

District I  
1625 N. French Dr., Hobbs, NM 88240

District II  
811 South First, Artesia, NM 88210

District III  
1000 Rio Brazos Road, Aztec, NM 87410

District IV  
2040 South Pacheco, Santa Fe, NM 87505

NOTIFY OCD SPUD & TIME TO WIT  
WATER PROTECTION STRING

Form C-101  
Revised March 17, 1999

Submit to appropriate District Office  
State Lease - 6 Copies  
Fee Lease - 5 Copies

Santa Fe, NM 87505

☐ AMENDED REPORT

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

<b>Devon-SFS Operating, Inc.</b> <b>20 North Broadway, Suite 1500</b> <b>Oklahoma City, Oklahoma 73102-8260</b>		<b>Operator Name and Address</b> <b>Walter M. Frank</b> <b>Senior Operations Engineer</b> <b>(405) 552-4595</b>	<b>2 OGRID Number</b> <b>20305</b>
<b>3 Property Code</b> <b>28044</b>	<b>5 Property Name</b> <b>RIFLEMAN "6P" STATE COM.</b>		<b>3 API Number</b> <b>30-015-31770</b>
			<b>6 Well No.</b> <b>1</b>

**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
P	6	22S	26E		720'	SOUTH	800'	EAST	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

**9 Proposed Pool 1**

**AVALON (MORROW)**

**10 Proposed Pool 2**

<b>11 Work Type Code</b> <b>N</b>	<b>12 Well Type Code</b> <b>G</b>	<b>13 Cable/Rotary</b> <b>R</b>	<b>14 Lease Type Code</b> <b>P</b>	<b>15 Ground Level Elevation</b> <b>GL 3608'</b>
<b>16 Multiple</b> <b>No</b>	<b>17 Proposed Depth</b> <b>11,700'</b>	<b>18 Formation</b> <b>MORROW</b>	<b>19 Contractor</b> <b>Unknown at this time</b>	<b>20 Spud Date</b> <b>AUGUST, 2001</b>

**21 Proposed Casing and Cement Program**

Hole Size	Casing Size	Casing weight/foot	Setting Depth	Sacks of Cement	Estimated TOC
17 1/2"	13 3/8"	48# H-40	500'	700	surface
12 1/4"	8 5/8"	32# J-55	2400'	1500	surface
7 7/8"	5 1/2"	17# L-80 & J-55	11,700'	2700	6500'

**22** 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.

**Devon plans to drill this well to a total depth of 11,700 feet and complete it as a Morrow development well.**  
**If it is deemed non-commercial then it will be plugged and abandoned in accordance with the rules and regulations established by the New Mexico OCD.**

**Blowout prevention equipment will be installed while drilling the intermediate and production holes.**

**Attached are C102 plat, maps, BOP equipment and casing design sheets, H2S plan, and proof of bond.**

<b>23</b> I hereby certify that the information given above is true and complete to the best of my knowledge and belief.		<b>OIL CONSERVATION DIVISION</b>	
Signature: <i>Candace R. Graham</i>		Approved by: <b>ORIGINAL SIGNED BY TIM W. GUM</b>	
Printed name: <b>Candace R. Graham</b>		Title: <b>DISTRICT II SUPERVISOR</b>	
Title: <b>Engineering Tech.</b>		Approval Date: <b>MAY 09 2001</b>	Expiration Date: <b>MAY 09 2002</b>
Date: <b>April 24, 2001</b>	Phone: <b>(405) 235-3611, X4520</b>	Conditions of Approval:	
		Attached <input type="checkbox"/>	

P. O. Box 1980  
Hobbs, NM 88241-1980

Energy, Minerals, and Natural Resources Department

Revised 02-10-94

Instructions on back

**DISTRICT II**

P. O. Drawer DD  
Artesia, NM 87411-0719

**DISTRICT III**

1000 Rio Brazos Rd.  
Aztec, NM 87410

**OIL CONSERVATION DIVISION**

P. O. Box 2088  
Santa Fe, New Mexico 87504-2088

Submit to the Appropriate  
District Office  
State Lease - 4 copies  
Fee Lease - 3 copies

