

RECEIVED

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UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

OCD-ARTESIA

SECRETARY'S POTASH


FORM APPROVED  
OMB No. 1004-0137  
Expires July 31, 2010

## APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: <input checked="" type="checkbox"/> DRILL <input type="checkbox"/> REENTER		5. Lease Serial No. NMNM 024160 & 054865	
1b. Type of Well: <input checked="" type="checkbox"/> Oil Well <input type="checkbox"/> Gas Well <input type="checkbox"/> Other <input checked="" type="checkbox"/> Single Zone <input type="checkbox"/> Multiple Zone		6. If Indian, Allottee or Tribe Name	
2. Name of Operator SM Energy Company		7. If Unit or CA Agreement, Name and No.	
3a. Address 3300 N. A St. bldg. 7-200 Midland, TX 79705		8. Lease Name and Well No. Parkway 35 Federal Com 3H [39023]	
3b. Phone No. (include area code) (432)688-3125		9. API Well No. 30-015-3988	
4. Location of Well (Report location clearly and in accordance with any State requirements.)* At surface 2080 FSL & 330 FWL (SL) Unit L At proposed prod. zone 1980 FSL & 330 FEL ( BHL) Unit I		10. Field and Pool, or Exploratory Parkway Bone Spring [49622]	
14. Distance in miles and direction from nearest town or post office* 8 miles south of Loco Hills, NM		11. Sec., T. R. M. or Blk. and Survey or Area Sec 35 - T19S - 29E	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any) 330'		12. County or Parish Eddy	
16. No. of acres in lease 280		13. State NM	
17. Spacing Unit dedicated to this well 160			
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 330'		20. BLM/BIA Bond No. on file NMB000805	
19. Proposed Depth 12503' MD 8261' TVD			
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3325' GL		23. Estimated duration 40 Days	
22. Approximate date work will start* 06/01/2012			
24. Attachments			

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

- |  |   |
|--|---|
| 1. Well plat certified by a registered surveyor.   | 4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above). |
| 2. A Drilling Plan.  | 5. Operator certification   |
| 3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office). | 6. Such other site specific information and/or plans as may be required by the BLM.             |

25. Signature 	Name (Printed/Typed) Malcolm Kintzing	Date 10/06/2011
Title Engineer		
Approved by (Signature) /s/ Tony J. Herrell	Name (Printed/Typed) /s/ Tony J. Herrell	Date DEC 28 2011
Title FOR STATE DIRECTOR	Office NM STATE OFFICE	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.  
Conditions of approval, if any, are attached.

APPROVAL FOR TWO YEARS

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 2)

\*(Instructions on page 2)

CAPITAN CONTROLLED WATER BASIN

SEE ATTACHED FOR  
CONDITIONS OF APPROVALAPPROVAL SUBJECT TO  
GENERAL REQUIREMENTS  
AND SPECIAL STIPULATIONS  
ATTACHED

UNITED STATES  
DEPARTMENT OF THE INTERIOR  
BUREAU OF LAND MANAGEMENT

FORM APPROVED  
OMB No. 1004-0137  
Expires: July 31, 2010

**SUNDRY NOTICES AND REPORTS ON WELLS**  
*Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.*

**SUBMIT IN TRIPLICATE** – Other instructions on page 2.

1. Type of Well

☒ Oil Well ☐ Gas Well ☐ Other

2. Name of Operator

SM ENERGY COMPANY

3a. Address

3300 N "A" ST BLDG 7-200 MIDLAND TX 79705

3b. Phone No. (include area code)

(432)688-1709

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

AT SURFACE (L) 2080' FSL & 330' FWL (SL); AT  
PROPOSED PROD ZONE (I) 1980' FSL & 330' FEL  
(BHL); , SEC 35-T19S-R29E

5. Lease Serial No.

NMNM 024160 & 054865

6. If Indian, Allottee or Tribe Name

7. If Unit of CA/Agreement, Name and/or No.

8. Well Name and No.

PARKWAY 35 FEDERAL 3H

9. API Well No.

10. Field and Pool or Exploratory Area

PARKWAY BONE SPRING

11. Country or Parish, State

EDDY COUNTY NM

CHECK THE APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT OR OTHER DATA

TYPE OF SUBMISSION	TYPE OF ACTION			
<input checked="" type="checkbox"/> Notice of Intent	<input type="checkbox"/> Acidize	<input type="checkbox"/> Deepen	<input type="checkbox"/> Production (Start/Resume)	<input type="checkbox"/> Water Shut-Off
<input type="checkbox"/> Subsequent Report	<input type="checkbox"/> Alter Casing	<input type="checkbox"/> Fracture Treat	<input type="checkbox"/> Reclamation	<input type="checkbox"/> Well Integrity
<input type="checkbox"/> Final Abandonment Notice	<input type="checkbox"/> Casing Repair	<input type="checkbox"/> New Construction	<input type="checkbox"/> Recomplete	<input checked="" type="checkbox"/> Other <b>CHANGE WELL</b>
	<input type="checkbox"/> Change Plans	<input type="checkbox"/> Plug and Abandon	<input type="checkbox"/> Temporarily Abandon	<b>NAME TO INCLUDE</b>
	<input type="checkbox"/> Convert to Injection	<input type="checkbox"/> Plug Back	<input type="checkbox"/> Water Disposal	<b>COM</b>

13. Describe Proposed or Completed Operation: Clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleate horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports must be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleation in a new interval, a Form 3160-4 must be filed once testing has been completed. Final Abandonment Notices must be filed only after all requirements, including reclamation, have been completed and the operator has determined that the site is ready for final inspection.)

THIS IS TO CHANGE WELL NAME TO PARKWAY 35 FEDERAL COM 3H

14. I hereby certify that the foregoing is true and correct. Name (Printed/Typed)

VICKIE MARTINEZ

Title ENGINEER TECH II

Signature

*Vickie Martinez*

Date 10/07/2011

**THIS SPACE FOR FEDERAL OR STATE OFFICE USE**

Approved by

/s/ James Stovall

**FIELD MANAGER**

Date

DEC 20 2011

Conditions of approval, if any, are attached. Approval of this notice does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon

Office

**CARLSBAD FIELD OFFICE**

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Instructions on page 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

1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico  
Energy, Minerals and Natural Resources Department

Form C-102

Revised July 16, 2010

Submit one copy to appropriate  
District Office

## OIL CONSERVATION DIVISION

1220 South St. Francis Dr.  
Santa Fe, New Mexico 87505

## WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number <b>30-015-39838</b>	Pool Code <b>49622</b>	Pool Name <b>Parkway Bone Spring</b>
Property Code <b>39023</b>	Property Name <b>PARKWAY "35" Federal Com</b>	Well Number <b>3H</b>
OGRID No. <b>154903</b>	Operator Name <b>SM ENERGY</b>	Elevation <b>3325'</b>

## Surface Location

UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
L	35	19 S	29 E		2080	SOUTH	330	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
I	35	19 S	29 E		1980	SOUTH	330	EAST	EDDY

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
<b>160</b>			

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><b>SURFACE LOCATION</b> Lat - N 32°36'56.24" Long - W 104°03'11.08" NMSPC - N 587807.938 E 627627.871 (NAD-83)</p> <p><b>PROPOSED BOTTOM HOLE LOCATION</b> Lat - N 32°36'54.83" Long - W 104°02'17.07" NMSPC - N 587678.176 E 632248.078 (NAD-83)</p>	<p><b>OPERATOR CERTIFICATION</b> I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or undivided 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 a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.</p> <p><i>Malcolm Kintzing</i> 8/29/11 Signature Date</p> <p><i>Malcolm Kintzing</i> Printed Name</p> <p><i>MKintzing@SM-Energy.com</i> Email Address</p> <p><b>SURVEYOR CERTIFICATION</b> 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><i>Gary L. Jones</i> Date Surveyed</p> <p><i>Gary L. Jones</i> Signature &amp; Seal of Professional Surveyor</p> <p>Certificate No. Gary L. Jones 7977</p> <p>HASIN SURVEYS 24920</p>
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Exhibit A

# Drilling program

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SM Energy Company  
Parkway 35 Federal Com 3H  
2080 FSL & 330 FWL (SHL)  
1980 FSL & 330 FEL (BHL)  
Sec 35-T19S-R29E  
Eddy County, New Mexico

## The estimated tops of geologic markers are as follows

Rustler	221'
Top of Salt	390'
Base of Salt	1100'
*Yates	1341'
Capitan	2336'
*Cherry Canyon	3470'
*Delaware	4061'
*Bone Spring	5706'
*Wolfcamp	9470'

## Estimated depths of anticipated fresh water, oil, or gas

Fresh water is expected at 75' and will be protected by setting surface casing at 250' and cementing to surface.

Oil and gas are anticipated in the above (\*) formations. These zones will be protected by casing as required.

## Pressure and control equipment

A 2M diverter system will be installed after running 20" casing.

The BOP system used to drill the intermediate hole will consist of a 13-5/8" 3M Double Ram and Annular preventer. The BOP system will be tested by a third party as per BLM onshore oil and gas order No. 2 as a 3M system prior to drilling out the surface casing shoe. In addition to the rams and annular preventer, additional BOP accessories including a Kelly cock, floor safety valve, choke lines, and choke manifold rated at 3,000 psi work pressure will be used.

## Proposed casing and cementing program

### A. Casing program:

<u>Hole Size</u>	<u>Casing Size</u>	<u>Casing #/foot</u>	<u>Grade</u>	<u>Setting Depth</u>	<u>Collar</u>
26"	20"	94	J55	0-250'	BTC
17.5"	13 3/8" (new)	54.5	J55	0-1500'	STC
12 1/4"	9 5/8" (new)	36	J55	0-3300'	LTC
8 3/4"	7" (new)	26	P110	0-8432'	LTC
6 1/8"	4.5" (new)	11.6	P110	8,250'-12,503'	LTC

Minimum casing design factors: Collapse 1.125, Burst 1.0, Tensile strength 1.8.

\*Subject to casing availability

SM Energy Company proposes drilling an 8-3/4" vertical pilot hole to 10,000 MD and plug back to KOP. The cement plug details are included below in the Cementing program.

