

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES

PMB 2020
JOE FOSS BUILDING
523 EAST CAPITOL
PIERRE, SOUTH DAKOTA 57501-3182
www.state.sd.us/denr

May 1, 2013

Lawrence Bender Fredrikson & Byron, P.A. 200 North 3rd Street, Suite 150 Bismarck, ND 58501

Re: Oil and Gas Case No. 11-2013 - Approval of Continental Resources' Request to Drill Stafford 44-1H and Haise 41-1H wells

Dear Mr. Bender:

On March 25, 2013, we received your request to drill two horizontal wells (Stafford 44-1H and the Haise 41-1H) within the Buffalo Field, Harding County, SD, in areas not previously spaced for horizontal drilling, which was submitted on behalf of Continental Resources, Inc., Oklahoma City, OK. Applications for permits to drill the Stafford 44-1H and the Haise 41-1H wells were received by the department on March 8, 2013 and April 17, 2013, respectively. The proposed wells are described as the Stafford 44-1H, with a surface location 750 feet from the south line and 220 feet from the east line, and a bottom hole location 850 feet from the north line and 680 feet from the west line; and the Haise 41-1H, with a surface location 850 feet from the north line and 680 feet from the west line; both wells being in Section 1, Township 21 North, Range 3 East, approximately 17 miles northwest of Buffalo, Harding County, SD.

The department published a Notice of Recommendation, Oil and Gas Case No. 11-2013, recommending conditional approval of the Stafford 44-1H and the Haise 41-1H permit applications. The date for intervention was April 26, 2013, and no parties petitioned the Board of Minerals and Environment for a hearing on the application by the deadline.

Therefore, in accordance with the Administrative Rules of South Dakota 74:12:02:02 and 74:12:09, conditional approval of the permit applications is hereby granted. Enclosed are the approved applications for permit to drill and permit conditions for the Stafford 44-1H and the Haise 41-1H wells.

Sincerely,

Robert Townsend, Administrator Minerals and Mining Program

Lent Townsend

Enclosures



Reenter Well Drill Directional Well

Type of work:

Other:

Drill New Well

DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES Minerals & Mining Program 2050 West Main, Suite #1, Rapid City, SD 57702-2493 Telephone: 605-773-4201, FAX: 605-394-5317 RECEIVED
MAR 0 8 2013

DEPT OF ENVIRONMENT & NATURAL RESOURCES - RAPID CITY

Injection

APPRICATION FOR PERMIT TO DRILL

Type of well:

✓ Oil Well

Other:

Gas Well

Mr. 77 35 1783	Name and Address of Operator:					Telephone:	
Continental Resources, Inc., P.O. Box 268870, Oklahoma City, OK 73126						405-234-9000	
Vame and Addr	ess of Surface Owne	er:					
Bill & Shirley Cla	irkson, 12233 Rasmi	us Road, Buffalo, SD	57750				
Name and Addr	ess of Drilling Contr	ractor and Rig Numb	er:				
yclone Drilling	, Inc. #1, P.O. Box 90	08, Gillette, WY 8271	7-0908				
urface Locatio	n of well: Qtr-Qtr, S	ec, Twp, Rge, Count	y, feet from	nearest lines of sectio	n, and latitude and longitude	(if available):	
ESE Sec 1 T21N	NR3E, Harding Co., 7	750' FSL & 220' FEL;	Lat: 45 48 27	7.695; Long: -103 41 1	4.945		
f Directional, to	op of pay and botton	n hole location from i	nearest lines	of section:			
op of Pay: 761	FSL & 701' FEL Sec	1 T21N R3E; BHL: SV	NSW Sec 1 T	21N R3E 850' FSL & 6	80' FWL		
cres in Spacin	g (Drilling) Unit:		Descr	iption of Spacing Unit	•		
20			S/2 Se	c 1 T21N R3E			
Well Name and	d Number: Elevation: Field and Pool, or Wildcat: Proposed Dept		Proposed Depth and Forn	and Formation:			
Staffo	ord 44-1H	3050' FRGE	Buffalo		12,755' MD; Red River "B"		
Size of Hole:	Size of Casing:	Weight per Foot:	Depth:	Cementing Program	m (amount, type, yield, additives)		
13 1/2	9 5/8	36	1500	678 sks Type III			
) 8 3/4)	/	23, 26, 29	8851	520 sks 60/40 Type III/Pozz, Class G			
)							
	sed Operations (Clea). Use additional pag		t details, and	I give pertinent dates,	including estimated date of s	tarting any	
pproximately	to the top of the Sili	urian Interlake forma	ation. From t		Co., S. Dakota. The well will b ole at 12 deg/100 ft BUR to a	oe drilled vertica	
				roximately at the top	of the Red River "B" porosity begin dirt work is 03/10/20	an azimuth of 27 vzone. The latera	
vill then be dril	lled to a BHL of 850'	FSL & 680' FWL of Se	ec 1 T21N R	roximately at the top	of the Red River "B" porosity begin dirt work is 03/10/20	an azimuth of 27 vzone. The latera	
vill then be dril it Liner Specifi	lled to a BHL of 850' cations: A 12 mil pla	FSL & 680' FWL of So astic liner will be use	ec 1 T21N Ri	roximately at the top BE. Estimated date to cuttings pit during d	of the Red River "B" porosity begin dirt work is 03/10/20	an azimuth of 27 / zone. The latera 13.	
vill then be dril it Liner Specifi	lled to a BHL of 850' cations: A 12 mil pla	r FSL & 680' FWL of So estic liner will be used s to any work or oper Terry L. Olson	ec 1 T21N R: d to line the ration perfor	roximately at the top BE. Estimated date to cuttings pit during d med is a true and corr Reg. Co	of the Red River "B" porosity begin dirt work is 03/10/20 rilling operations. ect report of such work or operations.	an azimuth of 27 y zone. The latera 13. eration.	
vill then be dril it Liner Specifi	cations: A 12 mil pla that the foregoing a	r FSL & 680' FWL of So estic liner will be used s to any work or operatory L. Olson	ec 1 T21N Rid to line the ration perfor	roximately at the top BE. Estimated date to cuttings pit during d med is a true and corr Reg. Co	of the Red River "B" porosity begin dirt work is 03/10/20 rilling operations. ect report of such work or op	an azimuth of 27 y zone. The latera 13. peration.	
vill then be dril	cations: A 12 mil pla that the foregoing a	r FSL & 680' FWL of So estic liner will be used s to any work or operatory L. Olson	ec 1 T21N Rid to line the ration perfor	roximately at the top BE. Estimated date to cuttings pit during d med is a true and corr Reg. Co	of the Red River "B" porosity begin dirt work is 03/10/20 rilling operations. ect report of such work or operations.	an azimuth of 27 y zone. The latera 13. eration.	
vill then be dril	cations: A 12 mil pla that the foregoing a	r FSL & 680' FWL of Sonstic liner will be used as to any work or open Terry L. Olson	ec 1 T21N Rid to line the ration perfor	roximately at the top BE. Estimated date to cuttings pit during d med is a true and corr Reg. Co	of the Red River "B" porosity begin dirt work is 03/10/20 rilling operations. ect report of such work or operations.	an azimuth of 27 y zone. The latera 13. eration.	
vill then be dril	cations: A 12 mil pla that the foregoing a	r FSL & 680' FWL of Sonstic liner will be used as to any work or open Terry L. Olson	d to line the ration perfor Name (Print OR OFFIC Title	roximately at the top BE. Estimated date to cuttings pit during d med is a true and corr Reg. Co	of the Red River "B" porosity begin dirt work is 03/10/20 rilling operations. ect report of such work or op ompliance Spec. Title	an azimuth of 27 y zone. The latera 13. eration.	
then be drived the second of t	cations: A 12 mil pla that the foregoing a	restic liner will be used to any work or operatory L. Olson F API No.: 40	d to line the ration perfor Name (Print OR OFFIC Title	roximately at the top BE. Estimated date to cuttings pit during d med is a true and corr Reg. Co	of the Red River "B" porosity begin dirt work is 03/10/20 rilling operations. ect report of such work or op ompliance Spec. Title	an azimuth of 27 y zone. The latera 13. Determinent in the latera in th	



DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES

PMB 2020 JOE FOSS BUILDING **523 EAST CAPITOL** PIERRE, SOUTH DAKOTA 57501-3182

www.state.sd.us/denr

PERMIT CONDITIONS

CRI: Stafford 44-1H 21N-3E-1 SESE, Harding County

Permit: #2030 API: 40 063 20744

Approval has been granted to drill this location as detailed on the attached Application for Permit to Drill (Form #2) with the following additional conditions:

- 1. This permit is conditioned on compliance with all applicable requirements of South Dakota Codified Laws 45-9 and Administrative Rules of South Dakota 74-12.
- 2. A 12-mil woven, reinforced high-density polyethylene liner must be used on all pits.
- 3. Surface runoff must be diverted around the drill site.
- 4. The surface hole must be drilled with fresh water.
- 5. Cement must be circulated to the ground surface on the surface casing.
- 6. If horizontally drilled:
 - A. The coordinates of the production casing shoe and the well terminus must be filed with the department.
 - B. The azimuth of the horizontal segment of the well must be filed with the department along with the results of periodic down hole surveys.
- 7. If production casing (long string) is set:
 - A. The cement program approved as submitted with the application shall be followed.
 - B. A cement bond log must be run and filed with the department within 60 days after completion of the well as required by Administrative Rules of South Dakota 74:12:02:12.
- 8. If abandoned, a plugging plan must be submitted to the department for review and approval. The plugging plan should address all requirements found in Administrative Rules of South Dakota 74:12:03.
 - A. If production casing is left in the wellbore, a mechanical integrity test must be conducted to verify the integrity of the casing as required by rule 74:12:03:02(4)(b)(ii).
 - B. The casing string must be cut off at least three feet below the final ground surface contour. A plate with the name of the operator, well name and number, and legal location by quarter-quarter section, township and range must be welded to the casing stub. The location of the abandoned well must be surveyed with high resolution global positioning system equipment or other appropriate survey methods sufficient to accurately locate the well. Survey coordinates must be included in the final abandonment report.
- 9. Surface reclamation of the site must be completed within one year of plugging and abandoning the well.
- 10. Interim reclamation must be completed within one year after site is completed in accordance with Administrative Rules of South Dakota 74:12:03:07.
- 11. A washed set of sample cuttings (or cores, if cut) must be shipped, free of charge, to:

Derric Iles Geological Survey Program Akeley-Lawrence Science Center University of South Dakota 414 E. Clark Street Vermillion, SD 57069-2390

12.	Please notify this office prior to plugging or MIT so a witness can be on location. will occur after regular business hours, call Jeff Klenner at (605) 929-1414.	If plugging or MIT



RECEIVED MAY 0 1 2013

DEPT OF ENVIRONMENT & NATURAL RESOURCES - RAPID CITY

State of Environment Department of Environment

Type of work: ☑Drill New Wel ☐Other:	Drill New Well Reenter Well Drill Directional Well				☐Gas Well	∏Injection	
Name and Address of Operator: Telephone:					e:		
Continental Res	Continental Resources, Inc., P.O. Box 268870, Oklahoma City, OK 73126 405-234-9000					-9000	
Name and Addre	ess of Surface Owner	r:					
Clarkson & Company, Shirley & Bill Clarkson, 12233 Rasmus Rd., Buffalo, SD 57750							
Name and Address of Drilling Contractor and Rig Number:							
Cyclone Drilling	, Inc., #1, P.O. Box 9	08, Gillette, WY 827	17-0908				
				nearest lines of section, 04.18; Long: -103 41 14		ongitude (if availab	le):
If Directional, top of pay and bottom hole location from nearest lines of section: Top of Pay: 861' FNL & 707' FEL NENE Sec 1 T21N R3E; BHL: NWNW Sec 1 T21N R3E 950' FNL & 680' FWL							
Acres in Spacing	g (Drilling) Unit:		Descri	ption of Spacing Unit:		7 - A 4 mills - Mill	
320				ec 1 T21N R3E			
Well Name and	Number:	Elevation:	Field and P	ool, or Wildcat:	Proposed Depth	and Formation:	
Haise Fe	Haise Federal 41-1H 3129' FRGE Buffalo 12,847' MD; Red River "B"						
Size of Hole: 1) 13 1/2"	Size of Casing:	Weight per Foot:	Depth:	Cementing Program (amount, type, yiel	d, additives)	Depth:
1) 13 1/2 2) 8 3/4"	9 5/8 " 7"	36# 23, 26, & 29#	1500' 8956'	678 sks; Type III 530 sks; 60/40 Type III,	. Class G		1500' 8956'
3) 4)	3)						
Describe Proposed Operations (Clearly state all pertinent details, and give pertinent dates, including estimated date of starting any proposed work). Use additional page(s) if appropriate.							
The Haise Feder	ral 41-1H is a horizor	ntal Red River "B" we	ell located in	Sec 1 T21N R3E, Hardi	ng County, SD. Th	ne well will be drille	ed l
vertically to app	proximately 8206' TV	/D. From this point,	an 8 3/4" ho	le at 12 deg/100 ft BUR	to an azimuth of	269 degrees will b	e drilled
through which the 7" casing will be set approximately at the top of the Red River "B" porosity zone. The lateral will then be drilled to a BHL of 950' FNL & 680' FWL of Sec 1 T21N R3E. Estimated date to begin dirt work is 4/30/2013.							
and the second s							
Pit Liner Specifications: A 12 mil plastic liner will be used to line the cuttings pit during drilling operations.							
I hereby certify that the foregoing as to any work or operation performed is a true and correct report of such work or operation.							
Terry L. Olson Reg. Compliance Spec. 4/30/2013							
Signature Name (Print) Title Date							
FOR OFFICE USE ONLY							
Approved By: _ Chat James Title: Administrator Mining Pra.							
Permit No.: 2031 API No.: 40 063 20745 Date Issued: 5/1/7013							
Conditions, if any, on attached page.							



DEPARTMENT of ENVIRONMENT and NATURAL RESOURCES

PMB 2020 JOE FOSS BUILDING 523 EAST CAPITOL PIERRE, SOUTH DAKOTA 57501-3182

www.state.sd.us/denr

PERMIT CONDITIONS

CRI: Haise Federal 41-1H 21N-3E-1 NENE, Harding County

Permit: #2031 API: 40 063 20745

Approval has been granted to drill this location as detailed on the attached Application for Permit to Drill (Form #2) with the following additional conditions:

- 1. This permit is conditioned on compliance with all applicable requirements of South Dakota Codified Laws 45-9 and Administrative Rules of South Dakota 74-12.
- 2. A 12-mil woven, reinforced high-density polyethylene liner must be used on all pits.
- 3. Surface runoff must be diverted around the drill site.
- 4. The surface hole must be drilled with fresh water.
- 5. Cement must be circulated to the ground surface on the surface casing.
- 6. If horizontally drilled:
 - A. The coordinates of the production casing shoe and the well terminus must be filed with the department.
 - B. The azimuth of the horizontal segment of the well must be filed with the department along with the results of periodic down hole surveys.
- 7. If production casing (long string) is set:
 - A. The cement program approved as submitted with the application shall be followed.
 - B. A cement bond log must be run and filed with the department within 60 days after completion of the well as required by Administrative Rules of South Dakota 74:12:02:12.
- 8. If abandoned, a plugging plan must be submitted to the department for review and approval. The plugging plan should address all requirements found in Administrative Rules of South Dakota 74:12:03.
 - A. If production casing is left in the wellbore, a mechanical integrity test must be conducted to verify the integrity of the casing as required by rule 74:12:03:02(4)(b)(ii).
 - B. The casing string must be cut off at least three feet below the final ground surface contour. A plate with the name of the operator, well name and number, and legal location by quarter-quarter section, township and range must be welded to the casing stub. The location of the abandoned well must be surveyed with high resolution global positioning system equipment or other appropriate survey methods sufficient to accurately locate the well. Survey coordinates must be included in the final abandonment report.
- 9. Surface reclamation of the site must be completed within one year of plugging and abandoning the well.
- 10. Interim reclamation must be completed within one year after site is completed in accordance with Administrative Rules of South Dakota 74:12:03:07.
- 11. A washed set of sample cuttings (or cores, if cut) must be shipped, free of charge, to:

Derric Iles Geological Survey Program Akeley-Lawrence Science Center University of South Dakota 414 E. Clark Street Vermillion, SD 57069-2390

12.	Please notify this office prior to plugging or MIT so a witness can be on location. will occur after regular business hours, call Jeff Klenner at (605) 929-1414.	If plugging or MIT