☐ AMENDED REPORT

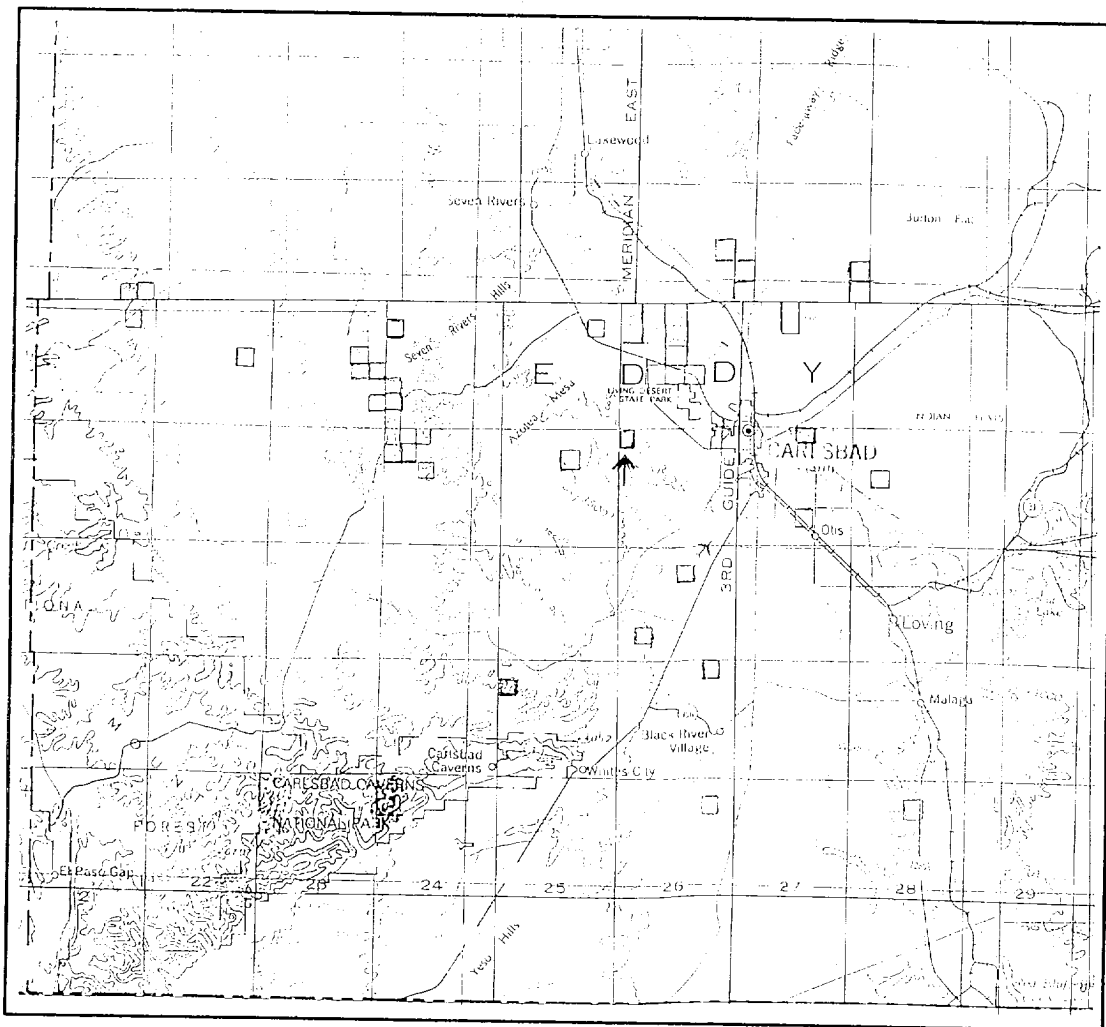
**DISTRICT IV**

P. O. Box 2088  
Santa Fe, NM 87507-2088

**WELL LOCATION AND ACREAGE DEDICATION PLAT**

1 API Number		2 Pool Code		3 Pool Name AVALON (MORROW)					
4 Property Code		5 Property Name RIFLEMAN '6P' STATE COM						6 Well Number 1	
7 OGRID No. 20305		8 Operator Name DEVON-SFS OPERATING, INC. <del>DEVON ENERGY PRODUCTIONS CO., L.P.</del>						9 Elevation 3608'	
10 SURFACE LOCATION									
UL or lot no. P	Section 6	Township 22 SOUTH	Range 26 EAST, N.M.P.M.	Lot Ida	Feet from the 720'	North/South line SOUTH	Feet from the 800'	East/West line EAST	County EDDY
"BOTTOM HOLE LOCATION IF DIFFERENT FROM SURFACE"									
UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
12 Dedicated Acres 320		13 Joint or Infill		14 Consolidation Code		15 Order No.			
NO ALLOWABLE WELL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION									
						<b>OPERATOR CERTIFICATION</b> I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief. Signature <i>Candace R. Graham</i> Printed Name Candace R. Graham Title Engineering Tech. Date April 24, 2001			
						<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. Date of Survey MARCH 21, 2001 Signature and Seal of Professional Surveyor <i>[Signature]</i> Certificate No. V. L. BEZNER R.P.S. #7920 JOB #75225 / 50 NE / V.H.B.			

# VICINITY MAP



SECTION 6 TWP 22-S RGE 26-E  
 SURVEY NEW MEXICO PRINCIPAL MERIDIAN  
 COUNTY EDDY STATE NM  
 DESCRIPTION 720' FSL & 800' FE.

DEVON-SFS OPERATING, INC.  
 OPERATOR DEVON ENERGY PRODUCTION CO., L.P.  
 LEASE RIFLEMAN "6P" STATE COM #

DISTANCE & DIRECTION FROM JCT. OF S.H. 524 & U.S.  
62/180 IN CARLSBAD, GO WEST ON S.H. 524 5.5 MILES  
TO A POINT ±200' NORTH OF THE LOCATION.

This location has been very carefully staked on the ground according to the best official survey records, maps, and other data available to us.  
 Review this plot and notify us immediately of any possible discrepancy.