### B. Cementing Program:

- I. **Surface conductor pipe:** 190 sx class C light cement 35:65 with salt and LCM additives. Yield of 2.0cuft/sx. 280 sx Class C cement with 2% CaCl<sub>2</sub>. Yield of 1.34 cuft/sx. Cmt circulated to surface w/100% excess.
- II. **Surface casing:** 525 sx 35:65 Class C light cement with salt and LCM additives. Yield at 2.0 cuft/sx. 780 sx class C cement containing 2% CaCl. Yield 1.34 cuft/sx. Cmt circulated to surface w/100% excess.
- III. **Intermediate Casing:** 550 sx 35:65 Class C light cement with salt and LCM additives. Yield at 2.0 cuft/sx. 410 sx class C cement containing 2% CaCl. Yield 1.34 cuft/sx. Cmt circulated to surface w/50% excess.
- IV. **Deep intermediate Casing:** 456 sx Class H light cement 35:65 with fluid loss, LCM, & salt additives. Yield at 2.12 cuft/sx. 205 sx class H cement containing fluid loss additives. Yield at 1.18 cuft/sx. Cmt circulated to 2000' w/25% excess.
- V. **Production Casing:** plans are to use a sliding sleeve, frac port and packer system with 4 1/2" liner. No cement required.
- VI. **Pilot Hole Plugs:**
  - i. **Plug 1:** 300 sx Class H Cement, 15.6, 1.18 cuft/sx
    1. **Top of plug** 9,000 ft
    2. **Bottom of plug** 10,000 ft
  - ii. **Plug 2:** 350 sx Class H Cement, 18 ppg, 0.90 cuft/sx
    1. **Top of plug** 7,500 ft
    2. **Bottom of plug** 8,000 ft

See COA

See COA

\*SM Energy Company reserves the right to change cement designs as hole conditions may warrant.

## Mud Program

<u>Interval</u>	<u>mud type</u>	<u>weight</u>	<u>Viscosity</u>	<u>Fluid loss</u>
0-250'	Fresh water spud mud	8.6-9.4	32-34	No Control
250'-1500'	Brine	10	28-30	No Control
1500'-3300'	Fresh water	8.4	28-30	No Control
3300'-8433'	Cut bine	8.4-8.6	28-30	No Control
8433'-TD MD	Cut brine w/polymer	8.4-8.6	32-40	No Control

## Evaluation Program

- See  
COA*
- I. Mud log samples will be taken in 10' intervals after drilling out the surface casing.
  - II. Open hole logs will be run from pilot hole TD to intermediate casing. Open hole logs include a Dual laterolog, compensated neutron-density, Gamma Ray and Caliper.
  - III. Gamma Ray will be used to drill lateral hole.
  - IV. No Drill stem tests or coring is planned at this time.
  - V. Additional testing may be initiated based on log evaluation and geological sample shows.

## Downhole Conditions

Zones of abnormal pressure:	None anticipated
Zones of lost circulation:	Anticipated in surface and intermediate holes
Maximum bottom hole temperature:	130 degrees F
Maximum bottom hole pressure:	.433 psi/ft gradient

## Anticipated Starting Date

SM Energy Company intends to drill this well early 2012 with approximately 40 days involved in drilling operations and an additional 10 days involved in completion operations on the project.



## **SM Energy**

**Eddy County (NAD83)**

**Parkway "35" #3H**

**Parkway "35" #3H**

**Lateral #1**

**Plan: Plan #1**

## **Standard Planning Report**

**22 August, 2011**



# Planning Report

**Database:** EDM 5000 1 Black Viper  
**Company:** SM Energy  
**Project:** Eddy County (NAD83)  
**Site:** Parkway "35" #3H  
**Well:** Parkway "35" #3H  
**Wellbore:** Lateral #1  
**Design:** Plan #1

**Local Co-ordinate Reference:** Site Parkway "35" #3H  
**TVD Reference:** KB @ 3343.00usft (Nabors 474)  
**MD Reference:** KB @ 3343 00usft (Nabors 474)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature

<b>Project</b>	Eddy County (NAD83)		
<b>Map System:</b>	US State Plane 1983	<b>System Datum:</b>	Mean Sea Level
<b>Geo Datum:</b>	North American Datum 1983		
<b>Map Zone:</b>	New Mexico Eastern Zone		

**Site** Parkway "35" #3H

<b>Site Position:</b>		<b>Northing:</b>	587,807.94 usft	<b>Latitude:</b>	32° 36' 56 240 N
<b>From:</b>	Map	<b>Easting:</b>	627,627.88 usft	<b>Longitude:</b>	104° 3' 11.082 W
<b>Position Uncertainty:</b>	0 00 usft	<b>Slot Radius:</b>	13-3/16 "	<b>Grid Convergence:</b>	0.15 °

**Well** Parkway "35" #3H

<b>Well Position</b>	<b>+N/-S</b>	0.00 usft	<b>Northing:</b>	587,807.94 usft	<b>Latitude:</b>	32° 36' 56 240 N
	<b>+E/-W</b>	0 00 usft	<b>Easting:</b>	627,627.88 usft	<b>Longitude:</b>	104° 3' 11.082 W
<b>Position Uncertainty</b>		0.00 usft	<b>Wellhead Elevation:</b>	3,343 00 usft	<b>Ground Level:</b>	3,325 00 usft

**Wellbore** Lateral #1

<b>Magnetics</b>	<b>Model Name</b>	<b>Sample Date</b>	<b>Declination (°)</b>	<b>Dip Angle (°)</b>	<b>Field Strength (nT)</b>
	IGRF2010	8/22/2011	7.81	60.46	48,781

**Design** Plan #1

**Audit Notes:**

<b>Version:</b>	<b>Phase:</b>	PROTOTYPE	<b>Tie On Depth:</b>	7,500.00
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<b>Vertical Section:</b>	<b>Depth From (TVD) (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Direction (°)</b>
	0 00	0 00	0.00	91.61

**Plan Sections**

<b>Measured Depth (usft)</b>	<b>Inclination (°)</b>	<b>Azimuth (°)</b>	<b>Vertical Depth (usft)</b>	<b>+N/-S (usft)</b>	<b>+E/-W (usft)</b>	<b>Dogleg Rate (°/100usft)</b>	<b>Build Rate (°/100usft)</b>	<b>Turn Rate (°/100usft)</b>	<b>TFO (°)</b>	<b>Target</b>
7,500.00	0 00	0.00	7,500.00	0.00	0.00	0 00	0 00	0 00	0 00	
7,551 93	0.00	0.00	7,551 93	0.00	0 00	0 00	0 00	0 00	0 00	
8,432 73	88 08	91.61	8,124 57	-15.55	553 54	10.00	10 00	0.00	91 61	
12,503 29	88.08	91.61	8,261 00	-129.76	4,620 21	0.00	0 00	0 00	0 00	PBHL#1[P"35"#3H]





# Planning Report

Database: EDM 5000 1 Black Viper  
 Company: SM Energy  
 Project: Eddy County (NAD83)  
 Site: Parkway "35" #3H  
 Well: Parkway "35" #3H  
 Wellbore: Lateral #1  
 Design: Plan #1

Local Co-ordinate Reference: Site Parkway "35" #3H  
 TVD Reference: KB @ 3343.00usft (Nabors 474)  
 MD Reference: KB @ 3343.00usft (Nabors 474)  
 North Reference: Grid  
 Survey Calculation Method: Minimum Curvature

## Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
7,500.00	0.00	0.00	7,500.00	0.00	0.00	0.00	0.00	0.00	0.00
7,529.99	0.00	0.00	7,529.99	0.00	0.00	0.00	0.00	0.00	0.00
7,551.93	0.00	0.00	7,551.93	0.00	0.00	0.00	0.00	0.00	0.00
<b>KOP Build 10.00°/100' :: TFO 91.61</b>									
7,559.99	0.81	91.61	7,559.98	0.00	0.06	0.06	9.99	9.99	0.00
7,589.98	3.81	91.61	7,589.96	-0.04	1.26	1.26	10.00	10.00	0.00
7,619.98	6.81	91.61	7,619.83	-0.11	4.03	4.04	10.00	10.00	0.00
7,649.98	9.81	91.61	7,649.51	-0.23	8.37	8.37	10.00	10.00	0.00
7,679.98	12.81	91.61	7,678.92	-0.40	14.24	14.25	10.00	10.00	0.00
7,709.98	15.81	91.61	7,707.99	-0.61	21.65	21.66	10.00	10.00	0.00
7,739.98	18.81	91.61	7,736.63	-0.86	30.57	30.58	10.00	10.00	0.00
7,769.98	21.81	91.61	7,764.76	-1.15	40.98	40.99	10.00	10.00	0.00
7,799.98	24.81	91.61	7,792.31	-1.48	52.84	52.86	10.00	10.00	0.00
7,829.98	27.81	91.61	7,819.20	-1.86	66.13	66.15	10.00	10.00	0.00
7,859.98	30.81	91.61	7,845.36	-2.27	80.80	80.84	10.00	10.00	0.00
7,889.98	33.81	91.61	7,870.71	-2.72	96.83	96.87	10.00	10.00	0.00
7,919.98	36.81	91.61	7,895.19	-3.21	114.16	114.20	10.00	10.00	0.00
7,938.99	38.71	91.61	7,910.22	-3.53	125.79	125.84	10.00	10.00	0.00
<b>2nd Bone Spring</b>									
7,949.98	39.80	91.61	7,918.73	-3.73	132.74	132.80	10.00	10.00	0.00
7,979.98	42.80	91.61	7,941.26	-4.28	152.54	152.60	10.00	10.00	0.00
8,009.98	45.80	91.61	7,962.73	-4.87	173.48	173.55	10.00	10.00	0.00
8,039.98	48.80	91.61	7,983.07	-5.49	195.52	195.59	10.00	10.00	0.00
8,069.98	51.80	91.61	8,002.23	-6.14	218.59	218.67	10.00	10.00	0.00
8,099.98	54.80	91.61	8,020.15	-6.81	242.63	242.73	10.00	10.00	0.00
8,129.98	57.80	91.61	8,036.79	-7.52	267.58	267.68	10.00	10.00	0.00
8,159.98	60.80	91.61	8,052.11	-8.24	293.36	293.48	10.00	10.00	0.00
8,189.98	63.80	91.61	8,066.05	-8.98	319.91	320.04	10.00	10.00	0.00
8,219.98	66.80	91.61	8,078.58	-9.75	347.15	347.29	10.00	10.00	0.00
8,249.98	69.80	91.61	8,089.67	-10.53	375.01	375.16	10.00	10.00	0.00
8,279.98	72.80	91.61	8,099.28	-11.33	403.42	403.58	10.00	10.00	0.00
8,309.98	75.80	91.61	8,107.40	-12.14	432.28	432.45	10.00	10.00	0.00
8,339.98	78.80	91.61	8,113.99	-12.96	461.54	461.72	10.00	10.00	0.00
8,369.98	81.80	91.61	8,119.04	-13.79	491.09	491.29	10.00	10.00	0.00
8,399.98	84.80	91.61	8,122.54	-14.63	520.87	521.08	10.00	10.00	0.00
8,429.98	87.80	91.61	8,124.47	-15.47	550.80	551.01	10.00	10.00	0.00
8,432.73	88.08	91.61	8,124.57	-15.55	553.54	553.76	9.99	9.99	0.00
<b>EOC Hold 88.08° INC :: 91.61° AZI</b>									
8,459.98	88.08	91.61	8,125.48	-16.31	580.77	581.00	0.00	0.00	0.00
8,489.98	88.08	91.61	8,126.49	-17.15	610.74	610.98	0.00	0.00	0.00
8,519.98	88.08	91.61	8,127.49	-17.99	640.71	640.96	0.00	0.00	0.00
8,549.98	88.08	91.61	8,128.50	-18.84	670.68	670.94	0.00	0.00	0.00
8,579.98	88.08	91.61	8,129.51	-19.68	700.65	700.93	0.00	0.00	0.00
8,609.98	88.08	91.61	8,130.51	-20.52	730.62	730.91	0.00	0.00	0.00
8,639.98	88.08	91.61	8,131.52	-21.36	760.59	760.89	0.00	0.00	0.00
8,669.98	88.08	91.61	8,132.52	-22.20	790.56	790.88	0.00	0.00	0.00
8,699.98	88.08	91.61	8,133.53	-23.05	820.54	820.86	0.00	0.00	0.00
8,729.98	88.08	91.61	8,134.53	-23.89	850.51	850.84	0.00	0.00	0.00
8,759.98	88.08	91.61	8,135.54	-24.73	880.48	880.83	0.00	0.00	0.00
8,789.98	88.08	91.61	8,136.54	-25.57	910.45	910.81	0.00	0.00	0.00
8,819.98	88.08	91.61	8,137.55	-26.41	940.42	940.79	0.00	0.00	0.00
8,849.98	88.08	91.61	8,138.56	-27.25	970.39	970.78	0.00	0.00	0.00
8,879.98	88.08	91.61	8,139.56	-28.10	1,000.36	1,000.76	0.00	0.00	0.00



