

District I - (575) 393-6161  
1625 N French Dr, Hobbs, NM 88240  
District II - (575) 748-1283  
811 S First St, Artesia, NM 88210  
District III - (505) 334-6178  
1000 Rio Brazos Road, Aztec, NM 87410  
District IV - (505) 476-3460  
1220 S. St. Francis Dr, Santa Fe, NM 87505

State of New Mexico  
Energy Minerals and Natural Resources

Form C-101  
June 16, 2008

Oil Conservation Division  
1220 South St. Francis Dr.  
Santa Fe, NM 87505

Submit to appropriate District Office

☐ AMENDED REPORT

**APPLICATION FOR PERMIT TO DRILL, RE-ENTER, DEEPEN, PLUGBACK, OR ADD A ZONE**

<sup>1</sup> Operator Name and Address SM Energy Company 3300 N A Street Bldg 7 Suite 200 Midland, TX 79705		<sup>2</sup> OGRID Number 154903
<sup>3</sup> Property Code <b>19266</b>		<sup>4</sup> API Number <b>30 - 015 - 39237</b>
<sup>5</sup> Property Name Parkway 36 <b>STATE</b>		<sup>6</sup> Well No 4H
<sup>9</sup> Proposed Pool 1 Parkway Bone Spring		<sup>10</sup> Proposed Pool 2

**7 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	36	19 S	29 E		660	South	440	West	Eddy

**8 Proposed 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
P	36	19 S	29 E		330	South	330	East	Eddy

**Additional Well Information**

<sup>11</sup> Work Type Code New Well	<sup>12</sup> Well Type Code Oil	<sup>13</sup> Cable/Rotary R	<sup>14</sup> Lease Type Code State	<sup>15</sup> Ground Level Elevation 3330'
<sup>16</sup> Multiple No	<sup>17</sup> Proposed Depth 12,500'	<sup>18</sup> Formation Bone Spring	<sup>19</sup> Contractor	<sup>20</sup> Spud Date 3/1/2012

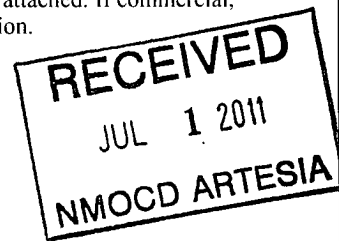
**21 Proposed Casing and Cement Program**

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
26"	20"	94	300'	600 sx	Circ. to Surf
17 5/8"	13 3/8"	54.5	1500'	1000 sx	Circ. to Surf
12 1/4"	9 5/8"	36	3500'	925 sx	Circ. to Surf
8 3/4"	7"	26	8500'	725 sx	
6 1/8"	4 1/2"	11.6	12,500'	0	

<sup>22</sup> Describe the proposed program. If this application is to DEEPEN or PLUG BACK, give the data on the present productive zone and proposed new productive zone. Describe the blowout prevention program, if any. Use additional sheets if necessary.

SM Energy Company proposes to drill the Parkway 36-4H. A closed-loop mud system will be used. SM Energy will notify NMOCD of spud date and cementing times so the surface and intermediate casing strings can be witnessed. A contingency plan for H2S is attached. If commercial, production casing will be run and utilize packer/port system. No cement required. Will stimulate as need for production.

Blowout prevention requirements attached



<sup>23</sup> I hereby certify that the information given above is true and complete to the best of my knowledge and belief

Signature: *Malcolm Kintzing*

Printed name: Malcolm Kintzing

Title: Engineer

E-mail Address: MKintzing@SM-Energy.com

Date: 6/29/11

Phone: 432.688.3125

**OIL CONSERVATION DIVISION**

Approved by

Title:

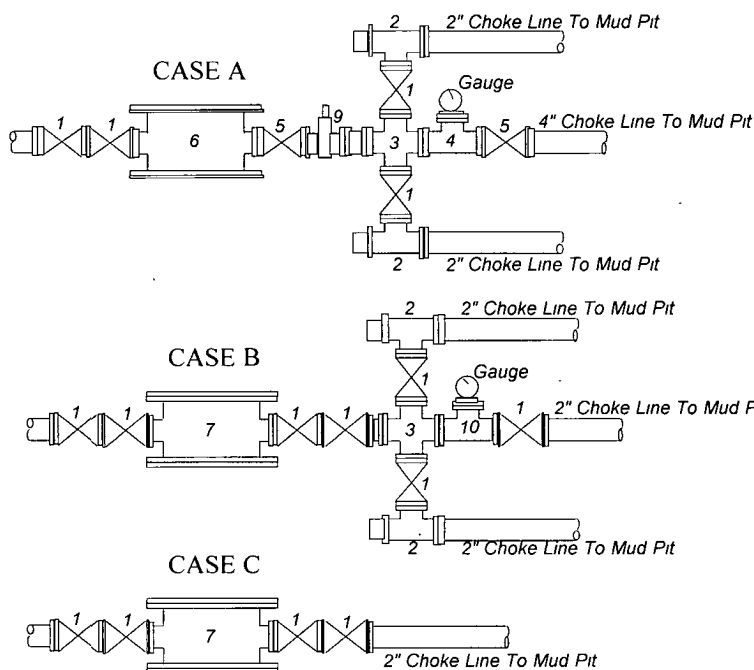
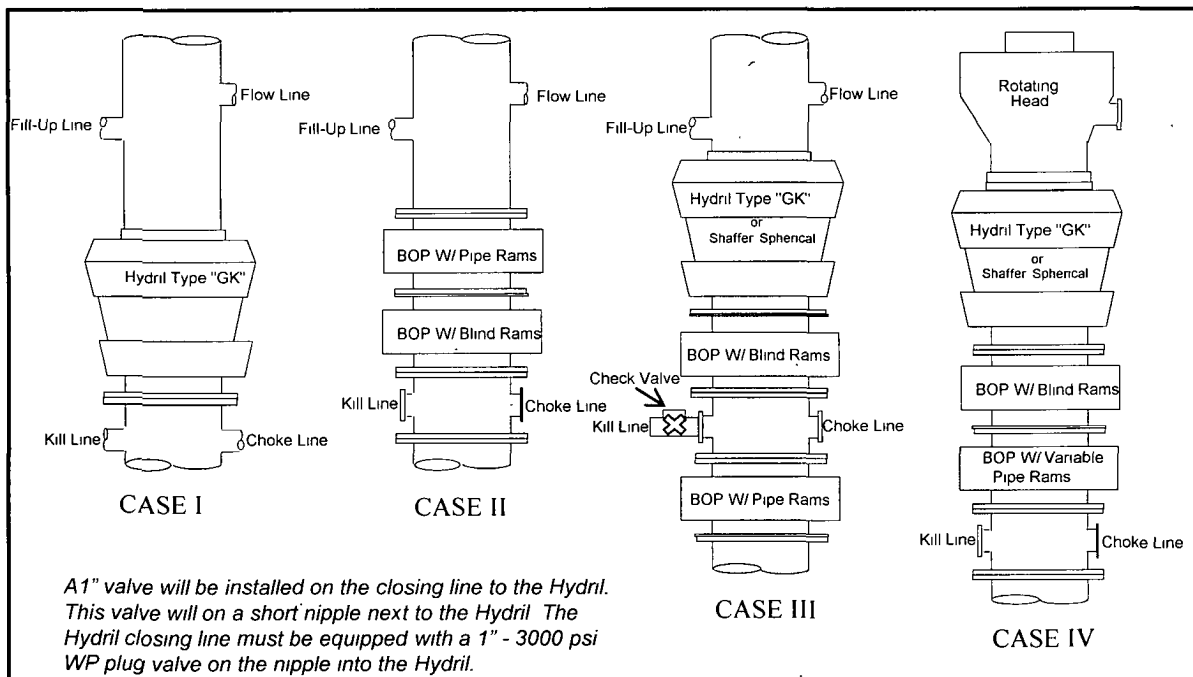
Approval Date

Expiration Date

Conditions of Approval Attached ☐

# SM Energy Company

## MINIMUM BLOWOUT PREVENTER REQUIREMENTS



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

**\*Rotating head required**

Bradenhead
Mfr: _____
Size: _____ Type _____

### 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

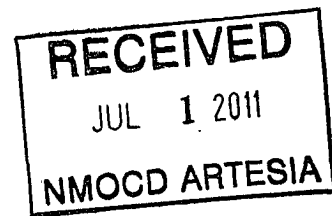
Choke manifold may be located in any convenient position. Use all steel fittings throughout. Make 90° turns with bull plugged tees only. No field welding will be permitted on any of the components of the choke manifold and related equipment upstream of the chokes. The choke spool and all lines and fittings 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.

