

DISTRICT I

1625 N. FRENCH DR., BOBBS, NM 88240

State of New Mexico

Energy, Minerals and Natural Resources Department

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

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 30-015-34930	Pool Code 96464	Pool Name Corral Canyon; Delaware Northwest
Property Code	Property Name KARLSBAD CORRAL 2	Well Number 5H
OGRIID 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 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

		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 Grimley</i> Signature JAMES ALAN GRIMLEY Printed Name Drilling Engineer Title 12/6/05 Date	
BOTTOM HOLE LOCATION $Y=421723.4 \text{ N}$ $X=615192.8 \text{ E}$		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 & Seal of Professional Surveyor <i>Ronald J. Edson</i> 05-11-1580 Certificate No. RONALD J. EDSON 3239	
GEODETIC COORDINATES NAD 27 NME SURFACE LOCATION $Y=419225.6 \text{ N}$ $X=615193.1 \text{ E}$ $LAT.=32^{\circ}09'07.27'' \text{ N}$ $LONG.=103^{\circ}57'40.04'' \text{ W}$			



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

BILL RICHARDSON

Governor

Joanna Prukop

Cabinet Secretary

December 20, 2005

Mark E. Fesmire, P.E.

Director

Oil Conservation Division

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

Attention: J. Alan Grimsley
Alan_Grimsley@SWN.COM

Administrative Order NSL-5316 (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 December 7 2005 (***administrative application reference No. pMES0-535442924***); and (ii) the Division's records in Santa Fe, including the file on Division Administrative Orders NSL-5275 (BHL) and NSL-5303 (BHL): all concerning Southwestern Energy Production Company's ("SwEPC") proposed development of the Cherry Canyon "4" Sand formation within a portion of the Karlsbad Corral "2" State Lease (***New Mexico State Land Office Lease No. V-03361-0001***) underlying the W/2 SW/4 of Section 2, 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 boundaries [see *Division Rule 104.A (2) (a)*] are subject to the statewide rules and regulations, as promulgated by Rule 104.B (1), 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;

- (4) It is the Division's understanding that SwEPC intends to drill its Karlsbad Corral "2" (State) Well No. 5-H from a surface location 65 feet from the South line and 660 feet from the West line (Unit M) of Section 2, vertically to an approximate measured depth (MD) of 4,838 feet; kick-off to the north 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 5,608 feet (MD), or 5,317 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 2563 feet from the South line and 660 feet from the West line (Unit L) of Section 2;
- (5) The top of the Undesignated Northwest Corral Canyon-Delaware Pool should be intercepted at an approximate depth of 3,200 feet;
- (6) The proposed 80-acre "Project Area", 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 Undesignated Northwest Corral Canyon-Delaware Pool comprising the NW/4 SW/4 (Unit L) and the SW/4 SW/4 (Unit M) of Section 2;
- (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, the subject application should be approved, further, the aforementioned horizontal drainhole and 80-acre project area should continue operating under the provisions contained within this order and all other applicable provisions of Division Rule 111;
- (9) The applicant has satisfied all of the appropriate requirements prescribed in Rules 111.C (2) and 104.F; therefore the subject application based on SwEPC's proposed directional drilling plan should be approved; and
- (10) The subject 80-acre oil spacing and proration unit/project area is to be governed by the provisions contained within this order and all other applicable provisions of Division Rules 111 and 505.

It Is Therefore Ordered That:

(1) Southwestern Energy Production Company ("SwEPC") is hereby authorized to directionally drill its Karlsbad Corral "2" (State) Well No. 5-H from a surface location 65 feet from the South line and 660 feet from the West line (Unit M) of Section 2, Township 25 South, Range 29 East, NMPM, Eddy County, New Mexico, vertically to an approximate measured depth (MD) of 4,838 feet; kick-off to the north 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 5,608 feet (MD), or 5,317 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 2563 feet from the South line and 660 feet from the West line (Unit L) of Section 2.

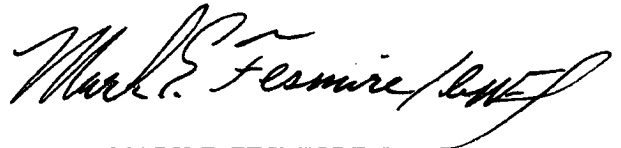
(2) Further, an 80-acre Project Area comprising the W/2 SW/4 of Section 2 shall be established by combining the NW/4 SW/4 (Unit L) and the SW/4 SW4 (Unit M) of Section 2.

(3) The operator shall comply with all applicable requirements and conditions set forth in Division Rules 111 and 505.