## Planning Report

**Database:** EDM 5000 1 Black Viper  
**Company:** SM Energy  
**Project:** Eddy County (NAD83)  
**Site:** Parkway "35" #3H  
**Well:** Parkway "35" #3H  
**Wellbore:** Lateral #1  
**Design:** Plan #1

**Local Co-ordinate Reference:** Site Parkway "35" #3H  
**TVD Reference:** KB @ 3343.00usft (Nabors 474)  
**MD Reference:** KB @ 3343.00usft (Nabors 474)  
**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature

### Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
8,909.98	88.08	91.61	8,140.57	-28.94	1,030.34	1,030.74	0.00	0.00	0.00
8,939.98	88.08	91.61	8,141.57	-29.78	1,060.31	1,060.72	0.00	0.00	0.00
8,969.98	88.08	91.61	8,142.58	-30.62	1,090.28	1,090.71	0.00	0.00	0.00
8,999.98	88.08	91.61	8,143.58	-31.46	1,120.25	1,120.69	0.00	0.00	0.00
9,029.98	88.08	91.61	8,144.59	-32.30	1,150.22	1,150.67	0.00	0.00	0.00
9,059.98	88.08	91.61	8,145.59	-33.15	1,180.19	1,180.66	0.00	0.00	0.00
9,089.98	88.08	91.61	8,146.60	-33.99	1,210.16	1,210.64	0.00	0.00	0.00
9,119.98	88.08	91.61	8,147.60	-34.83	1,240.13	1,240.62	0.00	0.00	0.00
9,149.98	88.08	91.61	8,148.61	-35.67	1,270.11	1,270.61	0.00	0.00	0.00
9,179.98	88.08	91.61	8,149.62	-36.51	1,300.08	1,300.59	0.00	0.00	0.00
9,209.98	88.08	91.61	8,150.62	-37.36	1,330.05	1,330.57	0.00	0.00	0.00
9,239.98	88.08	91.61	8,151.63	-38.20	1,360.02	1,360.56	0.00	0.00	0.00
9,269.98	88.08	91.61	8,152.63	-39.04	1,389.99	1,390.54	0.00	0.00	0.00
9,299.98	88.08	91.61	8,153.64	-39.88	1,419.96	1,420.52	0.00	0.00	0.00
9,329.98	88.08	91.61	8,154.64	-40.72	1,449.93	1,450.50	0.00	0.00	0.00
9,359.98	88.08	91.61	8,155.65	-41.56	1,479.90	1,480.49	0.00	0.00	0.00
9,389.98	88.08	91.61	8,156.65	-42.41	1,509.88	1,510.47	0.00	0.00	0.00
9,419.98	88.08	91.61	8,157.66	-43.25	1,539.85	1,540.45	0.00	0.00	0.00
9,449.98	88.08	91.61	8,158.66	-44.09	1,569.82	1,570.44	0.00	0.00	0.00
9,479.98	88.08	91.61	8,159.67	-44.93	1,599.79	1,600.42	0.00	0.00	0.00
9,509.98	88.08	91.61	8,160.68	-45.77	1,629.76	1,630.40	0.00	0.00	0.00
9,539.98	88.08	91.61	8,161.68	-46.61	1,659.73	1,660.39	0.00	0.00	0.00
9,569.98	88.08	91.61	8,162.69	-47.46	1,689.70	1,690.37	0.00	0.00	0.00
9,599.98	88.08	91.61	8,163.69	-48.30	1,719.67	1,720.35	0.00	0.00	0.00
9,629.98	88.08	91.61	8,164.70	-49.14	1,749.65	1,750.34	0.00	0.00	0.00
9,659.98	88.08	91.61	8,165.70	-49.98	1,779.62	1,780.32	0.00	0.00	0.00
9,689.98	88.08	91.61	8,166.71	-50.82	1,809.59	1,810.30	0.00	0.00	0.00
9,719.98	88.08	91.61	8,167.71	-51.67	1,839.56	1,840.28	0.00	0.00	0.00
9,749.98	88.08	91.61	8,168.72	-52.51	1,869.53	1,870.27	0.00	0.00	0.00
9,779.98	88.08	91.61	8,169.73	-53.35	1,899.50	1,900.25	0.00	0.00	0.00
9,809.98	88.08	91.61	8,170.73	-54.19	1,929.47	1,930.23	0.00	0.00	0.00
9,839.98	88.08	91.61	8,171.74	-55.03	1,959.44	1,960.22	0.00	0.00	0.00
9,869.98	88.08	91.61	8,172.74	-55.87	1,989.42	1,990.20	0.00	0.00	0.00
9,899.98	88.08	91.61	8,173.75	-56.72	2,019.39	2,020.18	0.00	0.00	0.00
9,929.98	88.08	91.61	8,174.75	-57.56	2,049.36	2,050.17	0.00	0.00	0.00
9,959.98	88.08	91.61	8,175.76	-58.40	2,079.33	2,080.15	0.00	0.00	0.00
9,989.98	88.08	91.61	8,176.76	-59.24	2,109.30	2,110.13	0.00	0.00	0.00
10,019.98	88.08	91.61	8,177.77	-60.08	2,139.27	2,140.12	0.00	0.00	0.00
10,049.98	88.08	91.61	8,178.77	-60.92	2,169.24	2,170.10	0.00	0.00	0.00
10,079.98	88.08	91.61	8,179.78	-61.77	2,199.21	2,200.08	0.00	0.00	0.00
10,109.98	88.08	91.61	8,180.79	-62.61	2,229.19	2,230.06	0.00	0.00	0.00
10,139.98	88.08	91.61	8,181.79	-63.45	2,259.16	2,260.05	0.00	0.00	0.00
10,169.98	88.08	91.61	8,182.80	-64.29	2,289.13	2,290.03	0.00	0.00	0.00
10,199.98	88.08	91.61	8,183.80	-65.13	2,319.10	2,320.01	0.00	0.00	0.00
10,229.98	88.08	91.61	8,184.81	-65.98	2,349.07	2,350.00	0.00	0.00	0.00
10,259.98	88.08	91.61	8,185.81	-66.82	2,379.04	2,379.98	0.00	0.00	0.00
10,289.98	88.08	91.61	8,186.82	-67.66	2,409.01	2,409.96	0.00	0.00	0.00
10,319.98	88.08	91.61	8,187.82	-68.50	2,438.98	2,439.95	0.00	0.00	0.00
10,349.98	88.08	91.61	8,188.83	-69.34	2,468.96	2,469.93	0.00	0.00	0.00
10,379.98	88.08	91.61	8,189.83	-70.18	2,498.93	2,499.91	0.00	0.00	0.00
10,409.98	88.08	91.61	8,190.84	-71.03	2,528.90	2,529.90	0.00	0.00	0.00
10,439.98	88.08	91.61	8,191.85	-71.87	2,558.87	2,559.88	0.00	0.00	0.00
10,469.98	88.08	91.61	8,192.85	-72.71	2,588.84	2,589.86	0.00	0.00	0.00
10,499.98	88.08	91.61	8,193.86	-73.55	2,618.81	2,619.84	0.00	0.00	0.00



## Planning Report

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**Site:** Parkway "35" #3H  
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**Local Co-ordinate Reference:** Site Parkway "35" #3H  
**TVD Reference:** KB @ 3343 00usft (Nabors 474)  
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**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature

### Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
10,529.98	88.08	91.61	8,194.86	-74.39	2,648.78	2,649.83	0.00	0.00	0.00
10,559.98	88.08	91.61	8,195.87	-75.23	2,678.75	2,679.81	0.00	0.00	0.00
10,589.98	88.08	91.61	8,196.87	-76.08	2,708.73	2,709.79	0.00	0.00	0.00
10,619.98	88.08	91.61	8,197.88	-76.92	2,738.70	2,739.78	0.00	0.00	0.00
10,649.98	88.08	91.61	8,198.88	-77.76	2,768.67	2,769.76	0.00	0.00	0.00
10,679.98	88.08	91.61	8,199.89	-78.60	2,798.64	2,799.74	0.00	0.00	0.00
10,709.98	88.08	91.61	8,200.90	-79.44	2,828.61	2,829.73	0.00	0.00	0.00
10,739.98	88.08	91.61	8,201.90	-80.29	2,858.58	2,859.71	0.00	0.00	0.00
10,769.98	88.08	91.61	8,202.91	-81.13	2,888.55	2,889.69	0.00	0.00	0.00
10,799.98	88.08	91.61	8,203.91	-81.97	2,918.52	2,919.68	0.00	0.00	0.00
10,829.98	88.08	91.61	8,204.92	-82.81	2,948.50	2,949.66	0.00	0.00	0.00
10,859.98	88.08	91.61	8,205.92	-83.65	2,978.47	2,979.64	0.00	0.00	0.00
10,889.98	88.08	91.61	8,206.93	-84.49	3,008.44	3,009.63	0.00	0.00	0.00
10,919.98	88.08	91.61	8,207.93	-85.34	3,038.41	3,039.61	0.00	0.00	0.00
10,949.98	88.08	91.61	8,208.94	-86.18	3,068.38	3,069.59	0.00	0.00	0.00
10,979.98	88.08	91.61	8,209.94	-87.02	3,098.35	3,099.57	0.00	0.00	0.00
11,009.98	88.08	91.61	8,210.95	-87.86	3,128.32	3,129.56	0.00	0.00	0.00
11,039.98	88.08	91.61	8,211.96	-88.70	3,158.30	3,159.54	0.00	0.00	0.00
11,069.98	88.08	91.61	8,212.96	-89.54	3,188.27	3,189.52	0.00	0.00	0.00
11,099.98	88.08	91.61	8,213.97	-90.39	3,218.24	3,219.51	0.00	0.00	0.00
11,129.98	88.08	91.61	8,214.97	-91.23	3,248.21	3,249.49	0.00	0.00	0.00
11,159.98	88.08	91.61	8,215.98	-92.07	3,278.18	3,279.47	0.00	0.00	0.00
11,189.98	88.08	91.61	8,216.98	-92.91	3,308.15	3,309.46	0.00	0.00	0.00
11,219.98	88.08	91.61	8,217.99	-93.75	3,338.12	3,339.44	0.00	0.00	0.00
11,249.98	88.08	91.61	8,218.99	-94.60	3,368.09	3,369.42	0.00	0.00	0.00
11,279.98	88.08	91.61	8,220.00	-95.44	3,398.07	3,399.41	0.00	0.00	0.00
11,309.98	88.08	91.61	8,221.00	-96.28	3,428.04	3,429.39	0.00	0.00	0.00
11,339.98	88.08	91.61	8,222.01	-97.12	3,458.01	3,459.37	0.00	0.00	0.00
11,369.98	88.08	91.61	8,223.02	-97.96	3,487.98	3,489.35	0.00	0.00	0.00
11,399.98	88.08	91.61	8,224.02	-98.80	3,517.95	3,519.34	0.00	0.00	0.00
11,429.98	88.08	91.61	8,225.03	-99.65	3,547.92	3,549.32	0.00	0.00	0.00
11,459.98	88.08	91.61	8,226.03	-100.49	3,577.89	3,579.30	0.00	0.00	0.00
11,489.98	88.08	91.61	8,227.04	-101.33	3,607.86	3,609.29	0.00	0.00	0.00
11,519.98	88.08	91.61	8,228.04	-102.17	3,637.84	3,639.27	0.00	0.00	0.00
11,549.98	88.08	91.61	8,229.05	-103.01	3,667.81	3,669.25	0.00	0.00	0.00
11,579.98	88.08	91.61	8,230.05	-103.85	3,697.78	3,699.24	0.00	0.00	0.00
11,609.98	88.08	91.61	8,231.06	-104.70	3,727.75	3,729.22	0.00	0.00	0.00
11,639.98	88.08	91.61	8,232.07	-105.54	3,757.72	3,759.20	0.00	0.00	0.00
11,669.98	88.08	91.61	8,233.07	-106.38	3,787.69	3,789.19	0.00	0.00	0.00
11,699.98	88.08	91.61	8,234.08	-107.22	3,817.66	3,819.17	0.00	0.00	0.00
11,729.98	88.08	91.61	8,235.08	-108.06	3,847.63	3,849.15	0.00	0.00	0.00
11,759.98	88.08	91.61	8,236.09	-108.91	3,877.61	3,879.13	0.00	0.00	0.00
11,789.98	88.08	91.61	8,237.09	-109.75	3,907.58	3,909.12	0.00	0.00	0.00
11,819.98	88.08	91.61	8,238.10	-110.59	3,937.55	3,939.10	0.00	0.00	0.00
11,849.98	88.08	91.61	8,239.10	-111.43	3,967.52	3,969.08	0.00	0.00	0.00
11,879.98	88.08	91.61	8,240.11	-112.27	3,997.49	3,999.07	0.00	0.00	0.00
11,909.98	88.08	91.61	8,241.11	-113.11	4,027.46	4,029.05	0.00	0.00	0.00
11,939.98	88.08	91.61	8,242.12	-113.96	4,057.43	4,059.03	0.00	0.00	0.00
11,969.98	88.08	91.61	8,243.13	-114.80	4,087.40	4,089.02	0.00	0.00	0.00
11,999.98	88.08	91.61	8,244.13	-115.64	4,117.38	4,119.00	0.00	0.00	0.00
12,029.98	88.08	91.61	8,245.14	-116.48	4,147.35	4,148.98	0.00	0.00	0.00
12,059.98	88.08	91.61	8,246.14	-117.32	4,177.32	4,178.97	0.00	0.00	0.00
12,089.98	88.08	91.61	8,247.15	-118.16	4,207.29	4,208.95	0.00	0.00	0.00
12,119.98	88.08	91.61	8,248.15	-119.01	4,237.26	4,238.93	0.00	0.00	0.00



## Planning Report

**Database:** EDM 5000 1 Black Viper  
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**Project:** Eddy County (NAD83)  
**Site:** Parkway "35" #3H  
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**Wellbore:** Lateral #1  
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**Local Co-ordinate Reference:** Site Parkway "35" #3H  
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**North Reference:** Grid  
**Survey Calculation Method:** Minimum Curvature

### Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,149.98	88.08	91.61	8,249.16	-119.85	4,267.23	4,268.91	0.00	0.00	0.00
12,179.98	88.08	91.61	8,250.16	-120.69	4,297.20	4,298.90	0.00	0.00	0.00
12,209.98	88.08	91.61	8,251.17	-121.53	4,327.17	4,328.88	0.00	0.00	0.00
12,239.98	88.08	91.61	8,252.17	-122.37	4,357.15	4,358.86	0.00	0.00	0.00
12,269.98	88.08	91.61	8,253.18	-123.22	4,387.12	4,388.85	0.00	0.00	0.00
12,299.98	88.08	91.61	8,254.19	-124.06	4,417.09	4,418.83	0.00	0.00	0.00
12,329.98	88.08	91.61	8,255.19	-124.90	4,447.06	4,448.81	0.00	0.00	0.00
12,359.98	88.08	91.61	8,256.20	-125.74	4,477.03	4,478.80	0.00	0.00	0.00
12,389.98	88.08	91.61	8,257.20	-126.58	4,507.00	4,508.78	0.00	0.00	0.00
12,419.98	88.08	91.61	8,258.21	-127.42	4,536.97	4,538.76	0.00	0.00	0.00
12,449.98	88.08	91.61	8,259.21	-128.27	4,566.94	4,568.75	0.00	0.00	0.00
12,479.98	88.08	91.61	8,260.22	-129.11	4,596.92	4,598.73	0.00	0.00	0.00
12,503.29	88.08	91.61	8,261.00	-129.76	4,620.21	4,622.03	0.00	0.00	0.00

PBHL#1[P"35"#3H]

### Wellbore Targets

Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
- hit/miss target									
- Shape									
PBHL#1[P"35"#3H]	0.00	0.00	8,261.00	-129.76	4,620.21	587,678.18	632,248.08	32° 36' 54.833 N	104° 2' 17.067 W
- plan hits target center									
- Point									

### Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
221.00	221.00	Rustler		-1.92	271.61
1,341.00	1,341.00	Yates		-1.92	271.61
2,336.00	2,336.00	Capitan		-1.92	271.61
2,488.00	2,488.00	Queen		-1.92	271.61
4,061.00	4,061.00	Brushy Canyon		-1.92	271.61
5,706.00	5,706.00	Bone Spring		-1.92	271.61
7,351.00	7,351.00	1st Bone Spring		-1.92	271.61
7,938.99	7,910.22	2nd Bone Spring		-1.92	271.61

### Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Comment
7,551.93	7,551.93	0.00	0.00	KOP Build 10.00°/100' :: TFO 91.61
8,432.73	8,124.57	0.00	0.00	EOC Hold 88.08° INC :: 91.61° AZI
12,503.29	8,261.00	-15.55	553.54	587678.18 N :: 632248.08 E



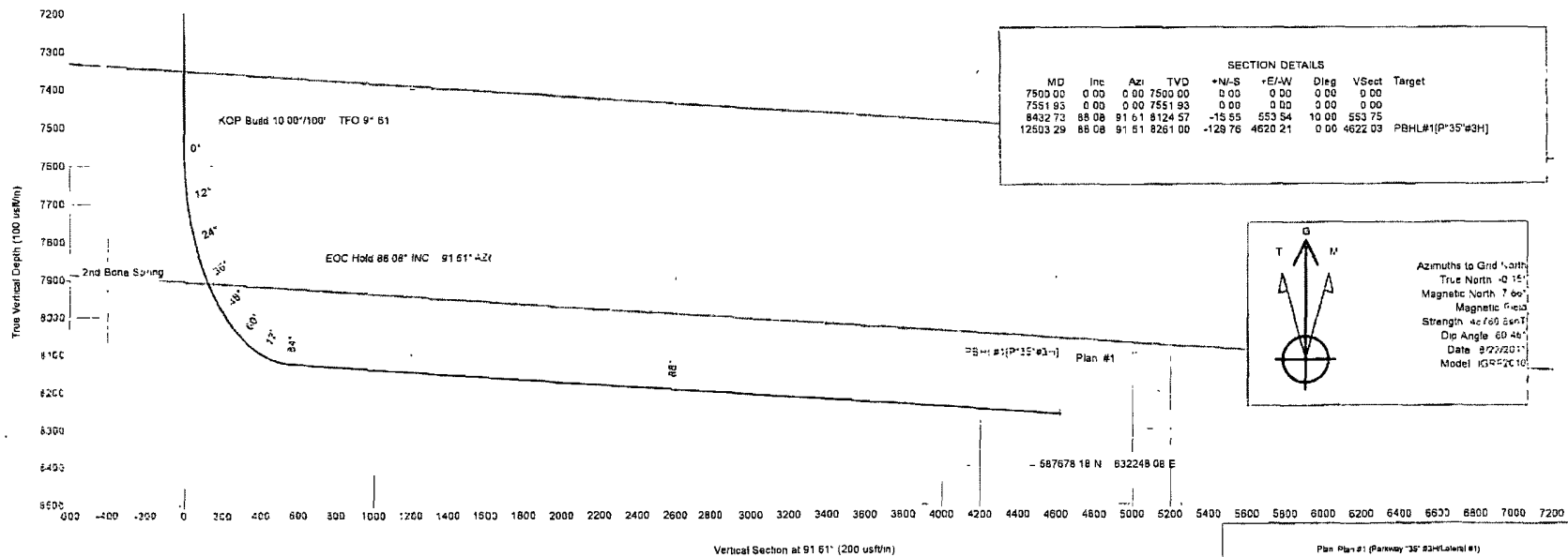
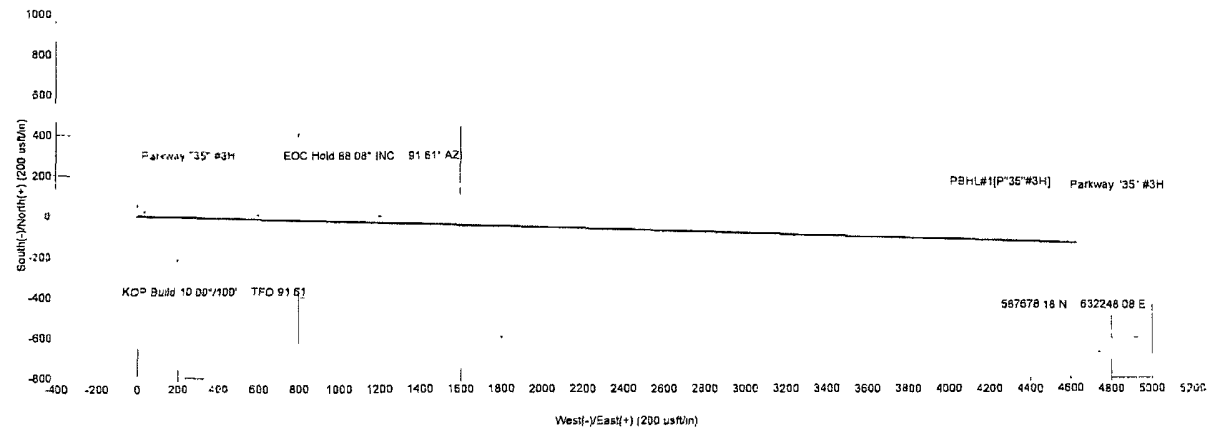
Parkway "35" #3H  
Eddy County (NAD83)  
Lateral #1  
2080.00 FSL  
330.00 FWL