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

6/23/11

District 2 Geologist  
New Mexico Oil and Gas Division  
811 South First Street  
Artesia, NM 88210

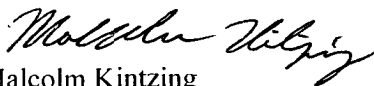
**Re: Parkway 36-4H**  
**SHL: 660' FSL & 440' FWL**  
**BHL: 330' FSL & 330' FWL**  
**Sec. 36-T19S-R29E**  
**Eddy, NM**  
**Rule 118 H2S Exposure**



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 drilling out the intermediate casing and will continue monitoring the remainder of the well.

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.

## **PROPOSED MUD PROGRAM**

### **CASING DESIGN**

20" Surface Casing at 300'  
13 3/8" Intermediate 1 Casing at 1,500'  
9 5/8" Intermediate 2 Casing at 3,500'  
7" Production Casing at 8,500'  
4 1/2" Liner at 12,500'

### **Recommended Mud Properties**

**Spud Surface hole with Fresh Water.**

<b><u>Depth</u></b>	<b><u>Mud</u></b>		<b><u>Fluid loss</u></b>
	<b><u>Weight</u></b>	<b><u>Viscosity</u></b>	
Spud	8.6-8.7	30-32	No Control
300'	8.9-9.2	30-32	No Control

**Set 20" Surface Casing at 300'. Drill out with Brine Water.**

300'	9.8-10.0	28-29	No Control
1,500'	9.8-10.0	28-29	No Control

**Set 13 3/8" Intermediate Casing at 1,500'. Drill out with Fresh Water.**

1,500'	8.4-8.6	28-29	No Control
3,500'	8.4-8.6	28-29	No Control

**Set 9 5/8" Intermediate Casing at 3,500'. Drill out with Fresh Water.**

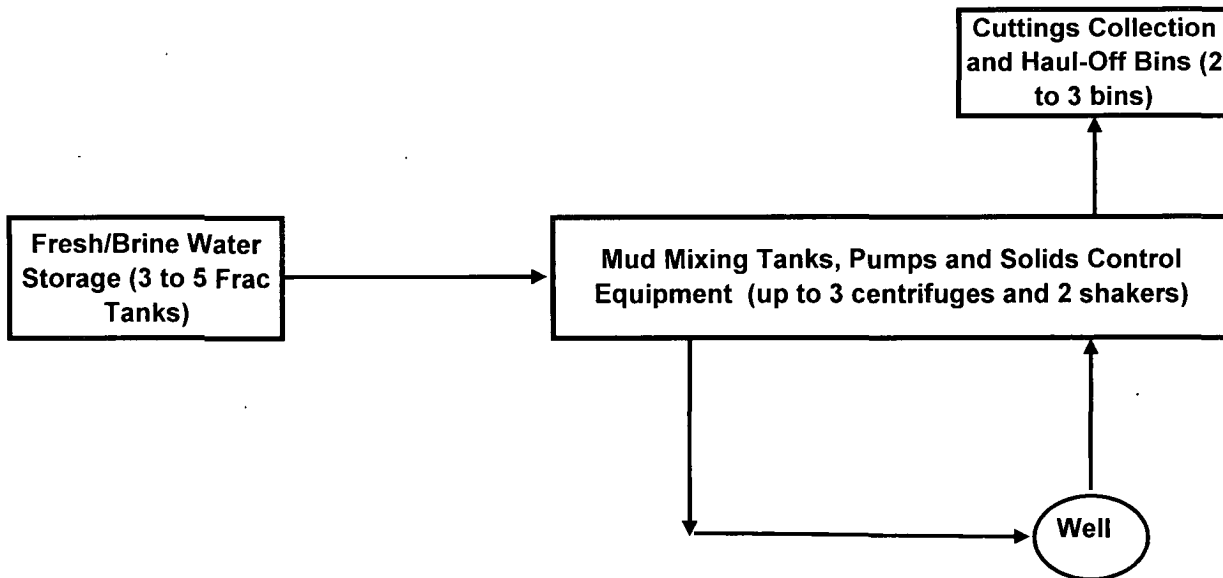
3,500'	8.4-8.6	28-29	No Control
8,500'	8.4-8.6	28-29	No Control

**Set 7" Intermediate Casing at 8,500'. Drill out with Fresh Water.**

8,500'	8.4-8.6	28-29	No Control
TD	8.4-8.6	28-29	No Control

# **CLOSED-LOOP SYSTEM**

## **Design Plan:**



## **Operating and Maintenance Plan:**

During drilling operations, third party service companies will utilize solids control equipment to remove cuttings from the drilling fluid and collect it in haul-off bins. Equipment will be closely monitored at all times while drilling by the derrick man and the service company employees.