## TOPOGRAPHIC LAND SURVEYORS

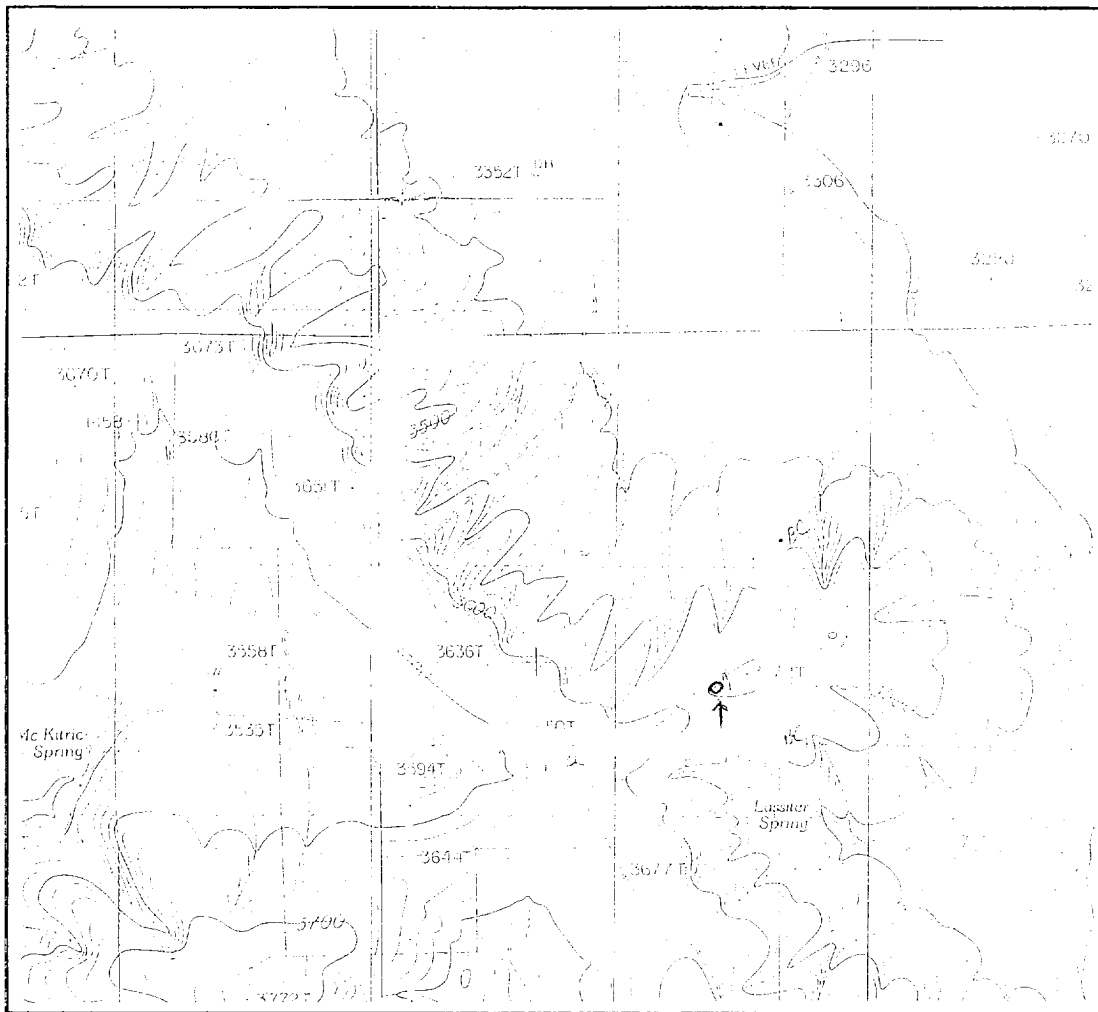
*Surveying & Mapping for the Oil & Gas Industry*

1307 N. HOBART  
 PAMPA, TX. 79065  
 (800) 658-6382

6709 N. CLASSEN BLVD.  
 OKLAHOMA CITY, OK. 73116  
 (800) 654-3219

2903 N. BIG SPRING  
 MIDLAND, TX. 79705  
 (800) 767-1653

# LOCATION & ELEVATION VERIFICATION MAP



SCALE : 1" = 2000'

CONTOUR INTERVAL 20'

SECTION 6 TWP 22-S RGE 25-E

SURVEY NEW MEXICO PRINCIPAL MERIDIAN

COUNTY EDDY STATE NM

DESCRIPTION 720' FSL & 800' FEL

ELEVATION 3608'

OPERATOR DEVON-SFS OPERATING, INC.  
DEVON ENERGY PRODUCTION CO., L.P.

LEASE RIFLEMAN "6P" STATE COM #1

U.S.G.S. TOPOGRAPHIC MAP

CARLSBAD WEST, NEW MEXICO

LAT. N

LONG. W



This location has been very carefully staked on the ground according to the best official survey records, maps, and other data available to us.

Review this plot and notify us immediately of any possible discrepancy.

## TOPOGRAPHIC LAND SURVEYORS

*Surveying & Mapping for the Oil & Gas Industry*

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# MINIMUM BLOWOUT PREVENTER REQUIREMENTS