(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. FESMIORÉ, 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)



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

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

Plan: Plan #1 100605	Date Composed: 10/6/2005
Principal: No	Version: 1
	Tied-to: From Surface

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	Date:	11/22/2005	Time:	10:41:48	Page:	2
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				

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	Date: 11/22/2005	Time: 10:41:48	Page: 3
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		

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 @
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	End of Curve @ 5608' MD/5
5608.29	90.00	0.00	5316.70	497.62	0.00	497.62	12.00	12.00	0.00	
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	Date: 11/22/2005	Time: 10:41:48	Page: 4
Field: Karlsbad Corral Section 2	Co-ordinate(N/E) 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		

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 Loca
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

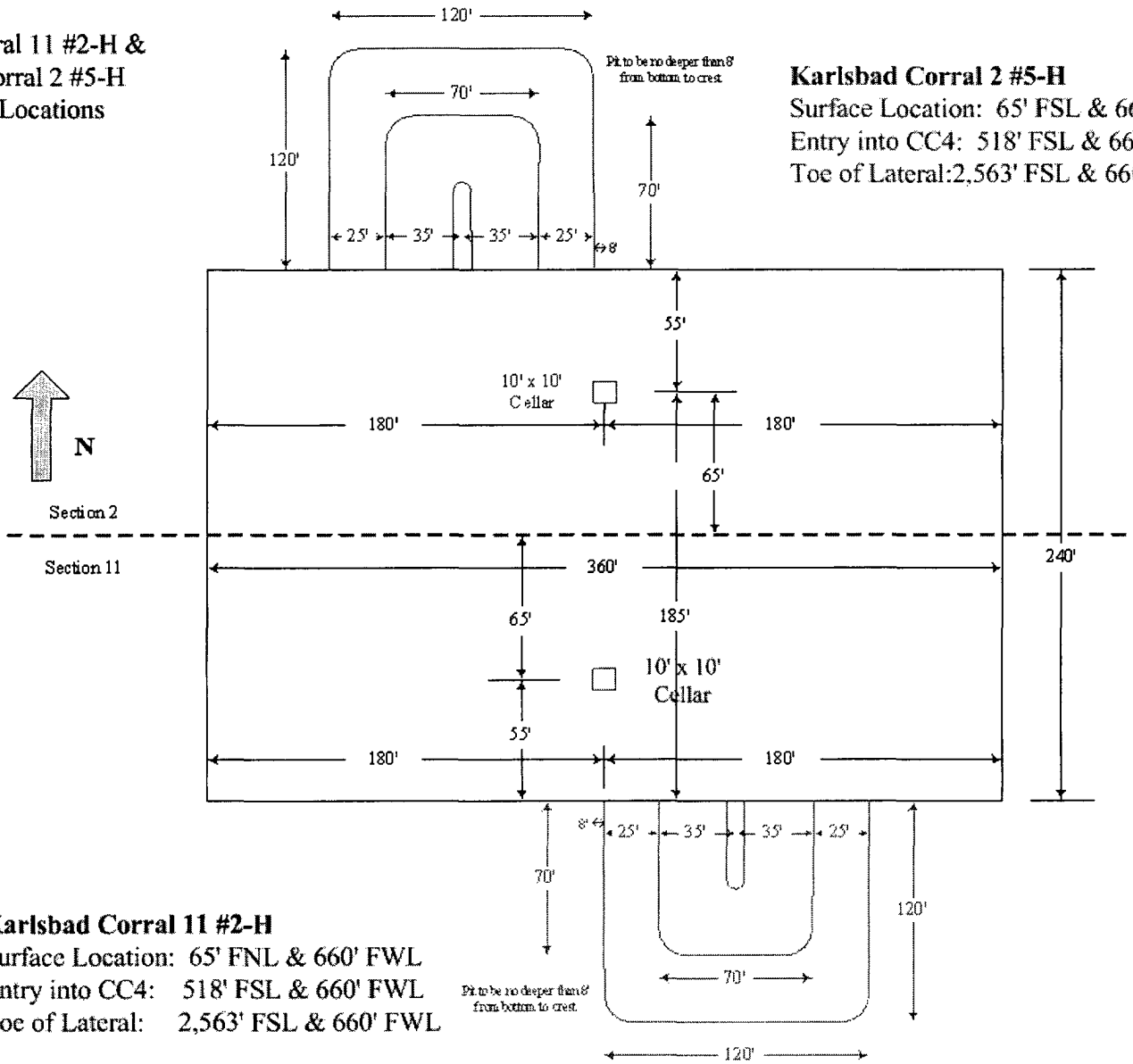
Name	Description Dip. Dir.	TVD ft	+N/-S ft	+E/-W ft	Map Northing ft	Map Easting ft	← Latitude → Deg Min Sec			← Longitude → Deg Min Sec		
KC 2-5 PBHL		5316.70	2497.80	-0.30	421723.40	615192.80	32	9	31.993 N	103	57	39.942 W

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

**Karlsbad Corral 11 #2-H &
Karlsbad Corral 2 #5-H
Proposed Locations**

Karlsbad Corral 2 #5-H
Surface Location: 65' FSL & 660' FWL
Entry into CC4: 518' FSL & 660' FWL
Toe of Lateral: 2,563' FSL & 660' FWL



Karlsbad Corral 11 #2-H
Surface Location: 65' FNL & 660' FWL
Entry into CC4: 518' FSL & 660' FWL
Toe of Lateral: 2,563' FSL & 660' FWL

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

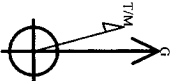
No.	TVD	MD	Annotation
1	4838.00	4838.00	KOP @ 4838' w/12° Build Rates
2	5315.00	5563.29	Top of CCA / Begin Hold @ 87° Inclination
3	5316.05	5583.29	End Hold/Begin Build to Land Curve
4	5316.70	5608.29	End of Curve @ 5608' MD/5317' TVD
5	5316.70	7608.45	Proposed Bottom Hole Location, KC 2 #5H