## **Closure Plan:**

During drilling operations, third party service companies will haul-off drill solids and fluids to an approved disposal facility as noted on the C-144 form. At the end of the well, all closed loop equipment will be removed from the location.

**SM Energy Company**  
**3300 North A Street building 7 Suite 200**  
**Midland, TX 79705**  
**(432) 688-3125(Office)**  
**(432) 688-1701 (Fax)**

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District 2 Geologist  
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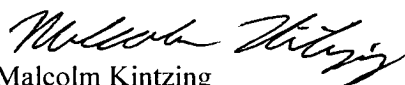
**Re: Parkway 36-4H**  
**SHL: 660' FSL & 440' FWL**  
**BHL: 330' FSL & 330' FEL**  
**Sec. 36-T19S-R29E**  
**Eddy, NM**

**Application for Permit to Drill**

Attached you will find an original and 4 copies of a C-101, C-102, H2S contingency letter, blowout preventer requirements, mud program, plats, and maps for the referenced well. This well will be drilled with a closed loop mud system.

Please contact me if you have any additional questions.

Sincerely,

  
Malcolm Kintzing  
Engineer

DISTRICT I --- CHECKLIST FOR INTENTS TO DRILL

19266 Operator SM ENERGY CO OGRID # 154903  
Well Name & # PARKWAY 36 # 4H Surface Type (F) (S) (P)  
Location: UL     , Sect 36, Township 19 s, RNG 29 e, Sub-surface Type (F) (S) (P)

- A. Date C101 rec'd     /    /     C101 reviewed     /    /
- B. 1 Check mark, Information is OK on Forms:  
OGRID X, BONDING X, PROP CODE X, WELL # X, SIGNATURE       
2. Inactive Well list as of: 7/26/11 # wells 101, # Inactive wells 1  
a. District Grant APD but see number of inactive wells:  
No letter required X; Sent Letter to Operator     , to Santa Fe       
3. Additional Bonding as of: 7/26/11  
a. District Denial because operator needs addition bonding:  
No Letter required X; Sent Letter to Operator     , To Santa Fe       
b. District Denial because of Inactive Well list and Financial Assurance:  
No Letter required X; Sent Letter to Operator     , To Santa Fe
- C. C102 YES     , NO     , Signature       
1. Pool PARKWAY; BS, Code 49622  
a. Dedicated acreage 160, What Units       
b. SUR. Location Standard X; Non-Standard Location       
c. Well shares acres: Yes     , No     , # of wells      plus this well #       
2. 2<sup>nd</sup>. Operator in same acreage, Yes     , No       
Agreement Letter     , Disagreement letter       
3. Intent to Directional Drill Yes X, No       
a. Dedicated acreage 160, What Units       
b. Bottomhole Location Standard X, Non-Standard Bottomhole       
4. Downhole Commingle: Yes     , No X  
a. Pool #2     , Code     , Acres       
Pool #3     , Code     , Acres       
Pool #4     , Code     , Acres       
5. POTASH Area Yes     , No X
- D. Blowout Preventer Yes X, No
- E. H2S Yes X, No
- F. C144 Pit Registration Yes     , No     , need
- G. Does APD require Santa Fe Approval:  
1. Non-Standard Location: Yes     , No X, NSL #       
2. Non-Standard Proration: Yes     , No X, NSP #       
3. Simultaneous Dedication: Yes     , No X, SD #       
Number of wells      Plus #       
4. Injection order Yes     , No X; PMX #      or WFX #       
5. SWD order Yes     , NO X; SWD #       
6. DHC from SF     ; DHC-HOB     ; Holding
7. OCD Approval Date     /    /     API #30-0 15-39237
8. Reviewers