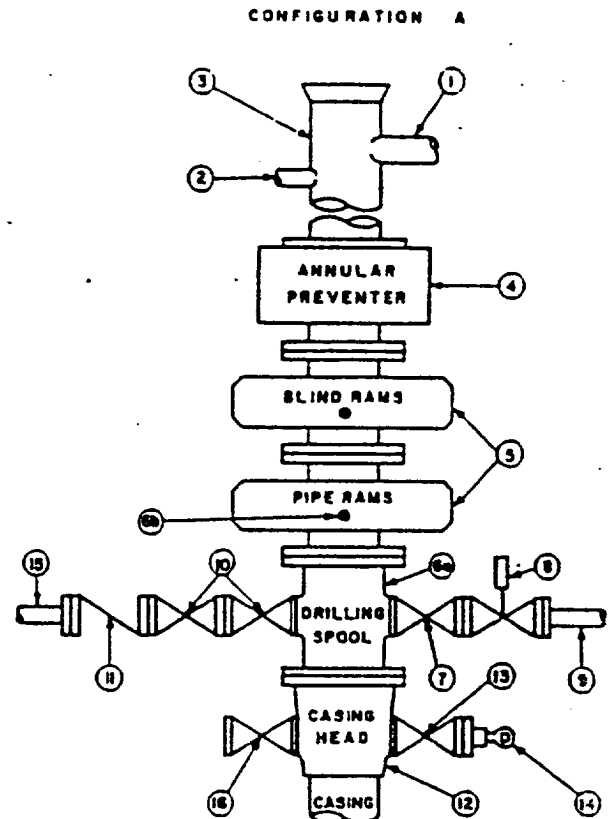
3,000 psi Working Pressure

3 MWP

## STACK REQUIREMENTS

No.	Item	Min. I.D.	Min. Nominal
1	Flowline		
2	Fill up line		2"
3	Drilling nipple		
4	Annular preventer		
5	Two single or one dual hydraulically operated rams		
6a	Drilling spool with 2" min. kill line and 3" min choke line outlets		
6b	2" min. kill line and 3" min. choke line outlets in ram. (Alternate to 6a above.)		
7	Valve Gate <input type="checkbox"/> Plug <input type="checkbox"/>	3-1/8"	
8	Gate valve—power operated	3-1/8"	
9	Line to choke manifold		3"
10	Valves Gate <input type="checkbox"/> Plug <input type="checkbox"/>	2-1/16"	
11	Check valve	2-1/16"	
12	Casing head		
13	Valve Gate <input type="checkbox"/> Plug <input type="checkbox"/>	1-13/16"	
14	Pressure gauge with needle valve		
15	Kill line to rig mud pump manifold		2"

OPTIONAL			
16	Flanged valve	1-13/16"	



## CONTRACTOR'S OPTION TO FURNISH:

1. All equipment and connections above bradenhead or casinghead. Working pressure of preventers to be 3,000 psi, minimum.
2. Automatic accumulator (80 gallon, minimum) capable of closing BOP in 30 seconds or less and, holding them closed against full rated working pressure.
3. BOP controls, to be located near drillers position.
4. Kelly equipped with Kelly cock.
5. Inside blowout preventer or its equivalent on derrick floor at all times with proper threads to fit pipe being used.
6. Kelly saver-sub equipped with rubber casing protector at all times.
7. Plug type blowout preventer tester.
8. Extra set pipe rams to fit drill pipe in use on location at all times.
9. Type RX ring gaskets in place of Type R.

## MEC TO FURNISH:

1. Bradenhead or casinghead and side valves.
2. Wear bushing, if required.

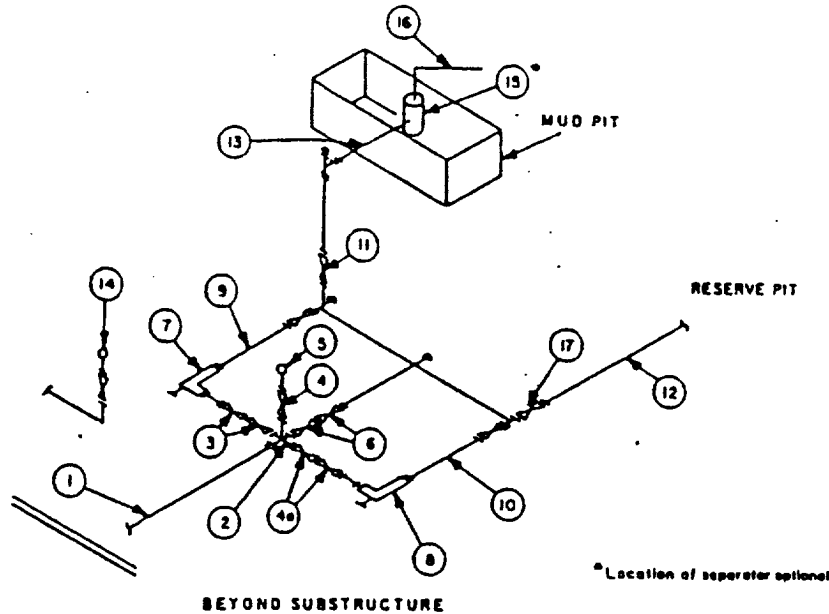
## GENERAL NOTES:

1. Deviations from this drawing may be made only with the express permission of MEC's Drilling Manager.
2. All connections, valves, fittings, piping, etc., subject to well or pump pressure must be flanged (suitable clamp connections acceptable) and have minimum working pressure equal to rated working pressure of preventers up through chokes. Valves must be full opening and suitable for high pressure mud service.
3. Controls to be of standard design and each marked, showing opening and closing position.
4. Chokes will be positioned so as not to hamper or delay changing of choke beans. Replaceable parts for adjustable choke, other bean sizes, retainers, and choke wrenches to be conveniently located for immediate use.
5. All valves to be equipped with handwheels or handles ready for immediate use.
6. Choke lines must be suitably anchored.

7. Handwheels and extensions to be connected and ready for use.
8. Valves adjacent to drilling spool to be kept open. Use outside valves except for emergency.
9. All seamless steel control piping (3000 psi working pressure) to have flexible joints to avoid stress. Hoses will be permitted.
10. Casinghead connections shall not be used except in case of emergency.
11. Do not use kill line for routine fill-up operations.