COMPANY DETAILS

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

FIELD DETAILS

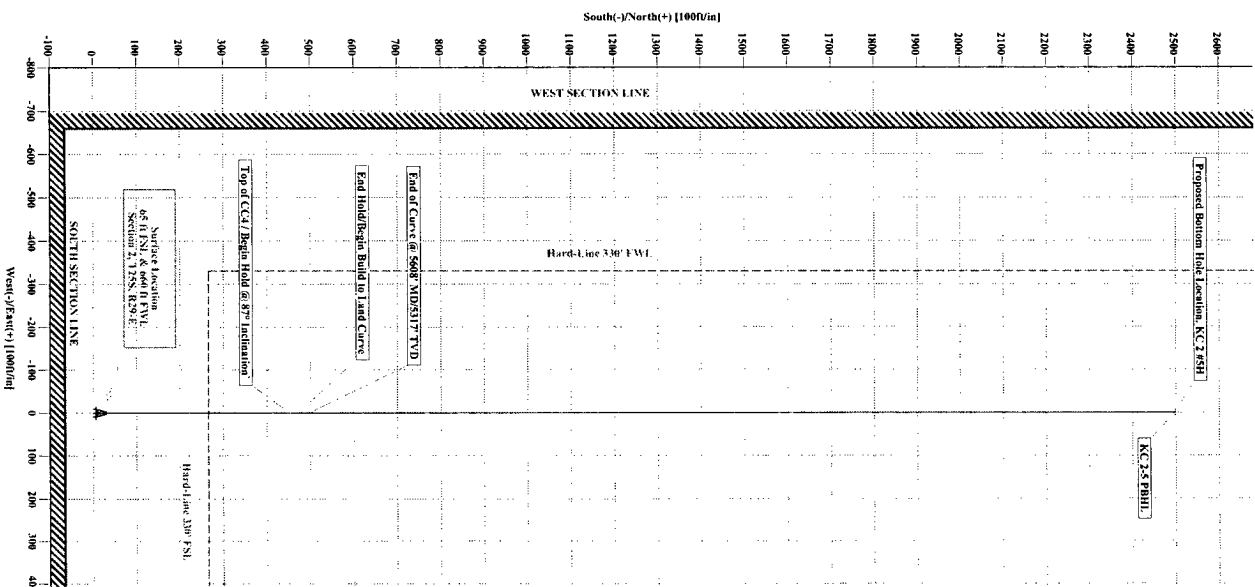
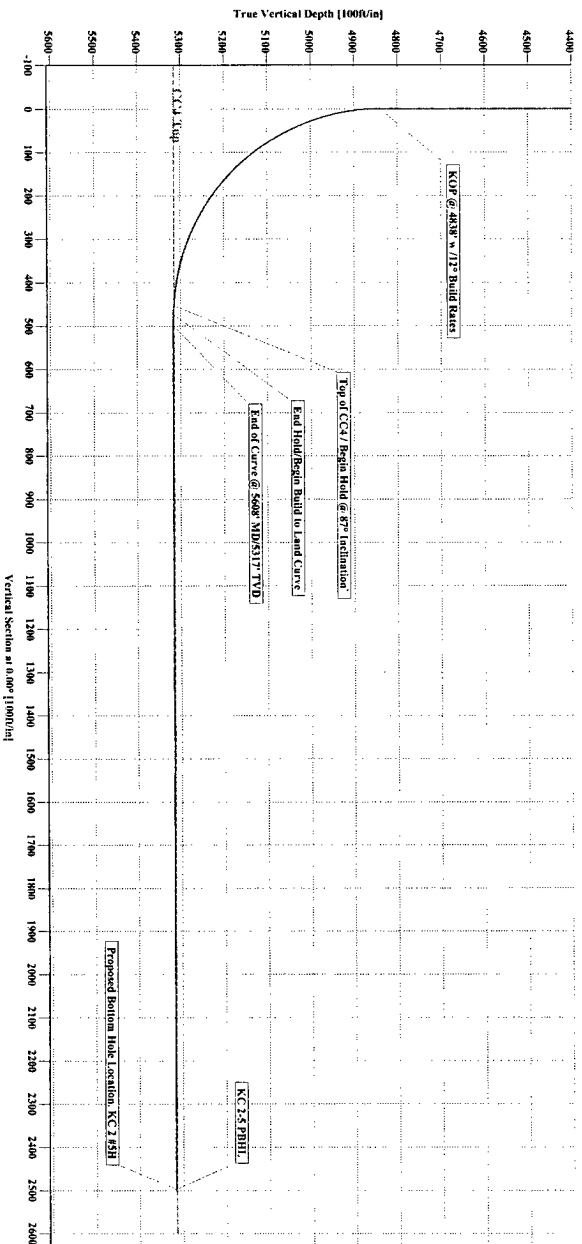
Karlsbad Corral Section 2
Eddy County, New Mexico
Geodetic System: US State Plane Coordinate System 1927
Ellipsoid: NAD27 (Clarke 1866)
Zone: New Mexico, Eastern Zone
Magnetic Model: IGR2005
System Datum: Mean Sea Level
Local North: Grid North



Ammunts 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	D-Leg	T-Face	V-Sec	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	0.00	0.00	0.00	0.00	452.66	
4	5583.29	87.00	0.00	5316.05	0.00	0.00	0.00	0.00	472.63	
5	5608.29	90.00	0.00	5316.70	0.00	0.00	12.00	0.00	497.62	
6	7608.47	90.00	0.00	5316.70	0.00	0.00	0.00	0.00	2497.80	KC 2-5 PBHL





**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

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

RECEIVED

DEC 7 2005
CCU-ARTESIA

Dear Mr. Stogner:

30 - 015 - 34930

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).

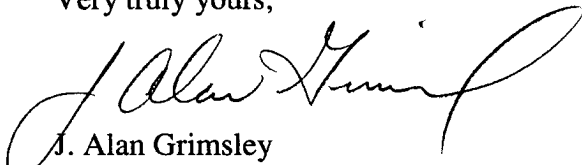
By placing the surface location at 65' FSL and 660' FWL of Section 2, the maximum amount of reservoir rock in the Cherry Canyon 4 Sand in the producing area can be penetrated and produced. The proposed surface location also allows for utilization of one (1) well pad for two wells, the Karlsbad Corral 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., HOBBS, NM 88240

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

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

DISTRICT IV
1225 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

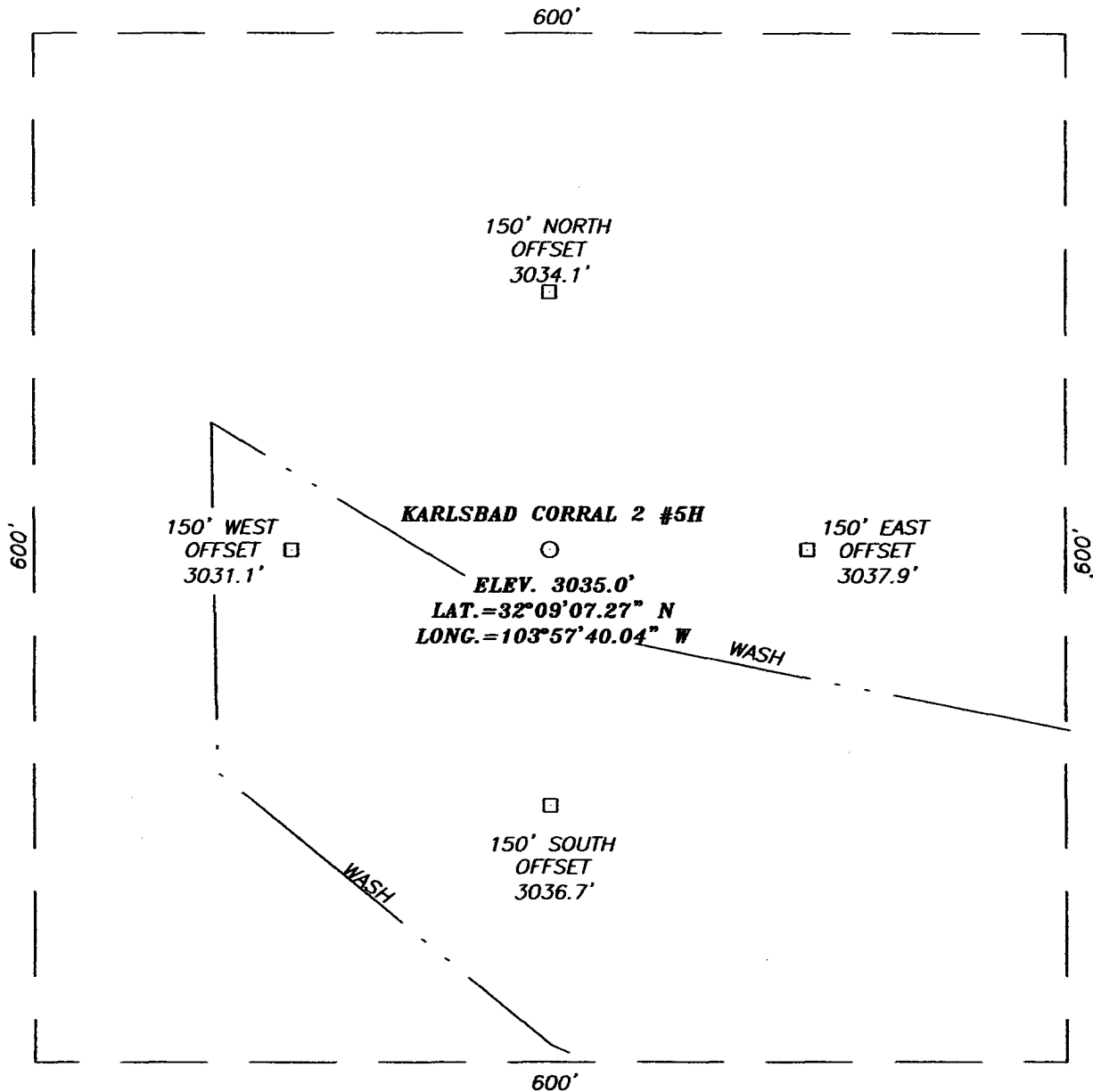
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	2	25-S	29-E		2563	SOUTH	660	WEST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.

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

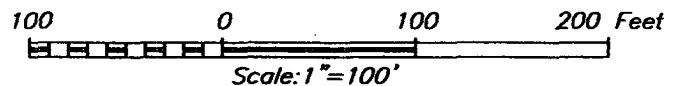
	BOTTOM HOLE LOCATION Y=421723.4 N X=615192.8 E	RECEIVED DEC - 7 2005 OCD-ARTESIA	OPERATOR CERTIFICATION I hereby certify the the information contained herein is true and complete to the best of my knowledge and belief. <i>James Alan Grimsley</i> Signature JAMES ALAN GRIMSLEY Printed Name Drilling Engineer Title 12/6/05 Date
2 660' S.L. 11 65'	GEODETIC COORDINATES NAD 27 NME SURFACE LOCATION Y=419225.6 N X=615193.1 E LAT.=32°09'07.27\" N LONG.=103°57'40.04\" W	2 11	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 & Seal of Professional Surveyor <i>Ronald J. Gibson</i> 103-111580 10/24/05 Certificate No. RONALD J. GIBSON 3239

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



DIRECTIONS TO LOCATION

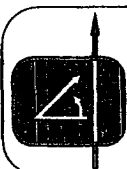
FROM THE INTERSECTION OF ST. HWY. #128 AND BUCK JACKSON RD. GO SOUTHWEST ON BUCK JACKSON RD. APPROX. 16.5 MILES TO THE INTERSECTION OF BUCK JACKSON ROAD AND TWIN WELLS RD. TURN RIGHT ON TWIN WELLS RD. AND GO APPROX. 500 FEET. TURN LEFT AND GO SOUTHWEST APPROX. 3.0 MILES. TURN RIGHT AND GO NORTHWEST APPROX. 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

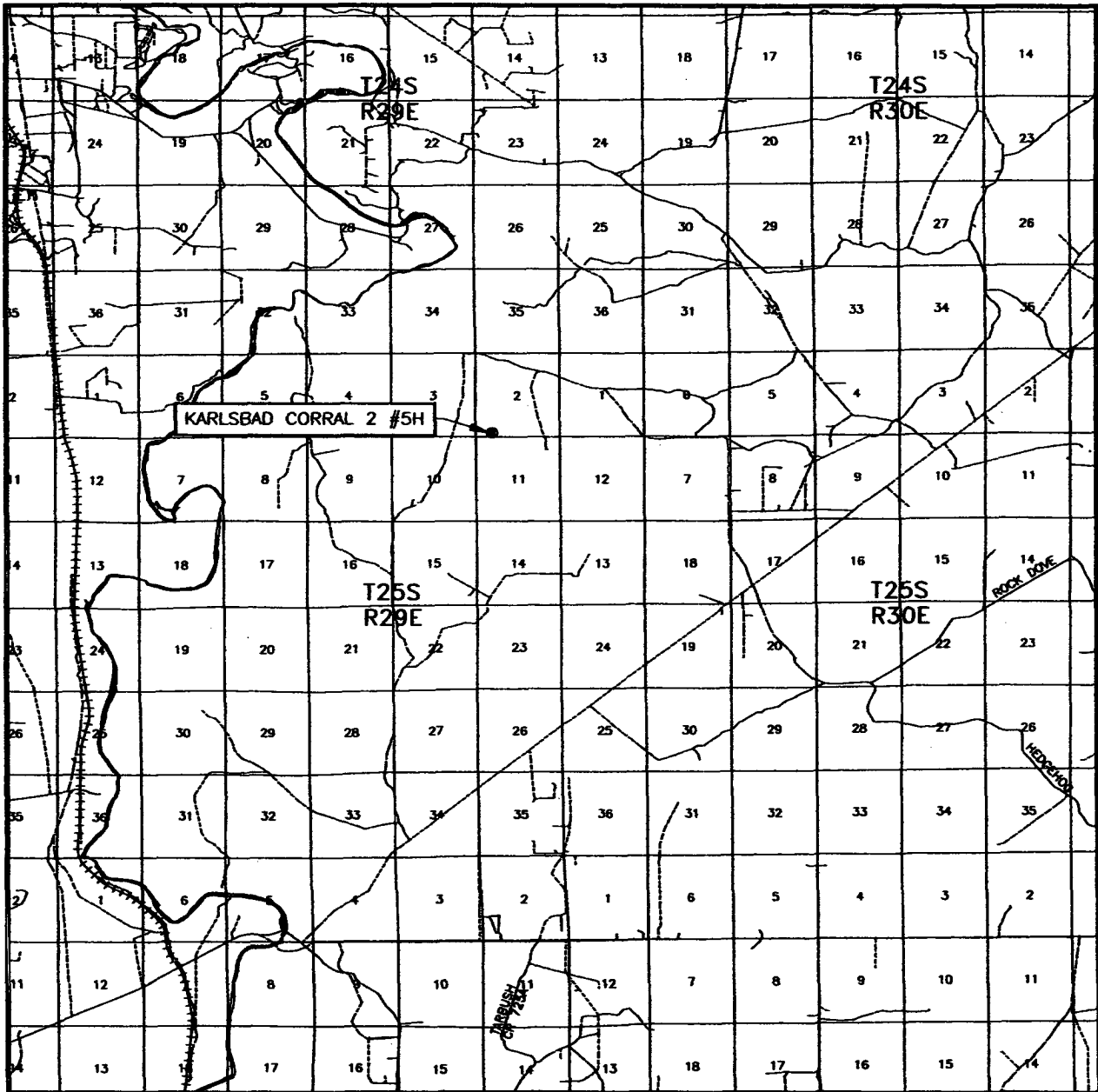
KARLSBAD CORRAL 2 #5H WELL
 LOCATED 65 FEET FROM THE SOUTH LINE
 AND 660 FEET FROM THE WEST LINE OF SECTION 2,
 TOWNSHIP 25 SOUTH, RANGE 29 EAST, N.M.P.M.,
 EDDY COUNTY, NEW MEXICO.

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



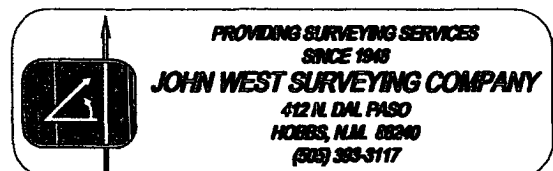
PROVIDING SURVEYING SERVICES
 SINCE 1946
JOHN WEST SURVEYING COMPANY
 412 N. DAL PASO
 HOBBS, N.M. 88240
 (505) 393-3117

VICINITY MAP

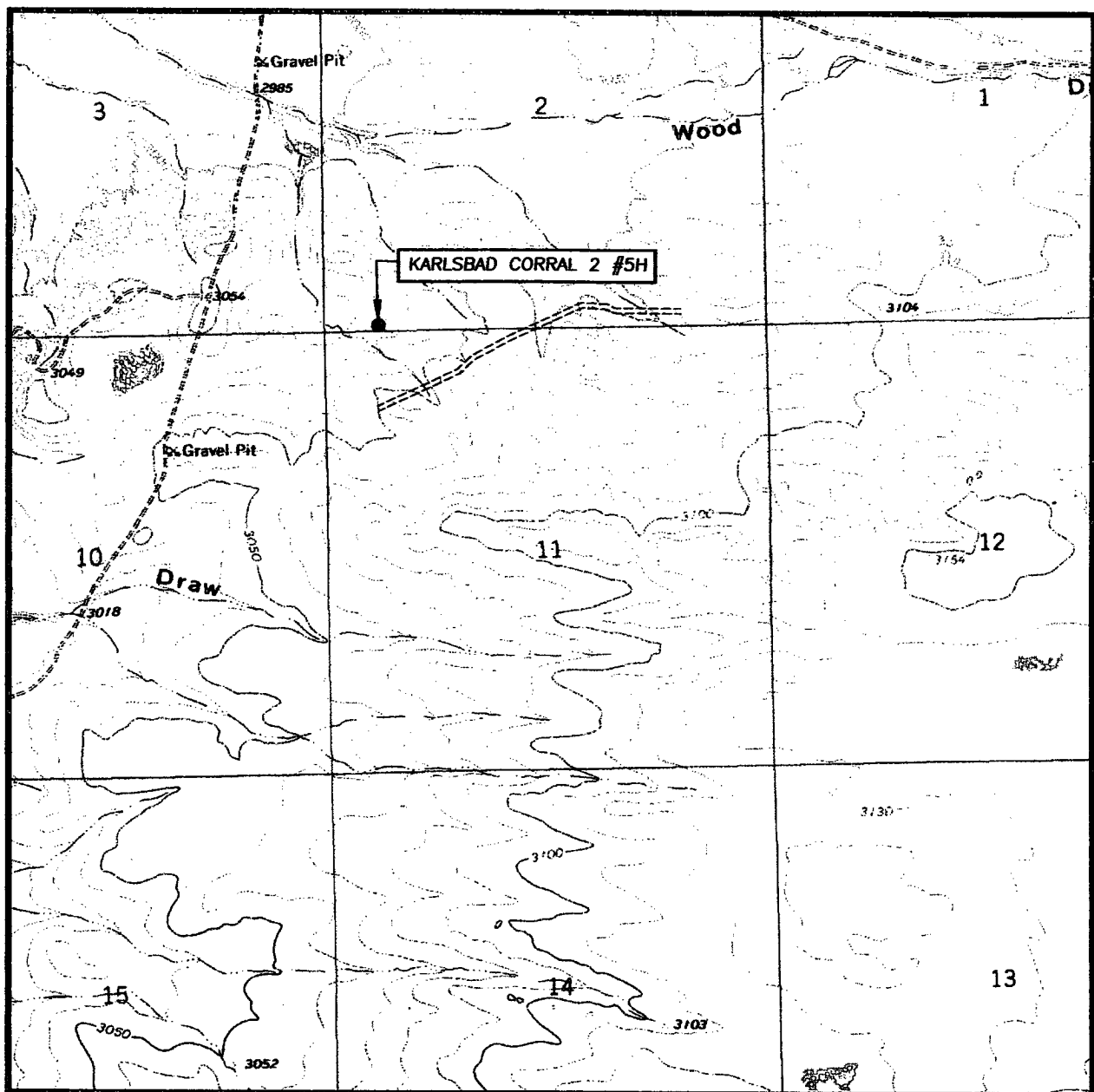


SCALE: 1" = 2 MILES

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



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

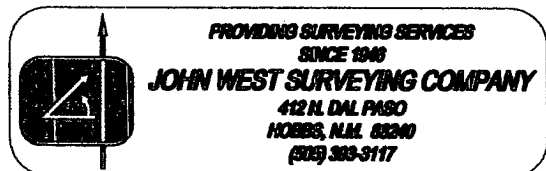
DESCRIPTION 65' FSL & 660' FWL

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

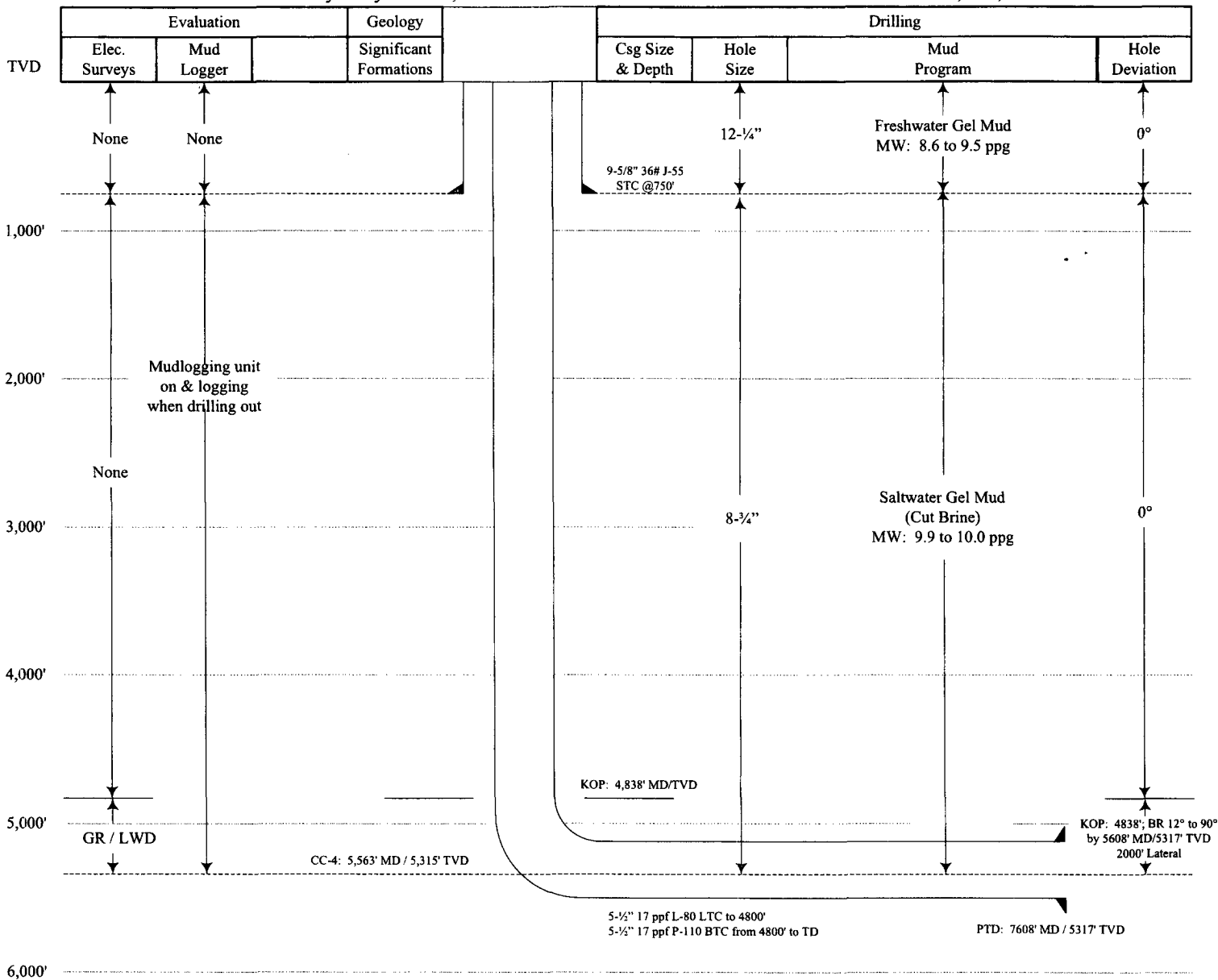
Drilling Prognosis

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	4838.00	KOP @ 4838' w/12° Build Rates
2	5315.00	5363.29	Top of CC4 / Begin Hold @ 87° Inclination
3	5316.05	5383.29	End Hold/Begin Build to Land Curve
4	5316.70	5608.29	End of Curve @ 5608' MD/5317' TVD
5	5316.70	7608.45	Proposed Bottom Hole Location: KC 2 #5H

COMPANY DETAILS

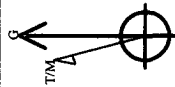
Southwestern Energy Production Co.
3250 N. Sam Houston Pkwy E.
Houston, TX 77032

Calculation Method: Minimum Curvature
Error System: Systematic Ellipsoid
Error Surface: Ellipsoid
Warning Method: Error Ratio