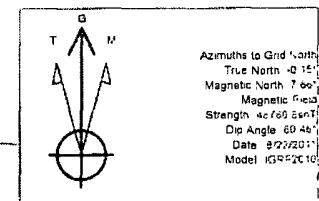
Well Name: Parkway "35" #3H  
System: US State Plane 1983  
Zone: New Mexico Eastern Zone  
System Datum: Mean Sea Level  
Northing: 587807.94  
Easting: 627627.67  
Ground Level: 3325.00  
Depth Reference: KB @ 3343.00 Lst (Nabors 474)

#### ANNOTATIONS

TVD	MD	Annotation
7551.93	7551.93	KOP Build 10.00°/100' TFO 91.61
8124.57	8432.73	EOC Hold 88.08° INC 91.61° AZI
8261.00	12503.29	587878.18 N 632248.08 E



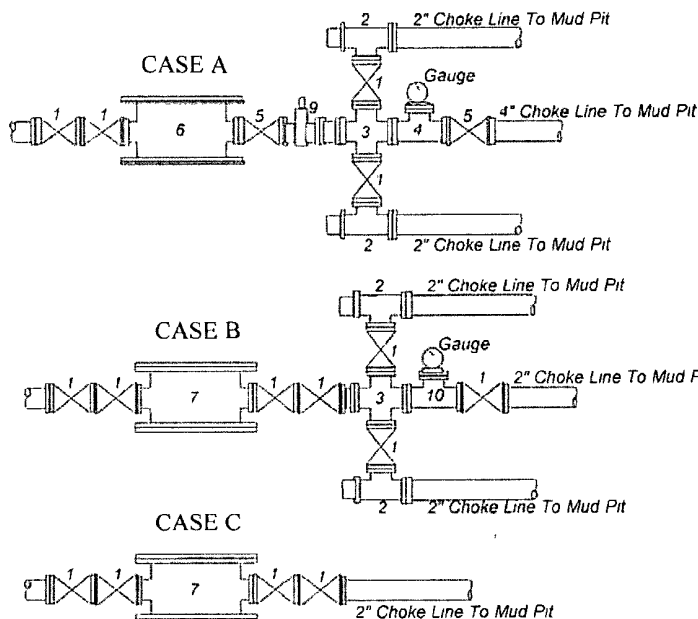
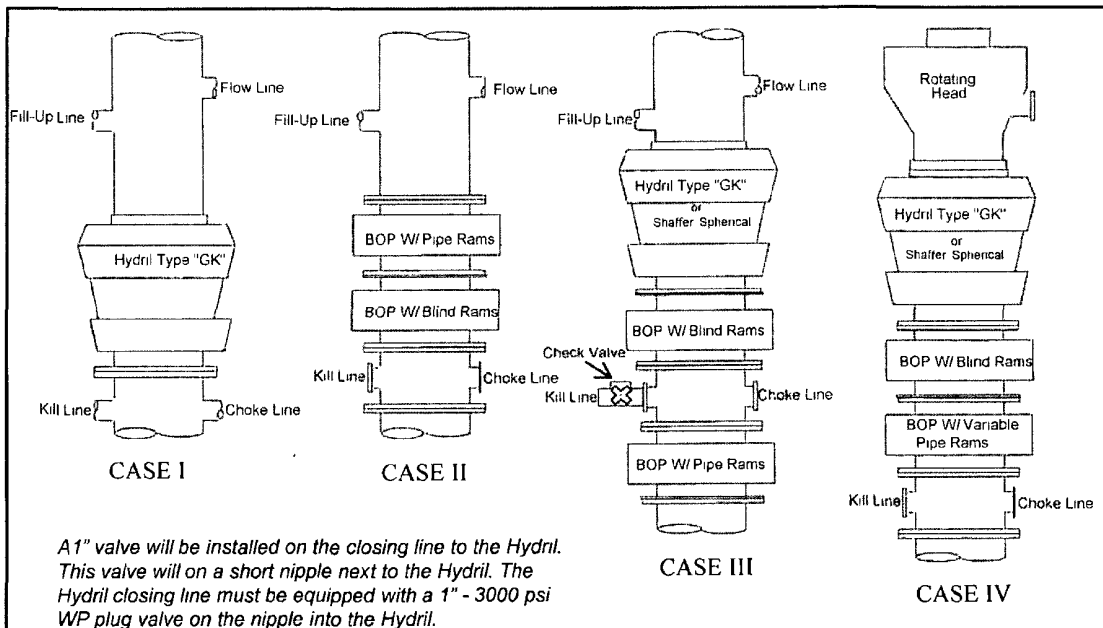
SECTION DETAILS									
MD	Inc	Azi	TVD	+N-S	+E-W	Dleg	Vsect	Target	
7500.00	0.00	0.00	7500.00	0.00	0.00	0.00	0.00		
7551.93	0.00	0.00	7551.93	0.00	0.00	0.00	0.00		
8432.73	88.08	91.61	8124.57	-15.55	553.54	10.00	553.75		
12503.29	88.08	91.61	8261.00	-128.76	4620.21	0.00	4622.03	PBHL#1(P'35'W3H)	



Plan Plan #1 (Parkway "35" #3H-Lateral #1)  
Created By: Heath/Vannoy Date: August 22, 2011

# SM Energy Company

## MINIMUM BLOWOUT PREVENTER REQUIREMENTS



BOP SIZE	BOP CASE	WORKING PRESSURE	CHOKE CASE
13-3/8"	II	2000 psi	B
9-5/8"	III	3000 psi	B

**\*Rotating head required**

### Legend

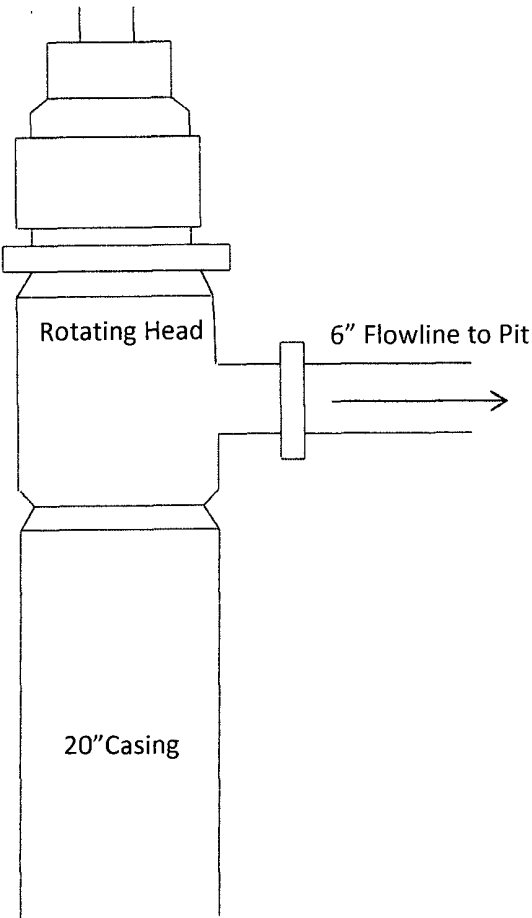
1. 2" flanged all steel valve must be either Cameron "F", Halliburton Low Torque or Shaffer Flo-Seal
2. 2" flanged adjustable chokes, min. 1" full opening & equipped with hard trim.
3. 4" x 2" flanged steel cross.
4. 4" flanged steel tee
5. 4" flanged all steel valve (Type as in no 1)
6. Drilling Spool with 2" x 4" flanged outlet.
7. Drilling Spool with 2" x 2" flanged outlet
8. 2" x 2" flanged steel cross.
9. 4" pressure operated gate valve.
10. 2" flanged steel tee.

### Notes

Choke manifold may be located in any convenient position. Use all steel fittings throughout. Make 90° turns with bull plugged tees only. No field welding will be permitted on any of the components of the choke manifold and related equipment upstream of the chokes. The choke spool and all lines and fittings must be at least equivalent to the test pressure of the preventers required. Independent closing control unit with clearly marked controls to be located on derrick floor near driller's position.

(10-31-96) WTXBOPS,PPT

**Diverter System**



**SM Energy Company**  
**3300 N. A Street, Suite 200**  
**Midland, TX 79705**  
**(432) 688-3125 (Office)**  
**(432) 682-1701 (Fax)**


**Parkway 35 Federal 3H**  
**2080 FSL & 330 FWL (SHL)**  
**1980 FSL & 330 FEL (BHL)**  
**Sec 35-T19S-R29E**  
**Eddy County, New Mexico**  
**Rule 118 H2S Exposure**

SM Energy Company has evaluated this well and we do not expect to encounter hydrogen sulfide. However, we will employ a third party monitoring system. We will begin monitoring prior to the Yates Formation and will continue monitoring the remainder of the well.

*See COA*

Please contact me if you have any additional questions.