**MINIMUM CHOKE MANIFOLD**  
3,000, 5,000 and 10,000 PSI Working Pressure

**3 MWP - 5 MWP - 10 MWP**



MINIMUM REQUIREMENTS										
No.		3,000 MWP			5,000 MWP			10,000 MWP		
		I.D.	NOMINAL	RATING	I.D.	NOMINAL	RATING	I.D.	NOMINAL	RATING
1	Line from drilling spool		3"	3,000		3"	5,000		3"	10,000
2	Cross 3"x3"x3"x2"			3,000			5,000			
	Cross 3"x3"x3"x3"									10,000
3	Valves(1) Gate <input type="checkbox"/> Plug <input <="" td="" type="checkbox/&gt;(2)&lt;/td&gt;&lt;td&gt;3-1/8"/> <td></td> <td>3,000</td> <td>3-1/8"</td> <td></td> <td>5,000</td> <td>3-1/8"</td> <td></td> <td>10,000</td>		3,000	3-1/8"		5,000	3-1/8"		10,000	
4	Valve Gate <input type="checkbox"/> Plug <input <="" td="" type="checkbox/&gt;(2)&lt;/td&gt;&lt;td&gt;1-13/16"/> <td></td> <td>3,000</td> <td>1-13/16"</td> <td></td> <td>5,000</td> <td>1-13/16"</td> <td></td> <td>10,000</td>		3,000	1-13/16"		5,000	1-13/16"		10,000	
4a	Valves(1)	2-1/16"		3,000	2-1/16"		5,000	3-1/8"		10,000
5	Pressure Gauge			3,000			5,000			10,000
6	Valves Gate <input type="checkbox"/> Plug <input <="" td="" type="checkbox/&gt;(2)&lt;/td&gt;&lt;td&gt;3-1/8"/> <td></td> <td>3,000</td> <td>3-1/8"</td> <td></td> <td>5,000</td> <td>3-1/8"</td> <td></td> <td>10,000</td>		3,000	3-1/8"		5,000	3-1/8"		10,000	
7	Adjustable Choke(3)	2"		3,000	2"		5,000	2"		10,000
8	Adjustable Choke	1"		3,000	1"		5,000	2"		10,000
9	Line		3"	3,000		3"	5,000		3"	10,000
10	Line		2"	3,000		2"	5,000		3"	10,000
11	Valves Gate <input type="checkbox"/> Plug <input <="" td="" type="checkbox/&gt;(2)&lt;/td&gt;&lt;td&gt;3-1/8"/> <td></td> <td>3,000</td> <td>3-1/8"</td> <td></td> <td>5,000</td> <td>3-1/8"</td> <td></td> <td>10,000</td>		3,000	3-1/8"		5,000	3-1/8"		10,000	
12	Lines		3"	1,000		3"	1,000		3"	2,000
13	Lines		3"	1,000		3"	1,000		3"	2,000
14	Remote reading compound standpipe pressure gauge			3,000			5,000			10,000
15	Gas Separator		2'x5'			2'x5'			2'x5'	
16	Line		4"	1,000		4"	1,000		4"	2,000
17	Valves Gate <input type="checkbox"/> Plug <input <="" td="" type="checkbox/&gt;(2)&lt;/td&gt;&lt;td&gt;3-1/8"/> <td></td> <td>3,000</td> <td>3-1/8"</td> <td></td> <td>5,000</td> <td>3-1/8"</td> <td></td> <td>10,000</td>		3,000	3-1/8"		5,000	3-1/8"		10,000	

(1) Only one required in Class 3M.

(2) Gate valves only shall be used for Class 10M.

(3) Remote operated hydraulic choke required on 5,000 psi and 10,000 psi for drilling.

#### EQUIPMENT SPECIFICATIONS AND INSTALLATION INSTRUCTIONS

- All connections in choke manifold shall be welded, studded, flanged or Cameron clamp of comparable rating.
- All flanges shall be API 6B or 6BX and ring gaskets shall be API RX or BX. Use only BX for 10 MWP.
- All lines shall be securely anchored.
- Chokes shall be equipped with tungsten carbide seats and needles, and replacements shall be available.
- Choke manifold pressure and standpipe pressure gauges shall be available at the choke manifold to assist in regulating chokes. As an alternate with automatic chokes, a choke manifold pressure gauge shall be located on the rig floor in conjunction with the standpipe pressure gauge.
- Line from drilling spool to choke manifold should be as straight as possible. Lines downstream from chokes shall make turns by large bends or 90° bends using bull plugged tees.
- Discharge lines from chokes, choke bypass and from top of gas separator should vent as far as practical from the well.

Well name: **Rifleman 6 "P" State Com. #1**  
 Operator: ~~Devon Energy Production Company, L.P.~~ **DEVON-SFS OPERATING, INC.**  
 String type: **Surface**  
 Location: **Section 6, T22S, R26E, Eddy County, NM**

**Design parameters:**

**Collapse**

Mud weight: 8.800 ppg  
 Design is based on evacuated pipe.

**Minimum design factors:**

**Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**Environment:**

H2S considered? No  
 Surface temperature: 75 °F  
 Bottom hole temperature: 79 °F  
 Temperature gradient: 0.80 °F/100ft  
 Minimum section length: 500 ft  
 Minimum Drift: 2.250 in

**Burst**

Max anticipated surface pressure: 286 psi  
 Internal gradient: 0.000 psi/ft  
 Calculated BHP 286 psi  
 Annular backup: 8.80 ppg

**Tension:**

8 Round STC: 1.80 (J)  
 8 Round LTC: 1.80 (J)  
 Buttress: 1.60 (J)  
 Premium: 1.50 (J)  
 Body yield: 1.60 (B)

Non-directional string.