FIELD DETAILS

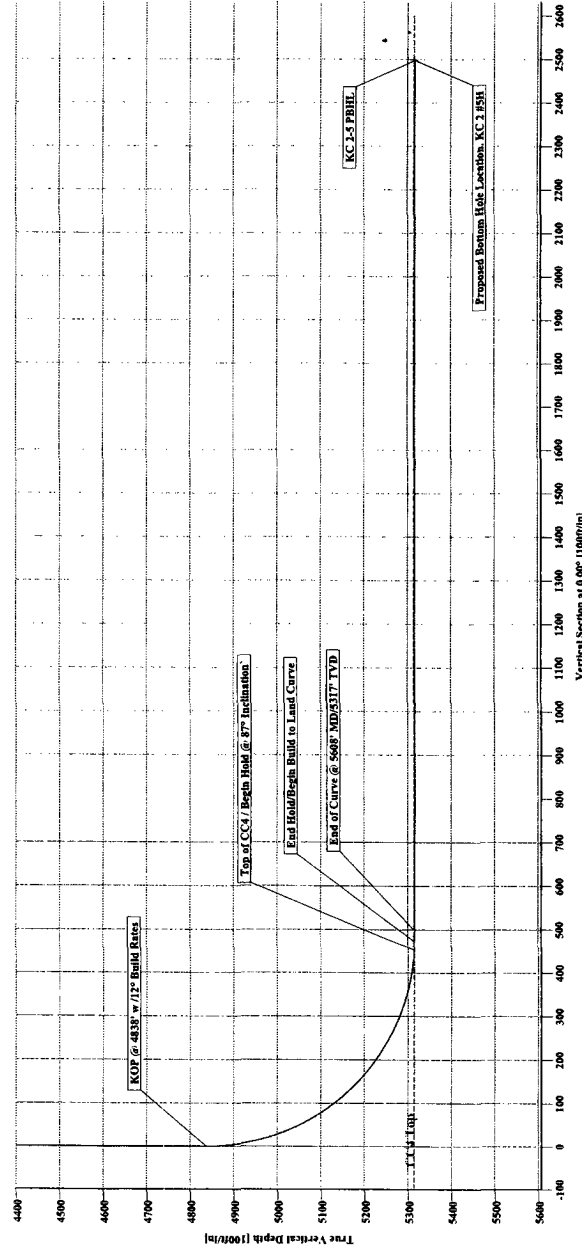
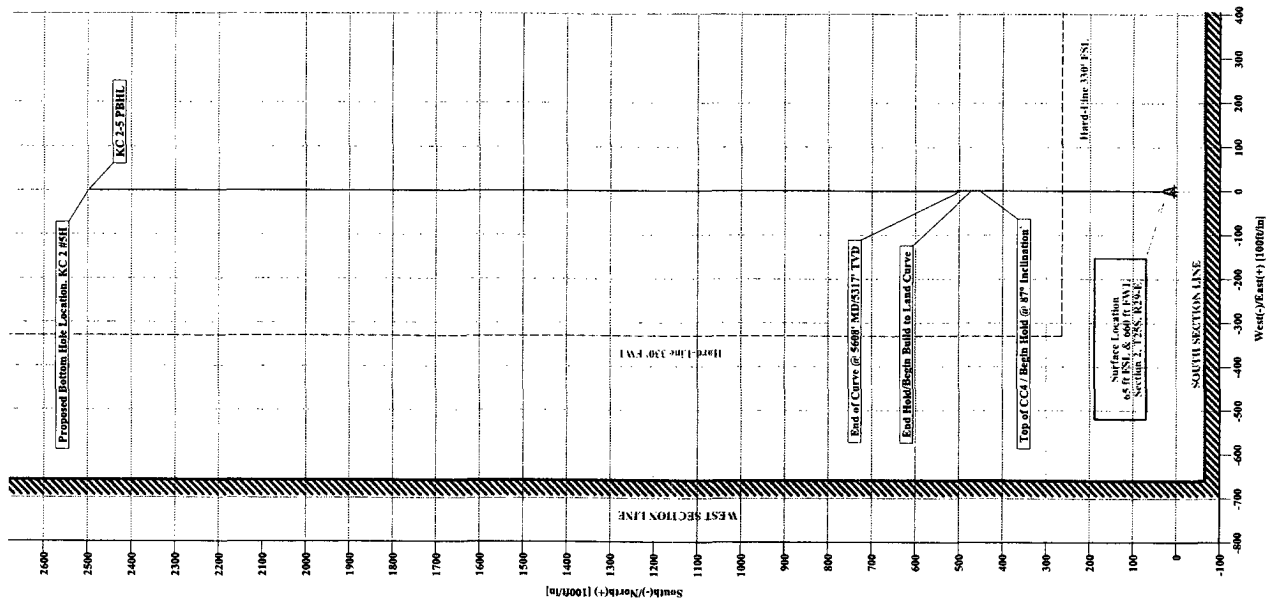
Karlsbad Corral Section 2
Eddy County, New Mexico
Geodetic System: US State Plane Coordinate System 1927
Ellipsoid: NAD27 (Clarke 1866)
Zone: New Mexico, Eastern Zone
Magnetic Model: IGR2005
System Datum: Mean Sea Level
Local North: Grid North

Azimuths to Grid North
True North: -0.20°
Magnetic North: -0.20°
Magnetic Field
Strength: 0nT
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
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:** 1
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

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

Drilled From: Surface

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

Plan: Plan #1 100605

Date Composed: 10/6/2005

Principal: No

Version: 1
Tied-to: From Surface

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(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

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 @
5583.29	87.00	0.00	5316.05	472.63	0.00	472.63	0.00	0.00	0.00	End Hold/Begin Build to L
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 Loca
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

Karlsbad Corral 2 #5-IH
Surface Location: 65' FSL & 660' FWL
Entry into CC4: 520' FSL & 660' FWL
Toe of Lateral: 2,563' FSL & 660' FWL