Sincerely,



Malcolm Kintzing  
Engineer



## **Hydrogen Sulfide Drilling Operations Plan**

1. Company and Contract personnel admitted on location should be trained by a qualified H<sub>2</sub>S safety instructor to the following:
  - A. Characteristics of H<sub>2</sub>S.
  - B. Physical Effects and Hazards.
  - C. Proper Use of Safety Equipment and Life Support Systems.
  - D. Principle and Operation of H<sub>2</sub>S Detectors, Warning System and Briefing.
  - E. Evacuation Procedure, Routes and First Aid.
  - F. Proper Use of 30 minute Pressure Demand Air Pack.
2. H<sub>2</sub>S Detection and Alarm Systems
  - A. H<sub>2</sub>S Detectors and Audio Alarm System to be Located at Bell Nipple, End of Blooie Line (mud pit) and on Derrick floor or doghouse.
3. Windsock and/or Wind Streamers
  - A. Windsock at Mud Pit Area Should be High Enough to be Visible.
  - B. Windsock at Briefing Area Should be High Enough to be Visible.
  - C. There Should be a Windsock at Entrance to Location.
4. Condition Flags and Signs
  - A. Warning Sign on Access Road to Location.
  - B. Flags to be Displayed on Sign at Entrance to Location.
    1. Green Flag, Normal Safe Condition.
    2. Yellow Flag, Indicates Potential Pressure and Danger.
    3. Red Flag, Danger H<sub>2</sub>S Present in Dangerous Concentration Only Emergency Personnel Admitted to Location.
5. Well Control Equipment
  - A. See Attached Diagram.
6. Communication
  - A. While Working Under Masks Chalkboards Will be Used for Communication.
  - B. Hand Signals will be Used Where Chalk Board is Inappropriate.
  - C. Two Way Radio or Cell Phone will be Used to Communicate off Location in Case of Available at Most Drilling Foreman's Trailer or Living Quarters.
7. Drillstem Testing
  - A. Exhausts will be Watered.
  - B. Flare Line will be Equipped with an Electric Igniter or a propane pilot light in case gas reaches the surface.
  - C. If Location is near any Dwelling a Closed DST will be Performed.
8. Drilling Contractor Supervisor will be Required to be Familiar with the Effects H<sub>2</sub>S has on tubular goods and other mechanical equipment.
9. If H<sub>2</sub>S Encountered, Mud system will be Altered if Necessary to Maintain Control of Formation. A Mud Gas Separator will be Brought into Service Along with H<sub>2</sub>S Scavengers if Necessary.

# Emergency Contacts

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Eddy County Sheriff's Office 911 or 575-887-7551

Carlsbad Fire Department 911 or 575-885-2111

Columbia Medical Center of Carlsbad 575 or 575-677-3266

SM Energy Company (Midland office)

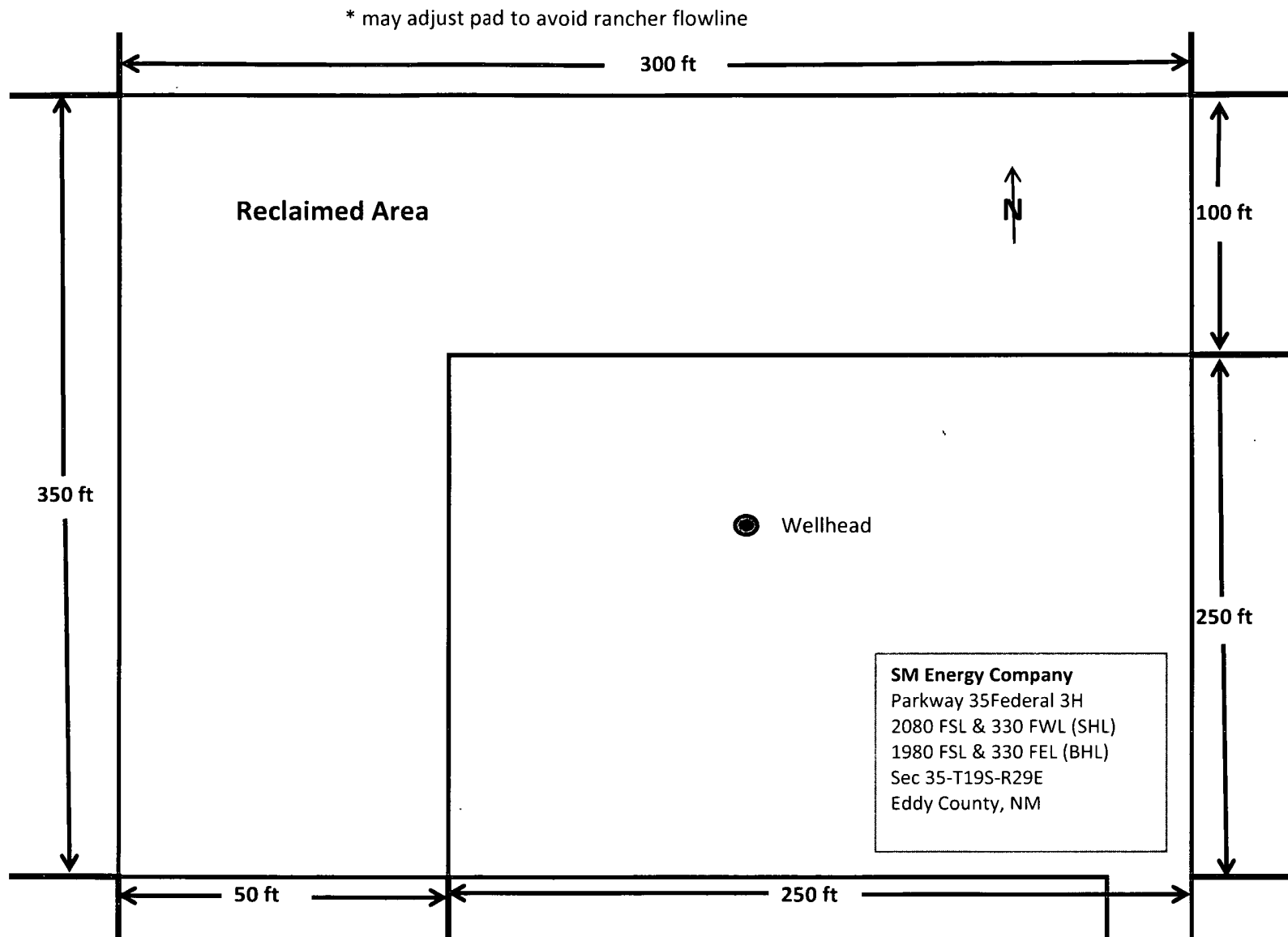
Phone 432-688-1700

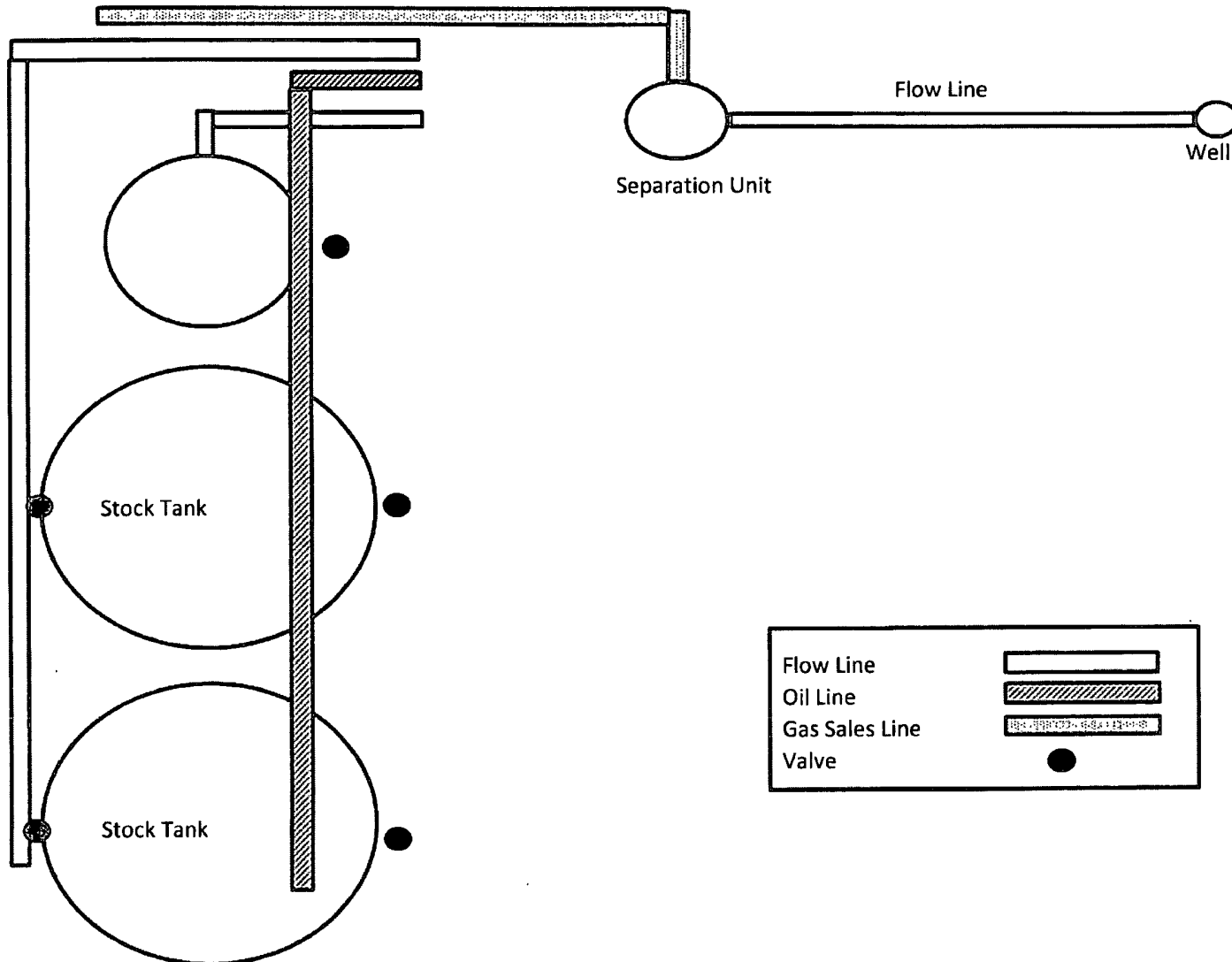
Fax 432-688-1701

Contract Pumper Jackie Herron 575-746-7601

Field Superintendent Bill Hearne 432-230-6054

Operations Manager Mark Bondy 432-557-9049





# Surface Use and Operations Plan

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**Parkway 35 Federal Com 3H  
2080 FSL & 330 FWL (SHL)  
1980 FSL & 330 FEL (BHL)  
Sec 35-T19S-R29E  
Eddy County, New Mexico**

The purpose of this plan is to describe the location of the proposed well, the proposed construction activities and operations plans, the magnitude of surface disturbance, and the procedures associated with the remediation plan.

## **Existing and Proposed Roads**

- a. Exhibit B is a reproduction of a County General Hi-way map showing existing roads.
- b. Exhibit A shows the proposed well site as staked with the current and proposed roads. All existing roads will be maintained in a condition equal to or better than current conditions. All new roads will be constructed to BLM specifications.
- c. Directions to location: from the intersection of CR 235 and State HWY 360; go westerly on HWY 360 for approximately 6 miles to lease road; thence southerly on lease road for 2.6 miles; then east on lease road for approx. 0.75 miles
- d. Exhibit C shows top topography surrounding the proposed well location.