Tension is based on air weight.  
 Neutral point: 436 ft

**Re subsequent strings:**

Next setting depth: 2,400 ft  
 Next mud weight: 9.000 ppg  
 Next setting BHP: 1,122 psi  
 Fracture mud wt: 11.000 ppg  
 Fracture depth: 500 ft  
 Injection pressure 286 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	500	13.375	48.00	H-40	ST&C	500	500	12.59	6201
Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	229	740	3.24	286	1730	6.05	24	322	13.42 J

Prepared W.M. Frank  
 by: Devon Energy

Phone: (405) 552-4595  
 FAX: (405) 552-4621

Date: April 8, 2001  
 Oklahoma City, Oklahoma

**Remarks:**

Collapse is based on a vertical depth of 500 ft, a mud weight of 8.8 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

*Engineering responsibility for use of this design will be that of the purchaser.*

Well name:	<b>Rifleman 6 "P" State Com. #1</b>
Operator:	<del>Devon Energy Production Company, L.P.</del> <b>DEVON-SFS OPERATING, INC.</b>
String type:	Intermediate
Location:	Section 6, T22S, R26E, Eddy County, NM

**Design parameters:**
**Collapse**

Mud weight: 9.000 ppg  
Design is based on evacuated pipe.

**Minimum design factors:**
**Collapse:**

Design factor 1.125

**Burst:**

Design factor 1.00

**Environment:**

H2S considered? No  
Surface temperature: 75 °F  
Bottom hole temperature: 94 °F  
Temperature gradient: 0.80 °F/100ft  
Minimum section length: 500 ft  
Minimum Drift: 7.875 in

**Burst**

Max anticipated surface pressure: 1,371 psi  
Internal gradient: 0.000 psi/ft  
Calculated BHP 1,371 psi  
  
Annular backup: 9.00 ppg

**Tension:**

8 Round STC: 1.80 (J)  
8 Round LTC: 1.80 (J)  
Buttress: 1.60 (J)  
Premium: 1.50 (J)  
Body yield: 1.60 (B)

Non-directional string.

Tension is based on air weight.  
Neutral point: 2,079 ft

**Re subsequent strings:**

Next setting depth: 11,700 ft  
Next mud weight: 9.600 ppg  
Next setting BHP: 5,835 psi  
Fracture mud wt: 11.000 ppg  
Fracture depth: 2,400 ft  
Injection pressure 1,371 psi

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
1	2400	8.625	32.00	J-55	LT&C	2400	2400	7.875	19341

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
1	1122	2530	2.25	1371	3930	2.87	76.8	417	5.43 J

Prepared W.M. Frank  
by: Devon Energy

Phone: (405) 552-4595  
FAX: (405) 552-4621

Date: April 8, 2001  
Oklahoma City, Oklahoma

**Remarks:**

Collapse is based on a vertical depth of 2400 ft, a mud weight of 9 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kernler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

*Engineering responsibility for use of this design will be that of the purchaser.*

Well name: **Rifleman 6 "P" State Com. #1**  
 Operator: **Devon Energy Production Company, L.P.** DEVON-SFS OPERATING, INC.  
 String type: Production  
 Location: Section 6, T22S, R26E, Eddy County, NM

**Design parameters:**

**Collapse**

Mud weight: 6.600 ppg  
 Design is based on evacuated pipe.

**Minimum design factors:**

**Collapse:**

Design factor 1.125

**Environment:**

H2S considered? No  
 Surface temperature: 75 °F  
 Bottom hole temperature: 169 °F  
 Temperature gradient: 0.80 °F/100ft  
 Minimum section length: 500 ft

Surface pressure: 1,120 psi

**Burst:**

Design factor 1.00

**Burst**

Max anticipated surface pressure: 4,011 psi  
 Internal gradient: 0.000 psi/ft  
 Calculated BHP 4,011 psi  
 Annular backup: 9.60 ppg

**Tension:**

8 Round STC: 1.80 (J)  
 8 Round LTC: 1.80 (J)  
 Buttress: 1.60 (J)  
 Premium: 1.50 (J)  
 Body yield: 1.60 (B)

Non-directional string.

Packer fluid details:  
 Fluid density: 8.600 ppg  
 Packer depth: 10,700 ft

Tension is based on air weight.  
 Neutral point: 10,529 ft

Estimated cost: 65,825 (\$)

Run Seq	Segment Length (ft)	Size (in)	Nominal Weight (lbs/ft)	Grade	End Finish	True Vert Depth (ft)	Measured Depth (ft)	Drift Diameter (in)	Est. Cost (\$)
4	700	5.5	17.00	L-80	Buttress	700	700	4.767	4745
3	3300	5.5	17.00	L-80	LT&C	4000	4000	4.767	20909
2	3500	5.5	17.00	J-55	LT&C	7500	7500	4.767	13560
1	4200	5.5	17.00	L-80	LT&C	11700	11700	4.767	26611

Run Seq	Collapse Load (psi)	Collapse Strength (psi)	Collapse Design Factor	Burst Load (psi)	Burst Strength (psi)	Burst Design Factor	Tension Load (kips)	Tension Strength (kips)	Tension Design Factor
4	1360	4831	3.55	4011	7740	1.93	198.9	397	2.00 B
3	2491	5423	2.18	3975	7740	1.95	187	338	1.81 J
2	3691	4417	1.20	3804	5320	1.40	130.9	247	1.89 J
1	5131	6290	1.23	3622	7740	2.14	71.4	338	4.73 J

Prepared W.M. Frank  
 by: Devon Energy

Phone: (405) 552-4595  
 FAX: (405) 552-4621

Date: April 8, 2001  
 Oklahoma City, Oklahoma

**Remarks:**

Collapse is based on a vertical depth of 11700 ft, a mud weight of 6.6 ppg. The casing is considered to be evacuated for collapse purposes. Collapse strength is based on the Westcott, Dunlop & Kemler method of biaxial correction for tension.

Burst strength is not adjusted for tension.

*Engineering responsibility for use of this design will be that of the purchaser.*

# **DEVON ENERGY CORPORATION**

## **HYDROGEN SULFIDE DRILLING OPERATIONS PLAN**

### **A. Hydrogen Sulfide Training**

All rig crews and company personnel will receive training from a qualified instructor in the following areas prior to penetrating any hydrogen sulfide bearing formations during drilling operations:

1. The hazards and characteristics of hydrogen sulfide (H<sub>2</sub>S).
2. The proper use and maintenance of the H<sub>2</sub>S safety equipment and of personal protective equipment to be utilized at the location such as H<sub>2</sub>S detection monitors, alarms and warning systems, and breathing equipment. Briefing areas and evacuation procedures will also be discussed and established.
3. Proper rescue techniques and procedures will be discussed and established.

In addition to the above, supervisory personnel will be trained in the prevention of oil and gas well blowouts in accordance with Minerals Management Service Standards Subpart - 0 - 250 - 212.

Prior to penetrating any known H<sub>2</sub>S bearing formation, H<sub>2</sub>S training will be required at the rig sight for all rig crews and company personnel that have not previously received such training. This instruction will be provided by a qualified instructor with each individual being required to pass a 20 question test regarding H<sub>2</sub>S safety procedures. All contract personnel employed on an unscheduled basis will be required to have received appropriate H<sub>2</sub>S training.

This Hydrogen Sulfide Drilling And Operations Plan shall be available at the wellsite during drilling operations.

### **B. H<sub>2</sub>S Safety Equipment And Systems**

All H<sub>2</sub>S safety equipment and systems will be installed, tested, and operational when drilling operations reach a depth approximately 500' above any known or probable H<sub>2</sub>S bearing formation. The safety systems to be utilized during drilling operations are as follows:

### 1. Well Control Equipment

- (a) Double ram BOP with a properly sized closing unit and pipe rams to accommodate all pipe sizes in use.
- (b) A choke manifold with a minimum of one remote choke.

### 2. H2S Detection And Monitoring Equipment

- (a) Three (3) H2S detection monitors will be placed in service at the location. One monitor will be placed near the bell nipple on the rig floor; one will be placed at the rig substructure; and, one will be at the working mud pits or shale shaker. This monitoring system will have warning lights and audible alarms that will alert personnel when H2S levels reach 10 ppm.
- (b) One (1) Sensidyne Pump with the appropriate detection tubes will also be available to perform spot checks for H2S concentrations in any remote or isolated areas.

### 3. Protective Equipment For Essential Personnel

Protective equipment will consist of the following:

- (a) Four (4) - five minute escape packs located at strategic points around the rig.
- (b) Two (2) - thirty minute rescue packs to be located at the designated briefing areas.

### 4. Visual Warning System

Visual warning system will consist of the following:

- (a) Two wind direction indicators.
- (b) One condition / warning sign which will be posted on the road providing direct access to the location. The sign will contain lettering of sufficient size to be readable at a reasonable distance from the immediate location. The sign will inform the public that a hydrogen sulfide gas environment could be encountered at the location.

5. Mud Program

The mud program has been designed to minimize the volume of H<sub>2</sub>S circulated to surface. Proper mud weight and safe drilling practices (for example, keeping the hole filled during trips) will minimize hazards when drilling in H<sub>2</sub>S bearing formations.

6. Metallurgy

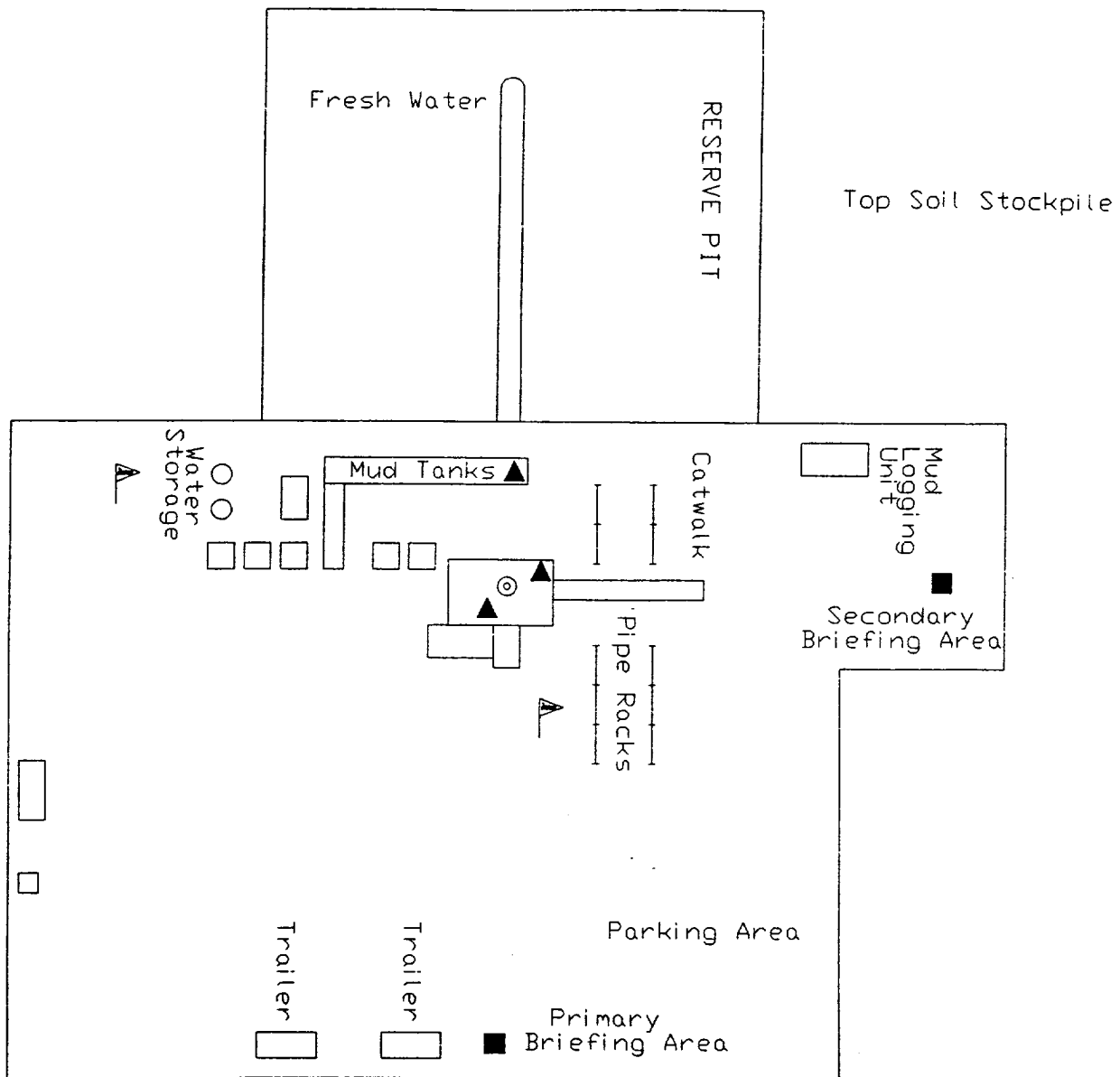
All drill strings, casings, tubing, wellhead, blowout preventers, drilling spools, kill lines, choke manifold and lines and valves shall be suitable for H<sub>2</sub>S service.

7. Communication

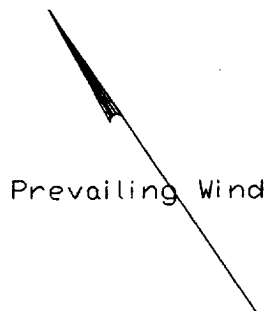
Cellular telephone communication will be available in company vehicles.


C. Diagram of Drilling Location

Attached is a diagram representing a typical location layout as well as the location of H<sub>2</sub>S monitors, briefing areas and wind direction indicators.



- ▲ H2S MONITORS WITH ALARMS AT THE BELL NIPPLE, SUBSTRUCTURE, AND SHALE SHAKER
- ▲ WIND DIRECTION INDICATORS
- SAFE BRIEFING AREAS WITH CAUTION SIGNS AND PROTECTIVE BREATHING EQUIPMENT





EDDY COUNTY, NEW MEXICO

## H2S PLAN

Scale in Feet

25      0      25      50      75      100



# NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

GARY E. JOHNSON  
Governor  
Jennifer A. Salisbury  
Cabinet Secretary

October 3, 2000

Lori Wrotenbery  
Director  
Oil Conservation Division

Ms. Charlene Newkirk  
Lease & Contract Records Supervisor  
Santa Fe Snyder Corporation  
840 Gessner, Suite 1400  
Houston, TX 77024-4142

Re: Change of Name - Santa Fe Snyder to Devon SFS Operating, Inc.

Dear Ms. Newkirk:

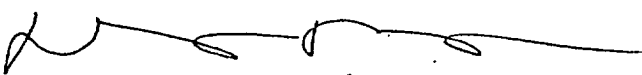
The New Mexico Oil Conservation Division hereby acknowledges receipt of the replacement bond No. 71S100753206-126 to replace St. Paul Fire and Marine Fire Insurance Company Bond No. 400 JF 5475. Before I can process the change, the name Devon SFS Operating, Inc. must be licensed to do business in the State of New Mexico with the Public Regulation Commission (505) 827-4511. *rec'd Certificate of authority 10/20/00 per Pat Gussler*

Secondly, enclosed are the new procedures implemented by the Oil Conservation Division for Change of Operator or Change of Name. Also enclosed is a spreadsheet of all the wells under OGRID 20305 which is the ID No. given to Santa Fe Snyder Corporation. The number will remain the same for Devon SFS Operating, Inc. Please work with the district office (s) where your wells are located for processing of the paperwork. (Hobbs - (505) 393-6161 Ext. 115, Donna Pitzer and Artesia (505) 748-1283 Carmen Reno.)

You will not submit a rider as you have submitted a replacement bond. Upon verification from the district(s) that the paperwork has been filed and verification that you are registered with the Public Regulation Commission, I will proceed with approval of the blanket bond No. 71S100753206-126 and release of Bond No. 400 JF 5475.

If you have any questions, please do not hesitate to contact me at (505) 827-7137.

Sincerely,

  
Dorothy Phillips  
Bond Administrator

Enclosures

*Took list to Teresa*  
**RECEIVED** 10/23/00  
OCT 10 2000  
LAND DEPARTMENT