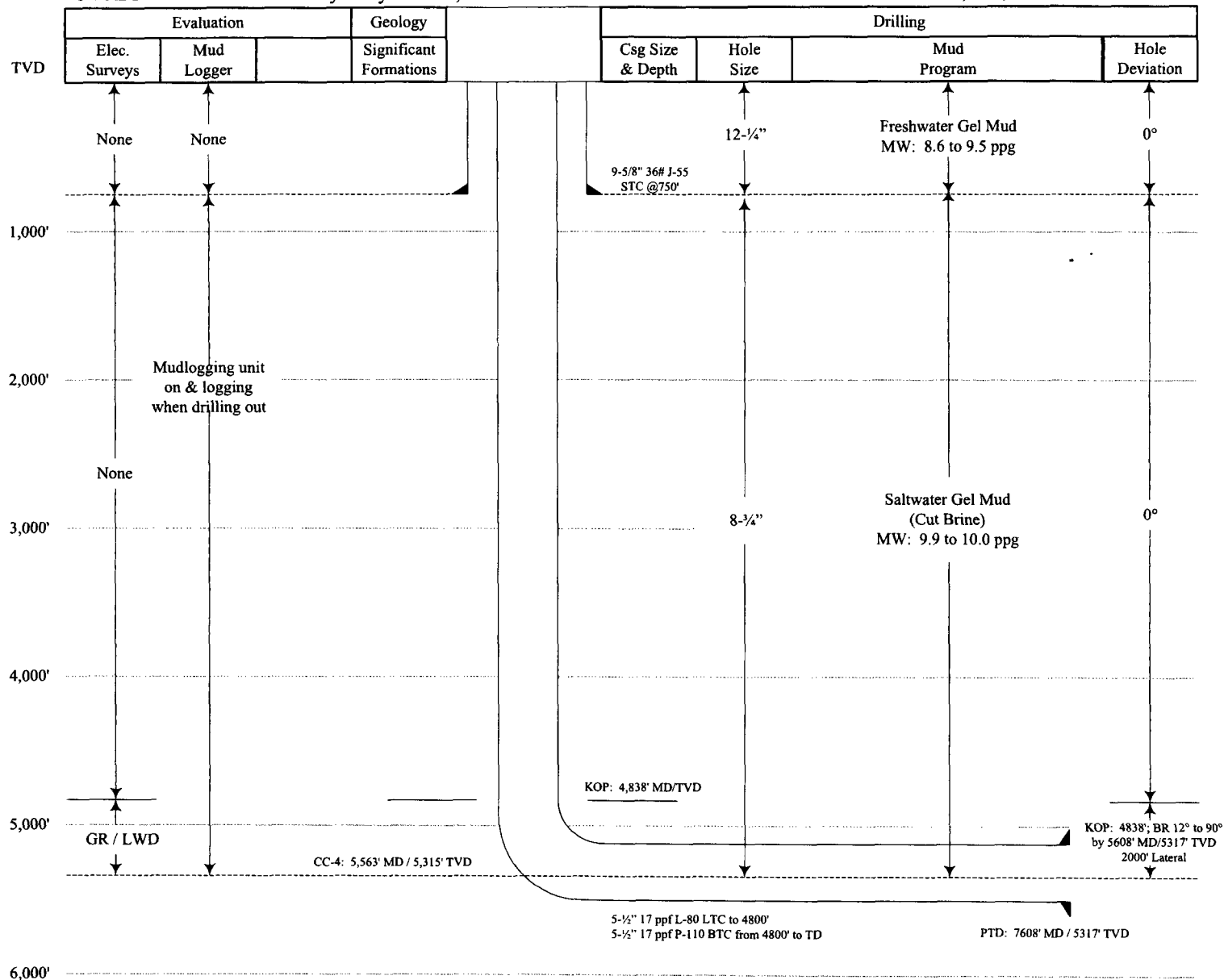
Drilling Prognosis

WELL NAME: Karlsbad Corral 2 #5-H
LOCATION Section 2, T25S, R29E
Eddy County, New Mexico
SL: 65' FSL & 660' FWL
BHL: 2,563' FSL & 660' FWL
Target Entry Point: 520' FSL & 660' FWL

AFE NO.: Not Issued Yet
PROSPECT: Corral Fly

OBJECTIVE Cherry Canyon Sand, CC-4

EST. ELEVATION: GL: 3,035'; RKB: ±25.0'



Southwestern Energy Production Co.

Karlsbad Corral 2 #5H

65 ft FSL & 660 ft FWL

Section 2, T25-S, R29-E

Eddy County, New Mexico

Plan #1 11/22/05



ANNOTATIONS

No.	TVD	MD	Annotation
1	4838.00	KOP @ 4838' w/ 12° Build Rates	
2	5315.00	Top of CC4/ Begin Hold @ 87° Inclination	
3	5583.29	End Hold/Begin Build to Land Curve	
4	5316.70	End of Curve @ 5608' MD/5317' TVD	
5	5316.70	Proposed Bottom Hole Location, KC 2 #5H	

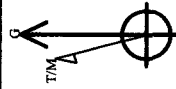
COMPANY DETAILS

Southwestern Energy Production Co.
3250 N. Sam Houston Pkwy E.
Houston, TX 77032

Calculation Method: Minimum Curvature
Error System: Systematic Ellipse
Surface Method: Approach 3D
Error Surface: Elliptical
Warning Method: Error Ratio

FIELD DETAILS

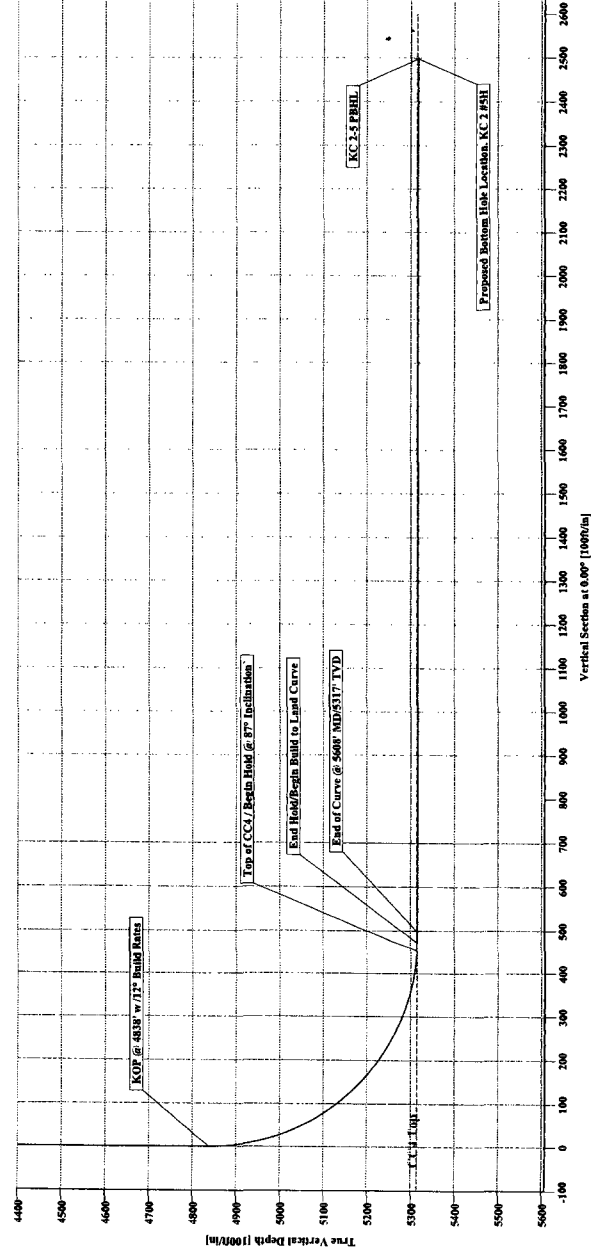
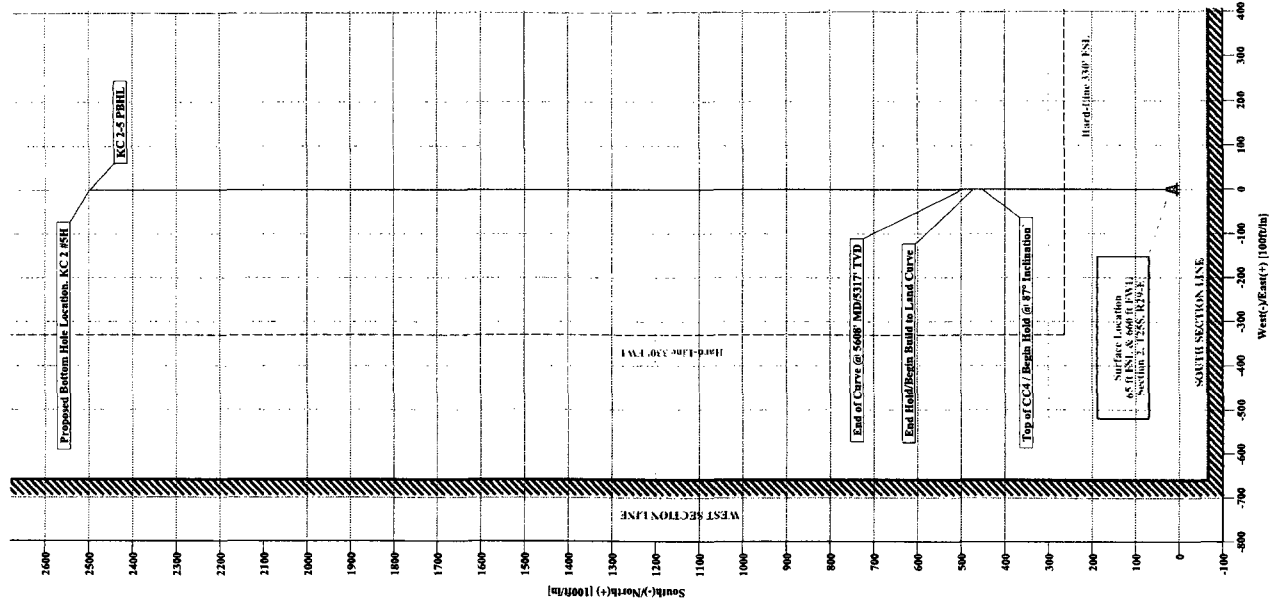
Karlsbad Corral Section 2
Eddy County, New Mexico
Geodetic System: US State Plane Coordinate System 1927
Ellipsoid: NAD27 (Clarke 1866)
Zone: New Mexico, Eastern Zone
Magnetic Model: IGR2005
System Datum: Mean Sea Level
Local North:



Azimuths to Grid North
True North: -0.20°
Magnetic North: -0.20°
Magnetic Field
Strength: 0.01
Dip Angle: 0.00°
Date: 10/6/2005
Model: IGR2005

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	4838.00	0.00	0.00	4838.00	0.00	0.00	0.00	0.00	0.00	
3	5563.29	87.00	0.00	5315.00	452.66	0.00	12.00	0.00	452.66	
4	5583.29	87.00	0.00	5316.05	472.63	0.00	0.00	0.00	472.63	
5	5608.29	90.00	0.00	5316.70	497.62	0.00	12.00	0.00	497.62	
6	7608.47	90.00	0.00	5316.70	2497.80	0.00	0.00	0.00	2497.80	KC 2-5 PBHL



PathFinder

Planning Report

Company: Southwestern Energy Production	Date: 11/22/2005	Time: 10:41:48	Page: 1
Field: Karlsbad Corral Section 2	Co-ordinate(NE) Reference: Well: Karlsbad Corral 2 #5H, Grid North		
Site: Karlsbad Corral 2 #5-H	Vertical (TVD) Reference: SITE 0.0		
Well: Karlsbad Corral 2 #5H	Section (VS) Reference: Well (0.00N,0.00E,0.00Azi)		
Wellpath: Original	Plan: Plan #1 100605		

Field: Karlsbad Corral Section 2
Eddy County, New Mexico

Map System: US State Plane Coordinate System 1927
Geo Datum: NAD27 (Clarke 1866)
Sys Datum: Mean Sea Level

Map Zone: New Mexico, Eastern Zone
Coordinate System: Well Centre
Geomagnetic Model: igrf2005

Site: Karlsbad Corral 2 #5-H
Section 2, T-25S & R-29E
Eddy County, N.M.

Site Position:	Northing: 419225.60 ft	Latitude: 32 9 7.274 N
From: Map	Easting: 615193.10 ft	Longitude: 103 57 40.039 W
Position Uncertainty: 0.00 ft		North Reference: Grid
Ground Level: 0.00 ft		Grid Convergence: 0.20 deg

Well: Karlsbad Corral 2 #5H

Slot Name:

Well Position: +N/-S 0.00 ft	Northing: 419225.60 ft	Latitude: 32 9 7.274 N
+E/-W 0.00 ft	Easting: 615193.10 ft	Longitude: 103 57 40.039 W
Position Uncertainty: 0.00 ft		

Wellpath: Original

Current Datum: SITE	Height 0.00 ft	Drilled From: Surface
Magnetic Data: 10/6/2005		Tie-on Depth: 0.00 ft
Field Strength: 0 nT		Above System Datum: Mean Sea Level
Vertical Section: Depth From (TVD)	+N/-S	Declination: 0.00 deg
ft	ft	Mag Dip Angle: 0.00 deg
		+E/-W
		ft
		Direction
		deg
0.00	0.00	0.00
		0.00

Plan: Plan #1 100605

Date Composed: 10/6/2005
Version: 1
Tied-to: From Surface

Principal: No

Plan Section Information

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
4838.00	0.00	0.00	4838.00	0.00	0.00	0.00	0.00	0.00	0.00	
5563.29	87.00	0.00	5315.00	452.66	0.00	12.00	12.00	0.00	0.00	
5583.29	87.00	0.00	5316.05	472.63	0.00	0.00	0.00	0.00	0.00	
5608.29	90.00	0.00	5316.70	497.62	0.00	12.00	12.00	0.00	0.00	
7608.47	90.00	0.00	5316.70	2497.80	0.00	0.00	0.00	0.00	0.00	KC 2-5 PBHL

Section 1 : Start Hold

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4800.00	0.00	0.00	4800.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
4838.00	0.00	0.00	4838.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

Section 2 : Start Build 12.00

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
4850.00	1.44	0.00	4850.00	0.15	0.00	0.15	12.00	12.00	0.00	0.00
4875.00	4.44	0.00	4874.96	1.43	0.00	1.43	12.00	12.00	0.00	0.00
4900.00	7.44	0.00	4899.83	4.02	0.00	4.02	12.00	12.00	0.00	0.00
4925.00	10.44	0.00	4924.52	7.90	0.00	7.90	12.00	12.00	0.00	0.00
4950.00	13.43	0.00	4948.98	13.07	0.00	13.07	12.00	12.00	0.00	0.00
4975.00	16.43	0.00	4973.13	19.51	0.00	19.51	12.00	12.00	0.00	0.00
5000.00	19.43	0.00	4996.91	27.21	0.00	27.21	12.00	12.00	0.00	0.00
5025.00	22.43	0.00	5020.26	36.14	0.00	36.14	12.00	12.00	0.00	0.00
5050.00	25.43	0.00	5043.11	46.28	0.00	46.28	12.00	12.00	0.00	0.00
5075.00	28.43	0.00	5065.39	57.60	0.00	57.60	12.00	12.00	0.00	0.00

PathFinder

Planning Report

Company: Southwestern Energy Production
 Field: Karlsbad Corral Section 2
 Site: Karlsbad Corral 2 #5-H
 Well: Karlsbad Corral 2 #5H
 Wellpath: Original

Date: 11/22/2005 Time: 10:41:48 Page: 2
 Co-ordinate(N/E) Reference: Well: Karlsbad Corral 2 #5H, Grid North
 Vertical (TVD) Reference: SITE 0.0
 Section (VS) Reference: Well (0.00N,0.00E,0.00Azi)
 Plan: Plan #1 100605

Section 2 : Start Build 12.00

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
5100.00	31.43	0.00	5087.06	70.07	0.00	70.07	12.00	12.00	0.00	0.00
5125.00	34.43	0.00	5108.04	83.66	0.00	83.66	12.00	12.00	0.00	0.00
5150.00	37.43	0.00	5128.28	98.33	0.00	98.33	12.00	12.00	0.00	0.00
5175.00	40.42	0.00	5147.73	114.03	0.00	114.03	12.00	12.00	0.00	0.00
5200.00	43.42	0.00	5166.33	130.73	0.00	130.73	12.00	12.00	0.00	0.00
5225.00	46.42	0.00	5184.03	148.38	0.00	148.38	12.00	12.00	0.00	0.00
5250.00	49.42	0.00	5200.78	166.94	0.00	166.94	12.00	12.00	0.00	0.00
5275.00	52.42	0.00	5216.54	186.34	0.00	186.34	12.00	12.00	0.00	0.00
5300.00	55.42	0.00	5231.26	206.54	0.00	206.54	12.00	12.00	0.00	0.00
5325.00	58.42	0.00	5244.90	227.49	0.00	227.49	12.00	12.00	0.00	0.00
5350.00	61.42	0.00	5257.43	249.12	0.00	249.12	12.00	12.00	0.00	0.00
5375.00	64.41	0.00	5268.82	271.38	0.00	271.38	12.00	12.00	0.00	0.00
5400.00	67.41	0.00	5279.02	294.20	0.00	294.20	12.00	12.00	0.00	0.00
5425.00	70.41	0.00	5288.01	317.52	0.00	317.52	12.00	12.00	0.00	0.00
5450.00	73.41	0.00	5295.77	341.28	0.00	341.28	12.00	12.00	0.00	0.00
5475.00	76.41	0.00	5302.28	365.42	0.00	365.42	12.00	12.00	0.00	0.00
5500.00	79.41	0.00	5307.52	389.86	0.00	389.86	12.00	12.00	0.00	0.00
5525.00	82.41	0.00	5311.47	414.54	0.00	414.54	12.00	12.00	0.00	0.00
5550.00	85.41	0.00	5314.12	439.40	0.00	439.40	12.00	12.00	0.00	0.00
5563.29	87.00	0.00	5315.00	452.66	0.00	452.66	12.00	12.00	0.00	0.00

Section 3 : Start Hold

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
5583.29	87.00	0.00	5316.05	472.63	0.00	472.63	0.00	0.00	0.00	0.00

Section 4 : Start Build 12.00

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
5600.00	89.01	0.00	5316.63	489.33	0.00	489.33	12.00	12.00	0.00	0.00
5608.29	90.00	0.00	5316.70	497.62	0.00	497.62	12.00	12.00	0.00	0.00

Section 5 : Start Hold

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	TFO deg
5700.00	90.00	0.00	5316.70	589.33	0.00	589.33	0.00	0.00	0.00	0.00
5800.00	90.00	0.00	5316.70	689.33	0.00	689.33	0.00	0.00	0.00	0.00
5900.00	90.00	0.00	5316.70	789.33	0.00	789.33	0.00	0.00	0.00	0.00
6000.00	90.00	0.00	5316.70	889.33	0.00	889.33	0.00	0.00	0.00	0.00
6100.00	90.00	0.00	5316.70	989.33	0.00	989.33	0.00	0.00	0.00	0.00
6200.00	90.00	0.00	5316.70	1089.33	0.00	1089.33	0.00	0.00	0.00	0.00
6300.00	90.00	0.00	5316.70	1189.33	0.00	1189.33	0.00	0.00	0.00	0.00
6400.00	90.00	0.00	5316.70	1289.33	0.00	1289.33	0.00	0.00	0.00	0.00
6500.00	90.00	0.00	5316.70	1389.33	0.00	1389.33	0.00	0.00	0.00	0.00
6600.00	90.00	0.00	5316.70	1489.33	0.00	1489.33	0.00	0.00	0.00	0.00
6700.00	90.00	0.00	5316.70	1589.33	0.00	1589.33	0.00	0.00	0.00	0.00
6800.00	90.00	0.00	5316.70	1689.33	0.00	1689.33	0.00	0.00	0.00	0.00
6900.00	90.00	0.00	5316.70	1789.33	0.00	1789.33	0.00	0.00	0.00	0.00
7000.00	90.00	0.00	5316.70	1889.33	0.00	1889.33	0.00	0.00	0.00	0.00
7100.00	90.00	0.00	5316.70	1989.33	0.00	1989.33	0.00	0.00	0.00	0.00
7200.00	90.00	0.00	5316.70	2089.33	0.00	2089.33	0.00	0.00	0.00	0.00
7300.00	90.00	0.00	5316.70	2189.33	0.00	2189.33	0.00	0.00	0.00	0.00
7400.00	90.00	0.00	5316.70	2289.33	0.00	2289.33	0.00	0.00	0.00	0.00
7500.00	90.00	0.00	5316.70	2389.33	0.00	2389.33	0.00	0.00	0.00	0.00
7608.45	90.00	0.00	5316.70	2497.78	0.00	2497.78	0.00	0.00	0.00	0.00
7608.47	90.00	0.00	5316.70	2497.80	0.00	2497.80	0.00	0.00	0.00	0.00

PathFinder

Planning Report

Company: Southwestern Energy Production
 Field: Karlsbad Corral Section 2
 Site: Karlsbad Corral 2 #5-H
 Well: Karlsbad Corral 2 #5H
 Wellpath: Original

Date: 11/22/2005 Time: 10:41:48 Page: 3
 Co-ordinate(NE) Reference: Well: Karlsbad Corral 2 #5H, Grid North
 Vertical (TVD) Reference: SITE 0.0
 Section (VS) Reference: Well (0.00N,0.00E,0.00Azi)
 Plan: Plan #1 100605

Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
4800.00	0.00	0.00	4800.00	0.00	0.00	0.00	0.00	0.00	0.00	KOP @ 4838' w /12° Build
4838.00	0.00	0.00	4838.00	0.00	0.00	0.00	0.00	0.00	0.00	
4850.00	1.44	0.00	4850.00	0.15	0.00	0.15	12.00	12.00	0.00	
4875.00	4.44	0.00	4874.96	1.43	0.00	1.43	12.00	12.00	0.00	
4900.00	7.44	0.00	4899.83	4.02	0.00	4.02	12.00	12.00	0.00	
4925.00	10.44	0.00	4924.52	7.90	0.00	7.90	12.00	12.00	0.00	
4950.00	13.43	0.00	4948.98	13.07	0.00	13.07	12.00	12.00	0.00	
4975.00	16.43	0.00	4973.13	19.51	0.00	19.51	12.00	12.00	0.00	
5000.00	19.43	0.00	4996.91	27.21	0.00	27.21	12.00	12.00	0.00	
5025.00	22.43	0.00	5020.26	36.14	0.00	36.14	12.00	12.00	0.00	
5050.00	25.43	0.00	5043.11	46.28	0.00	46.28	12.00	12.00	0.00	
5075.00	28.43	0.00	5065.39	57.60	0.00	57.60	12.00	12.00	0.00	
5100.00	31.43	0.00	5087.06	70.07	0.00	70.07	12.00	12.00	0.00	
5125.00	34.43	0.00	5108.04	83.66	0.00	83.66	12.00	12.00	0.00	
5150.00	37.43	0.00	5128.28	98.33	0.00	98.33	12.00	12.00	0.00	
5175.00	40.42	0.00	5147.73	114.03	0.00	114.03	12.00	12.00	0.00	
5200.00	43.42	0.00	5166.33	130.73	0.00	130.73	12.00	12.00	0.00	
5225.00	46.42	0.00	5184.03	148.38	0.00	148.38	12.00	12.00	0.00	
5250.00	49.42	0.00	5200.78	166.94	0.00	166.94	12.00	12.00	0.00	
5275.00	52.42	0.00	5216.54	186.34	0.00	186.34	12.00	12.00	0.00	
5300.00	55.42	0.00	5231.26	206.54	0.00	206.54	12.00	12.00	0.00	
5325.00	58.42	0.00	5244.90	227.49	0.00	227.49	12.00	12.00	0.00	
5350.00	61.42	0.00	5257.43	249.12	0.00	249.12	12.00	12.00	0.00	
5375.00	64.41	0.00	5268.82	271.38	0.00	271.38	12.00	12.00	0.00	
5400.00	67.41	0.00	5279.02	294.20	0.00	294.20	12.00	12.00	0.00	
5425.00	70.41	0.00	5288.01	317.52	0.00	317.52	12.00	12.00	0.00	
5450.00	73.41	0.00	5295.77	341.28	0.00	341.28	12.00	12.00	0.00	
5475.00	76.41	0.00	5302.28	365.42	0.00	365.42	12.00	12.00	0.00	
5500.00	79.41	0.00	5307.52	389.86	0.00	389.86	12.00	12.00	0.00	
5525.00	82.41	0.00	5311.47	414.54	0.00	414.54	12.00	12.00	0.00	
5550.00	85.41	0.00	5314.12	439.40	0.00	439.40	12.00	12.00	0.00	
5563.29	87.00	0.00	5315.00	452.66	0.00	452.66	12.00	12.00	0.00	Top of CC4 / Begin Hold @ End Hold/Begin Build to L
5583.29	87.00	0.00	5316.05	472.63	0.00	472.63	0.00	0.00	0.00	
5600.00	89.01	0.00	5316.63	489.33	0.00	489.33	12.00	12.00	0.00	
5608.29	90.00	0.00	5316.70	497.62	0.00	497.62	12.00	12.00	0.00	End of Curve @ 5608' MD/5
5700.00	90.00	0.00	5316.70	589.33	0.00	589.33	0.00	0.00	0.00	
5800.00	90.00	0.00	5316.70	689.33	0.00	689.33	0.00	0.00	0.00	
5900.00	90.00	0.00	5316.70	789.33	0.00	789.33	0.00	0.00	0.00	
6000.00	90.00	0.00	5316.70	889.33	0.00	889.33	0.00	0.00	0.00	
6100.00	90.00	0.00	5316.70	989.33	0.00	989.33	0.00	0.00	0.00	
6200.00	90.00	0.00	5316.70	1089.33	0.00	1089.33	0.00	0.00	0.00	
6300.00	90.00	0.00	5316.70	1189.33	0.00	1189.33	0.00	0.00	0.00	
6400.00	90.00	0.00	5316.70	1289.33	0.00	1289.33	0.00	0.00	0.00	
6500.00	90.00	0.00	5316.70	1389.33	0.00	1389.33	0.00	0.00	0.00	
6600.00	90.00	0.00	5316.70	1489.33	0.00	1489.33	0.00	0.00	0.00	
6700.00	90.00	0.00	5316.70	1589.33	0.00	1589.33	0.00	0.00	0.00	
6800.00	90.00	0.00	5316.70	1689.33	0.00	1689.33	0.00	0.00	0.00	
6900.00	90.00	0.00	5316.70	1789.33	0.00	1789.33	0.00	0.00	0.00	
7000.00	90.00	0.00	5316.70	1889.33	0.00	1889.33	0.00	0.00	0.00	
7100.00	90.00	0.00	5316.70	1989.33	0.00	1989.33	0.00	0.00	0.00	
7200.00	90.00	0.00	5316.70	2089.33	0.00	2089.33	0.00	0.00	0.00	
7300.00	90.00	0.00	5316.70	2189.33	0.00	2189.33	0.00	0.00	0.00	
7400.00	90.00	0.00	5316.70	2289.33	0.00	2289.33	0.00	0.00	0.00	
7500.00	90.00	0.00	5316.70	2389.33	0.00	2389.33	0.00	0.00	0.00	

PathFinder

Planning Report

Company: Southwestern Energy Production
Field: Karlsbad Corral Section 2
Site: Karlsbad Corral 2 #5-H
Well: Karlsbad Corral 2 #5H
Wellpath: Original

Date: 11/22/2005 **Time:** 10:41:48 **Page:** 4
Co-ordinate(NE) Reference: Well: Karlsbad Corral 2 #5H, Grid North
Vertical (TVD) Reference: SITE 0.0
Section (VS) Reference: Well (0.00N,0.00E,0.00Azi)
Plan: Plan #1 100605

Survey

MD ft	Incl deg	Azim deg	TVD ft	+N/-S ft	+E/-W ft	VS ft	DLS deg/100ft	Build deg/100ft	Turn deg/100ft	Tool/Comment
7608.45	90.00	0.00	5316.70	2497.78	0.00	2497.78	0.00	0.00	0.00	Proposed Bottom Hole Location
7608.47	90.00	0.00	5316.70	2497.80	0.00	2497.80	0.00	0.00	0.00	KC 2-5 PBHL

Targets

Name	Description Dip. Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	← Latitude → Deg Min Sec			← Longitude → Deg Min Sec		
KC 2-5 PBHL		5316.70	2497.80	-0.30	421723.40	615192.80	32	9	31.993 N	103	57	39.942 W

Annotation

MD ft	TVD ft	
4838.00	4838.00	KOP @ 4838' w /12° Build Rates
5563.29	5315.00	Top of CC4 / Begin Hold @ 87° Inclination
5583.29	5316.05	End Hold/Begin Build to Land Curve
5608.29	5316.70	End of Curve @ 5608' MD/5317' TVD
7608.45	5316.70	Proposed Bottom Hole Location. KC 2 #5H

Proposed Locations

Toe of Lateral: 2,563' FSL & 660' FWL