## **Planned Access Roads**

The pad will offset an existing lease road. No access road required.

## **Location of Existing Wells within a one mile radius (Exhibit D)**

- |                    |                       |
|--------------------|-----------------------|
| a. Water Wells     | None know             |
| b. Injection Wells | As shown on Exhibit D |
| c. Drilling Wells  | None know             |
| d. Producing Wells | As shown on Exhibit D |
| e. Abandoned Wells | As shown on Exhibit D |

### **Location of Existing and/ or proposed facilities**

- a. There are no production facilities on this location at the present time
- b. In the event that the well is productive, production facilities on the Parkway 35-4H will be used connected with approximately 1,500' 3" SRD-7 poly flow lines. Flow line will follow roads ~~as much as possible.~~ *JDE*
- c. All production vessels on location will be painted to conform to BLM painting stipulations within 180 days of installation.

### **Location and Type of Water Supply**

Water will be purchased locally from a commercial source and trucked over to the location access roads or piped to location in flexible lines laid on top of the ground.

### **Source of construction Materials**

If possible construction material will be obtained from the excavation of the drill site, if additional material is required it will be obtained from a local source and transported over the location access road. The construction contractor will be responsible for paying royalties on any additional materials required.

### **Methods of Handling Waste**

- a. Drill cuts not used for evaluation purposes will be hauled off to approved disposal sites
- b. Water produced during operations will be sent to an approved SWD well.
- c. If hydrocarbons are produced during operations, those liquids will be stored in suitable storage containers
- d. Sewage from living quarters will be drained into holding tanks and will be cleaned out periodically. A porta-potty will be provided for the rig crews. This equipment will be properly maintained during operations and removed upon completion.
- e. All trash, junk and other waste material will be contained in trash cages or trash bins in order to prevent scattering. When the job is completed all contents will be removed and disposed of in an approved sanitary land fill.

### **Ancillary Facilities**

No camps or air strips will be constructed on this location.

## **Well Site Layout**

- a. Exhibit E shows the proposed well site layout
- b. Exhibit E shows the location of the required equipment for closed loop drilling operations.
- c. Exhibit F shows the reclamation diagram showing dimensions of reclaimed area, dimensions of remaining well pad, and proposed production facilities.
- d. An archaeological survey is in the process of being conducted on the proposed location pad.

## **Plans for restoration of Surface**

- a. Upon completion of the proposed operations, if the well is abandoned the location and road will be ripped and reseeded. The entire location will be restored to its original condition prior to the operation. All trash and garbage will be picked up and disposed of in an approved site. All restoration work will be completed within 180 days of cessation of activities.
- b. The disturbed area will be restored by re seeding during the proper growing season.
- c. Any additional caliche required will be obtained as described in section 6.
- d. Within 90 days of completion of drilling and completion operations, all equipment not necessary for production operations will be removed. The location will be cleared of all trash and junk to insure the location is left as aesthetically pleasing as possible.

## **Surface Ownership**

The surface is owned by the Bureau of Land Management

## **Other Information**

- a. Topography: Refer to the archaeological report
- b. The primary use of the surface at the location is for grazing livestock

## **Operator's Representative**

Through APD approval, drilling, completion and production operations

### **Malcolm Kintzing**

Engineer

SM Energy Company

3300 N. A St. 7-200

Midland, TX 79705

O: 432-688-3125

C: 432-212-2628

**SM Energy Company**  
**3300 N. A Street, Suite 200**  
**Midland, TX 79705**  
**(432) 688-1700 (Office)**  
**(432) 682-1701 (Fax)**

I hereby certify that I or persons under my supervision have inspected the proposed drill site and the access road routes, that I am familiar with the conditions that currently exist, and that the statements made in this plan are to the best of my knowledge are true and correct, and that the work associated with the operations proposed herein will be performed by SM Energy Company, its contractors or its sub-contractors in conformance with this plan and the terms and the conditions under which it is approved. This statement is subject to the provisions of U.S.C 1001 for filing of a false statement.

Signature: Malcolm Kintzing

Date: 8/26/11

Malcolm Kintzing  
SM Energy Company  
3300 N. A St. 7-200  
Midland, TX 79705  
Office: 432.688.3125  
Cell: 432.212.2628



# PECOS DISTRICT CONDITIONS OF APPROVAL

OPERATOR'S NAME:	SM ENERGY COMPANY
LEASE NO.:	NM-54865
WELL NAME & NO.:	PARKWAY 35 FEDERAL #3H
SURFACE HOLE FOOTAGE:	2080' FSL & 330' FWL
BOTTOM HOLE FOOTAGE:	1980' FSL & 330' FEL
LOCATION:	Section 35, T.19 S., R.29 E., NMPM
COUNTY:	Eddy County, New Mexico

## TABLE OF CONTENTS

Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

- ☐ **General Provisions**
- ☐ **Permit Expiration**
- ☐ **Archaeology, Paleontology, and Historical Sites**
- ☐ **Noxious Weeds**
- ☒ **Special Requirements**
  - Avoidance of water line/contact allottee
  - Cave/Karst
  - Communitization Agreement
- ☐ **Construction**
  - Notification
  - Topsoil
  - Closed Loop System
  - Federal Mineral Material Pits
  - Well Pads
  - Roads
- ☐ **Road Section Diagram**
- ☒ **Drilling**
  - Secretary's Potash
  - High Cave/Karst
  - H2S – Onshore Order 6 Requirements
  - Logging Requirements
  - Waste Material and Fluids
- ☐ **Production (Post Drilling)**
  - Well Structures & Facilities
  - Pipelines
  - Electric Lines
- ☒ **Interim Reclamation**
- ☒ **Final Abandonment & Reclamation**

## **I. GENERAL PROVISIONS**

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

## **II. PERMIT EXPIRATION**

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

## **III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES**

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

## **IV. NOXIOUS WEEDS**

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

## **V. SPECIAL REQUIREMENT(S)**

### **Avoidance of water line**

**The rancher's water line approximately 175 feet to the southeast of the center hole shall be avoided during the construction of the well pad.**

### **Contact allottee prior to construction of the well pad**

**Jimmy Richardson 575-706-4063**

## **Cave and Karst**

**\*\* Depending on location, additional Drilling, Casing, and Cementing procedures may be required by engineering to protect critical karst groundwater recharge areas.**

### **Cave/Karst Surface Mitigation**

The following stipulations will be applied to minimize impacts during construction, drilling and production.

#### **Construction:**

In the advent that any underground voids are opened up during construction activities, construction activities will be halted and the BLM will be notified immediately.

#### **No Blasting:**

No blasting will be utilized for pad construction. The pad will be constructed and leveled by adding the necessary fill and caliche.

#### **Tank Battery Liners and Berms:**

Tank battery locations will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain 1 ½ times the content of the largest tank.

#### **Leak Detection System:**

A method of detecting leaks is required. The method could incorporate gauges to measure loss, siting valves and lines so they can be visually inspected, or installing electronic sensors to alarm when a leak is present. Leak detection plan will be submitted to BLM for approval.

#### **Automatic Shut-off Systems:**

Automatic shut off, check valves, or similar systems will be installed for pipelines and tanks to minimize the effects of catastrophic line failures used in production or drilling.

### **Cave/Karst Subsurface Mitigation**

The following stipulations will be applied to protect cave/karst and ground water concerns:

**Rotary Drilling with Fresh Water:**

Fresh water will be used as a circulating medium in zones where caves or karst features are expected. SEE ALSO: Drilling COAs for this well.

**Directional Drilling:**

Kick off for directional drilling will occur at least 100 feet below the bottom of the cave occurrence zone. SEE ALSO: Drilling COAs for this well.

**Lost Circulation:**

ALL lost circulation zones from the surface to the base of the cave occurrence zone will be logged and reported in the drilling report.

Regardless of the type of drilling machinery used, if a void of four feet or more and circulation losses greater than 70 percent occur simultaneously while drilling in any cave-bearing zone, the BLM will be notified immediately by the operator. The BLM will assess the situation and work with the operator on corrective actions to resolve the problem.

**Abandonment Cementing:**

Upon well abandonment in high cave karst areas additional plugging conditions of approval may be required. The BLM will assess the situation and work with the operator to ensure proper plugging of the wellbore.

**Pressure Testing:**

Annual pressure monitoring will be performed by the operator on all casing annuli and reported in a sundry notice. If the test results indicated a casing failure has occurred, remedial action will be undertaken to correct the problem to the BLM's approval.

**Communitization Agreement**

A Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the BLM. The effective date of the agreement shall be prior to any sales.

## **VI. CONSTRUCTION**

### **A. NOTIFICATION**

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-6235 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

### **B. TOPSOIL**

The operator shall stockpile the topsoil in a low profile manner in order to prevent wind/water erosion of the topsoil. The topsoil to be stripped is approximately 4 inches in depth. The topsoil will be used for interim and final reclamation.

### **C. CLOSED LOOP SYSTEM**

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

### **D. FEDERAL MINERAL MATERIALS PIT**

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

### **E. WELL PAD SURFACING**

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation.

The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

### **F. ON LEASE ACCESS ROADS**

#### **Road Width**

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty (20) feet.

### **Surfacing**

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

### **Crowning**

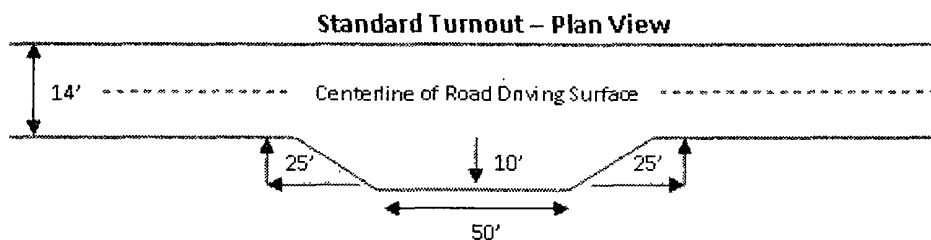
Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

### **Ditching**

Ditching shall be required on both sides of the road.

### **Turnouts**

Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall be constructed on all blind curves. Turnouts shall conform to the following diagram:

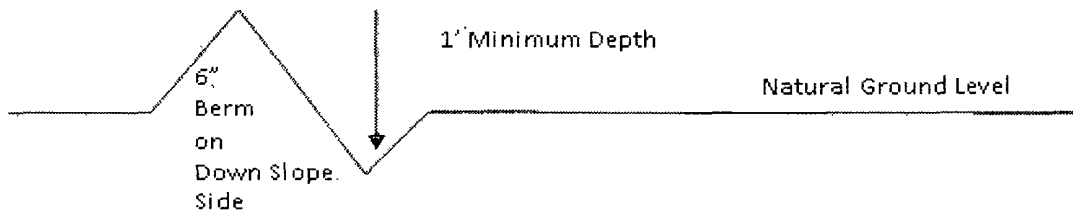


### **Drainage**

Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

### Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

### Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

$$400 \text{ foot road with } 4\% \text{ road slope: } \frac{400'}{4\%} + 100' = 200' \text{ lead-off ditch interval}$$

### Culvert Installations

Appropriately sized culvert(s) shall be installed at the deep waterway channel flow crossing.

### Cattleguards

An appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s).

Any existing cattleguard(s) on the access road shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattleguard(s) that are in place and are utilized during lease operations.

A gate shall be constructed and fastened securely to H-braces.

### Fence Requirement

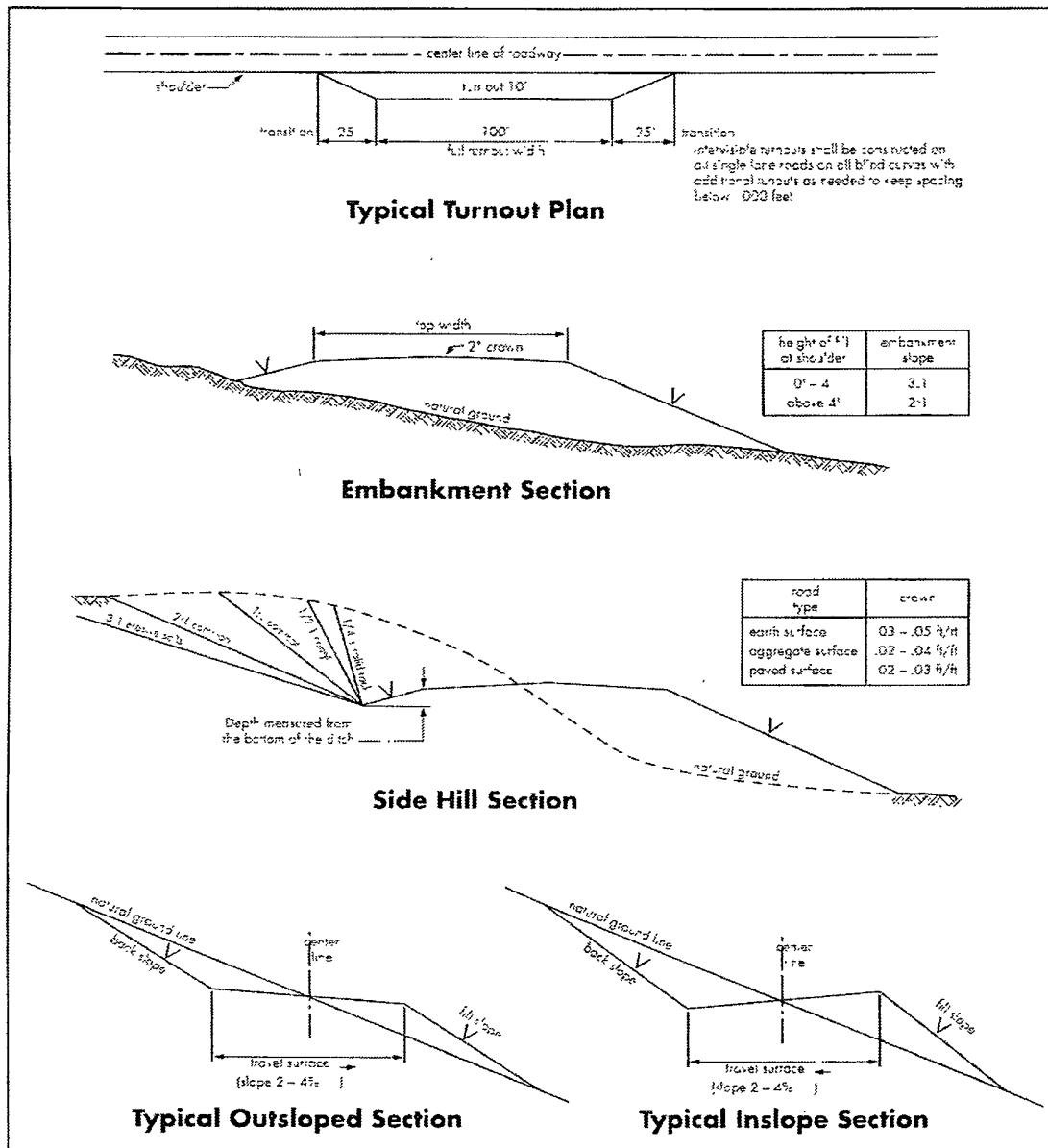
Where entry is required across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting.

The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

## Public Access

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

**Figure 1 – Cross Sections and Plans For Typical Road Sections**





## VII. DRILLING

### A. DRILLING OPERATIONS REQUIREMENTS

The BLM is to be notified a minimum of 4 hours in advance for a representative to witness:

- a. Spudding well
- b. Setting and/or Cementing of all casing strings
- c. BOPE tests

☒ **Eddy County**

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220,  
(575) 361-2822

1. A Hydrogen Sulfide (H<sub>2</sub>S) Drilling Plan should be activated **500** feet prior to drilling into the **Delaware** formation. **As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.**
2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. **If the drilling rig is removed without approval – an Incident of Non-Compliance will be written and will be a “Major” violation.**
3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.
4. **The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The top and bottom of Salt are to be recorded on the Completion Report.**

### B. CASING

**Changes to the approved APD casing and cement program require submitting a sundry and receiving approval prior to work. Failure to obtain approval prior to work will result in an Incident of Non-Compliance being issued.**

**Centralizers required on surface casing per Onshore Order 2.III.B.1.f.**

**Wait on cement (WOC) time prior to drilling out for a primary cement job will be a minimum 18 hours for a water basin, 24 hours in the potash area, or 500 pounds compressive strength, whichever is greater for all casing strings. DURING THIS WOC TIME, NO DRILL PIPE, ETC. SHALL BE RUN IN THE HOLE. Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. See individual casing strings for details regarding lead cement slurry requirements.**

**No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.**

**Secretary's Potash**

**High Cave/Karst**

**Possible lost circulation in the Artesia, Delaware and Bone Spring Groups.**

**Possible brine and water flows in the Artesia and Salado Groups.**

1. The **20** inch surface casing shall be set at approximately **250** feet (a minimum of 25 feet into the Competent Bed and above the salt) and cemented to the surface.
  - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
  - b. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.**
  - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
  - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
2. The minimum required fill of cement behind the **13-3/8** inch intermediate casing is:
  - ☒ Cement to surface. If cement does not circulate see B.1.a, c-d above.  
**Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst and potash.**

3. The minimum required fill of cement behind the 9-5/8 inch 2nd intermediate casing, **which shall be set in the Base of the Capitan Reef or in the Top of the Delaware Mountain Group, is:**

☒ Cement to surface. If cement does not circulate see B.1.a, c-d above. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst and potash. Additional cement may be required as excess calculates to 12%.**

**Pilot hole is required to have a plug at the bottom of the hole. If two plugs are set, the BLM is to be contacted (575-361-2822) prior to tag of bottom plug. Operator can set one plug from bottom of pilot hole to kick-off point and save the WOC time for tagging the first plug.**

**If 75% or greater lost circulation occurs while drilling the second intermediate hole, the cement on the 7 inch production casing must come to surface.**

**The BLM shows the Capitan Reef marker at 1700 feet. Top of cement on 7" production casing shall reach a minimum of 50 feet above that depth.**

4. The minimum required fill of cement behind the 7 inch production casing is:

☒ Cement should tie-back a minimum of 50 feet above the Capitan Reef. Operator shall provide method of verification. **Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to Capitan Reef, cave/karst and potash. Additional cement will be required as excess calculates to negative 15%.**

5. The minimum required fill of cement behind the 4-1/2 inch production liner is:

☒ No cement required on the 4-1/2" segment as it utilizes a Packer/Port completion system from TD to up inside 7" casing.

6. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

## **C. PRESSURE CONTROL**

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.
2. **A variance is granted for the use of a diverter on the 20" surface casing.**

3. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the 13-3/8 inch first intermediate casing shoe shall be **3000 (3M)** psi.
4. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.
  - a. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time.
  - b. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (18 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).
  - c. The results of the test shall be reported to the appropriate BLM office.
  - d. All tests are required to be recorded on a calibrated test chart. **A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.**
  - e. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug.

#### **D. DRILL STEM TEST**

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

## **E. WASTE MATERIAL AND FLUIDS**

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

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## **VIII. PRODUCTION (POST DRILLING)**

### **A. WELL STRUCTURES & FACILITIES**

#### **Placement of Production Facilities**

Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

#### **Containment Structures**

The containment structure shall be constructed to hold the capacity of the entire contents of the largest tank, plus 24 hour production, unless more stringent protective requirements are deemed necessary by the Authorized Officer.

#### **Painting Requirement**

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color Shale Green, Munsell Soil Color Chart # 5Y 4/2

### **B. PIPELINES**

#### **STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES**

**A copy of the APD and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.**

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. The holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.
2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and especially, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193.) Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the authorized officer concurrent with the filing of the reports to the involved Federal agency or State government.
3. The holder agrees to indemnify the United States against any liability arising from the

release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. 9601, et seq. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, et seq.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to activity of the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. The holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. The holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipe rupture, fire, or spills caused or substantially aggravated by any of the following within the right-of-way or permit area:

- a. Activities of the holder including, but not limited to construction, operation, maintenance, and termination of the facility.
- b. Activities of other parties including, but not limited to:
  - (1) Land clearing.
  - (2) Earth-disturbing and earth-moving work.
  - (3) Blasting.
  - (4) Vandalism and sabotage.
- c. Acts of God.

The maximum limitation for such strict liability damages shall not exceed one million dollars (\$1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.

This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil, salt water, or other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any responsibility as provided herein.

6. All construction and maintenance activity will be confined to the authorized right-of-way width of 20 feet.
7. No blading or clearing of any vegetation will be allowed unless approved in writing by the Authorized Officer.
8. The holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky or dune areas, the pipeline will be "snaked" around hummocks and dunes rather than suspended across these features.
9. The pipeline shall be buried with a minimum of 24 inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.
10. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.
11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.
12. Excluding the pipe, all above-ground structures not subject to safety requirement shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.
13. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.
14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.



15. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized officer to determine appropriate cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.

**C. ELECTRIC LINES (not applied for in APD)**

**IX. INTERIM RECLAMATION**

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

**X. FINAL ABANDONMENT & RECLAMATION**

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

#### Seed Mixture 4, for Gypsum Sites

The holder shall seed all disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)\* per acre. There shall be no primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed\* per acre:

<u>Species</u>	<u>lb/acre</u>
Alkali Sacaton ( <i>Sporobolus airoides</i> )	1.0
DWS Four-wing saltbush ( <i>Atriplex canescens</i> )	5.0

DWS: DeWinged Seed

\*Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed