

2nd MODIFIED DECISION RECORD
Yates Petroleum Corporation (YPC), Sirocco II Plan of Development (POD)
Environmental Assessment (EA), WY-070-EA12-004
Bureau of Land Management, Buffalo Field Office, Wyoming

This is a 2nd modified decision record; it is not a new decision record. This 2nd modified decision record augments the decision record for 2 specific applications for permit to drill (APDs) which BLM denied, then the WY State Office (WSO) remanded. BLM supports this 2nd modified decision record through State Director Review (SDR) WY-2014-019, incorporated here by reference.

Compliance. This decision complies with:

- Federal Land Policy and Management Act of 1976 (FLPMA) (43 USC 1701); DOI Order 3310.
- Mineral Leasing Act of 1920 (30 U.S.C. 181) and 43 CFR Part 3160 to include On Shore Order No. 1.
- Buffalo FEIS (1985), and PRB FEIS and Record of Decision (ROD) 2003.
- Buffalo Resource Management Plan (RMP), 1985, Amendments 2001, 2003, 2011.

The Selected Alternative.

Features. BLM approved the EA as summarized in the earlier decision record of June 19, 2012 then augmented by a modified decision record of November 16, 2012 as described in the EA and the decisions. The BLM approved 28 coalbed natural gas (CBNG), 2 water injection APDs, a water management plan (WMP), and rights-of-way. BLM deferred 6 APDs pending feedback on how to mitigate their adverse environmental effects. Yates provided, BLM analyzed that feedback, and approved those 6 APDs. YPC requested an extension of the 36 approved APDs on December 5, 2013 which BLM granted on February 3, 2014. (BLM repeats all the earlier approved APDs here for convenience and continuity).

Well Sites. BLM approved the following 34 CBNG and 2 water injection* APDs and support facilities:

#	Well Name	Well #	Qtr/Qtr	Sec.	Township	Range	Lease #
1	SIROCCO II CLOUDBURST CS FED	1	NENW	31	46N	77W	WYW129554
2	SIROCCO II DRAFT CS FED	1	NWSE	27	46N	77W	WYW146305
3	SIROCCO II DRAFT CS FED	2	NESW	27	46N	77W	WYW146305
4	SIROCCO II DRAFT CS FED	4	SESE	27	46N	77W	WYW146305
5	SIROCCO II DRAFT CS FED	5	NENE	28	46N	77W	WYW146305
6	SIROCCO II DRAFT CS FED	6	SWNE	28	46N	77W	WYW146305
7	SIROCCO II DRAFT CS FED	11	NENE	29	46N	77W	WYW146305
8	SIROCCO II DRAFT CS FED	13	NESE	29	46N	77W	WYW146305
9	SIROCCO II DRAFT CS FED	15	NENW	33	46N	77W	WYW146305
10	SIROCCO II DRAFT CS FED	16	SWNW	33	46N	77W	WYW146305
11	SIROCCO II DRAFT CS FED	18	NESE	33	46N	77W	WYW146305
12	SIROCCO II DRAFT CS FED	19	NESW	33	46N	77W	WYW146305
13	SIROCCO II SIROCCO S&R FED*	8	NESW	29	46N	77W	WYW134919
14	SIROCCO II WHISK S&R FED*	14	SENE	32	46N	77W	WYW130108
15	SIROCCO II SIROCCO CS FED	5	NESW	29	46N	77W	WYW134919
16	SIROCCO II SIROCCO CS FED	4	SWNW	29	46N	77W	WYW134919
17	SIROCCO II SIROCCO CS FED	3	NENW	29	46N	77W	WYW134919
18	SIROCCO II SIROCCO CS FED	6	SWSW	29	46N	77W	WYW134919
19	SIROCCO II WHISK CS FED	3	NESE	31	46N	77W	WYW130108
20	SIROCCO II WHISK CS FED	2	SWNE	31	46N	77W	WYW130108
21	SIROCCO II WHISK CS FED	1	NENE	31	46N	77W	WYW130108
22	SIROCCO II WHISK CS FED	7	SWNW	32	46N	77W	WYW130108

#	Well Name	Well #	Qtr/Qtr	Sec.	Township	Range	Lease #
23	SIROCCO II WHISK CS FED	10	NESW	32	46N	77W	WYW130108
24	SIROCCO II WHISK CS FED	12	SWSE	32	46N	77W	WYW130108
25	SIROCCO II WHISK CS FED	11	SWSW	32	46N	77W	WYW130108
26	SIROCCO II WHISK CS FED	9	NESE	32	46N	77W	WYW130108
27	SIROCCO II DRAFT CS FED	12	SWNE	29	46N	77W	WYW146305
28	SIROCCO II WHISK CS FED	8	SWNE	32	46N	77W	WYW130108
29	SIROCCO II WHISK CS FED	5	NENE	32	46N	77W	WYW130108
30	SIROCCO II SIROCCO CS FED	7	SWSE	29	46N	77W	WYW134919
31	SIROCCO II DRAFT CS FED	3	SWSW	27	46N	77W	WYW146305
32	SIROCCO II DRAFT CS FED	7	NESE	28	46N	77W	WYW146305
33	SIROCCO II DRAFT CS FED	9	SWSW	28	46N	77W	WYW146305
34	SIROCCO II DRAFT CS FED	10	SWSE	28	46N	77W	WYW146305
35	SIROCCO II DRAFT CS FED	14	NENE	33	46N	77W	WYW146305
36	SIROCCO II DRAFT CS FED	17	SWNE	33	46N	77W	WYW146305

Limitations: See the modified conditions of approval (COAs). The analysis in the EA and DR (June 19, 2012) concerning the WMP, to include but not limited to the status and bonding of Bobs Pit, and rights-of-way remains unchanged from that analysis and decision.

Deferred APDs (2 APDs). BLM defers the following CBNG APDs and associated infrastructure:

#	Well Name Well #	Qtr/Qtr	Sec.	Township	Range	Lease #
1	SIROCCO II SIROCCO CS FED 2 (SF2)	SWNW	28	46N	77W	WYW134919
2	SIROCCO II WHISK CS FED 6 (WF6)	NENW	32	46N	77W	WYW130108

#	Well Name Well #	Environmental Issue/Justification
1	SIROCCO II SIROCCO CS FED 2 (SF2)	SDR WY-2014-019, pp. 2-4 and see below.
2	SIROCCO II WHISK CS FED 6 (WF6)	SDR WY-2014-019, pp. 4-5 and see below.

APD Names, #s	Environmental Issue/Deficiency	Remedy
SIROCCO II SIROCCO CS FED 2 (SF2)	<p>1. SDR WY-2014-019, p.3: BLM recommended removing the APD since the area will receive adequate draining by proposed adjacent YPC wells. Yet, there was no oil and gas drainage determination or evidence YPC had any opportunity to rebut BLM’s claim.</p> <p>2. SDR WY-2014-019, p.3: BLM’s EA, pp. 29-31 noted a discrepancy between what YPC proposed and what is available on the ground to create a safe work site. YPC did not provide BLM with a requested well-site layout diagram. There is no documentation that YPC had an opportunity to rebut the safe work-site discrepancy; to wit, “does not provide adequate turn around” . . .”whether there is enough working area for either . . . the</p>	<p>1. BLM no longer considers the potential for overlapping drainage is relevant to the BLM’s analysis. BLM finds that YPC’s proposal for this situation complies with the State of WY’s fluid mineral spacing order.</p> <p>2.a. YPC will provide BLM with a well-site layout diagram per Onshore Oil and Gas Order No. 1 standards and to scales that shows enough working space for adequate turn around, to construct SF2 pad, drill, and produce the SF2.</p>

APD Names, #s	Environmental Issue/Deficiency	Remedy
	<p>75 foot wide road and pipeline corridor or . . . not enough room at the APD’s well location for the operator’s well site layout.”. See also; YPC Skyward, SDR WY-2006-011, pp. 17-18 (for the premise that, “[t]he BFO correctly concluded that worker safety and the likelihood that areas consisting of fragile soils and steep slopes could not be properly or economically restored are more important than the loss of revenue to the lessee and royalty to the federal government”).</p> <p>3. The proposed access road to SF2 is on 25-45% slopes with highly erosive soils, limited reclamation potential (LRP) areas, miscellaneous areas, badlands, drainages head cuts with final reclamation bordering on difficult, highly unlikely, if not impossible to achieve; EA, pp. 29, 33.</p> <p>4. This clarifies and reduces to a non-issue regarding SF2 from SDR WY-2014-019, p. 4, para 3 which reads in part, “The EA states that access road alternatives were identified in the field . . .”</p>	<p>3.a. YPC will submit access road mitigation and site specific reclamation plan for the proposed access road to SF2; mitigation proposals should consider but are not limited to a geotechnical analysis (see paragraphs following this table) of the access road, engineering and staking the proposed road, and a site specific reclamation plan for the SF2 pad and access road.</p> <p>3.b. BLM will, upon receipt of the access road mitigation and site specific reclamation plan (with or without a geotechnical analysis), and well-site layout diagram (2 above), conduct a NEPA analysis.</p> <p>4. BLM did not identify access alternatives to the SF2.</p>
SIROCCO II WHISK CS FED 6 (WF6)	<p>5. BLM identified 3 alternative sites for the WF6, per its 200 meter reasonable discretion, 43 CFR 3101.1-2, EA pp. 29-32; yet YPC refused all of the 3. BLM did not analyze its “reasonable measures” regulatory authority to move APDs as proposal alternatives.</p>	<p>5.a. YPC will provide BLM with a geotechnical analysis for its proposed WF6 site; or, as an option, BLM identified the following 3 alternative locations for the WF6 which have no issues.</p> <p>1) Move 430 feet south, UTM coordinates (13T 0408213 4863586), from the original WF6 proposal to avoid rock outcrop, slopes in excess of 25%, drainages head cuts, and very shallow soils and reduce road to a template design and reduce future reclamation.</p> <p>2) Move south 240 feet, UTM coordinates (13T 0408210 4863641), from the original WF6 proposal to avoid, rock outcrop, slopes</p>

APD Names, #s	Environmental Issue/Deficiency	Remedy
		<p>in excess of 25%, drainages, head cuts, very shallow erodible soils, reduce the road to a template and reduce future reclamation.</p> <p>3) Move west 365 feet, UTM coordinates (13T 0408102 4863730), from the original WF6 proposal along main road to eliminate engineered pad, engineered road, and reduce future reclamation.</p> <p>5.b. BLM will perform an analysis of the proposed WF6 site and the 3 alternative WF6 site locations, above. In an event that BLM approves 1 or more of the alternative sites for a location for the WF6 APD, then;</p> <p>5c. YPC may submit a modified APD package for the WF6, if so modified, for an approved well site – any such modified APD package must modify the footages, surface use, drilling plans, and other affected components of the WF6 APD package to an approved APD location with the BLM’s discretion to move an APD. BLM may likely be unable to make a decision on the WF6 APD without a modified APD package that reflects a proposal’s actual approved location.</p>

The SIROCCO II SIROCCO CS FED 2 (SF2) and SIROCCO II WHISK CS FED 6 (WF6) wells, pads and roads are deferred. BLM identified and determined the sites to be of uncertain stability and require additional information and analysis before being approved, constructed, and subjected to load bearing traffic; see WY-SDR-2014-019, pp. 2-5 and EA, pp. 29-35. The Powder River Basin EIS reads, “It may not be feasible or possible to build the road where slopes are steep and the rock or soil material is weak. In these cases, alternative road locations should be considered. Sites [determined] to be of uncertain stability should be reviewed by a Geotechnical Specialist before they are used. Those sites where emerging ground water, thick organic layers, unstable geology, or other instability factors are present should not be used.” If required by the BLM the operator will submit a geotechnical investigation plan including the location of all borings and any surface disturbance identified on a map to BLM. Prior to initiation of the geotechnical investigation and following review by the BLM ID team, BLM will notify the operator to proceed with the geotechnical analysis. The extent and detail of the geotechnical investigation required should be determined by a licensed professional engineer competent in geotechnical engineering. The investigation should be submitted to the BLM and consider the following:

- The analysis should include distribution of bedrock and surficial deposits, outcrops, in-situ slope stability, discontinuities, structural features, ground-water occurrence and behavior, potential sliding, current failures, and observed and potential geologic hazards.
- The geotechnical analysis should also include a narrative description of surficial deposits, specifying engineering properties, especially those that can affect design or construction. These descriptions may include, but are not restricted to, soil structure, composition, cohesion, internal friction, the presence of

swelling materials, low-density materials, gypsum and other sulfates, caliche, dispersive soils, loose deposits subject to liquefaction or consolidation, and erodible materials.

A minimum of three exploratory holes or test pits will be made per site to a depth suitable to determine geologic conditions affecting slope stability (i.e. bed rock). All drill hole and test pit logs must show moisture condition, soil classification, and depth.

Following completion of the geotechnical investigation and analysis, the operator will submit proper mitigation measures, based on a professional geotechnical engineer's recommendation, to alleviate the stress that load bearing traffic would impose upon the native materials and prevent slope failure.

THE MODIFIED FINDING OF NO SIGNIFICANT IMPACT (FONSI). The FONSI found no significant impacts, thus an EIS was not required. The FONSI and Modified FONSI for WY-070-EA12-004, incorporated here by reference, considered the new and additional information, analysis, and rationale and found no significant impact on the human environment aside from those disclosed in the PRB FEIS so there is no requirement for an EIS or a 2nd Modified FONSI.

COMMENT OR NEW INFORMATION SUMMARY. The BLM received updated and clarified information via WY-SDR-2014-019.

DECISION RATIONALE. BLM bases this 2nd modified decision record on:

1. The denial of SIROCCO CS FED 2 and WHISK CS FED 6APDs was remanded via WY SDR-2014-019 in order to comply with Onshore Oil and Gas Order No. 1, E.2.b.2. and 3, and E.2.c.
2. YPC is required to furnish further information to the BLM in order that BLM may comply with Onshore Oil and Gas Order No.1, above, and see pp. 2-5, above.
3. BLM's and the State of Wyoming's experience in the PRB is that as the CBNG development matures to the final reclamation, plug, and abandon phase, it is the most challenging phase for it is not uncommon for operators to minimize or attempt to skip final reclamation – leaving the governments with liabilities. This experience results in BLM's recommendation of development features with high reclamation potential over the locations of features in areas with the potential of reclamation being highly unlikely or impossible.
4. BLM is required to provide further information, to give YPC the opportunity to rebut some information, and BLM must provide analysis prior to making decisions on SF2 and WF6; see, pp. 2-5, above.
5. BLM incorporates by reference here the similar soils, steep slope, limited reclamation potential, lack of reclamation potential, geotechnical analysis, highly erodible soils, unnecessary or undue degradation, their mitigation analyses and rationales from:
 - a. Culp Draw Deep South, WY-070-390CX3-13-169, -185, -186, -187, & -188, 2014;
 - b. Elsie POD EA, WY-070-EA11-194, 2012, and SDR WY-2013-003 (affirmed and clarified in parts), 2013 (especially noting the EA's requirement for geotechnical analyses);
 - c. SDR WY-2011-022 (Neo), p. 5, to include but not limited to: “[The] surface use plan is very generic in several areas. . . . It is impossible to analyze a contingent event. Surface use plans by their very nature need to be as exact as possible. The BFO should not hesitate to ask for more detailed information if necessary prior to approving a POD. Additional need for surface disturbance must be requested in writing by the operator and is subject to the approval of the authorized officer.”
 - d. SDR WY-2011-021 and 2010-026 Part 2 (Williams Draw Unit Gamma and Delta) pp. 8-18;
 - e. SDR WY-2009-17 Part 3 (Augusta Unit Zeta), p. 18;
 - f. SDR WY-2006-12 (Nemesis), pp. 15-17 to include but not limited to: “Section 6 of the standard lease form (Form 3100-11) recognizes the right of the lessor to require the lessee to take

reasonable interim and final reclamation measures. Also, avoidance of sensitive soils by CBNG operations is consistent with programmatic mitigation found in the PRB ROD. The ROD states, "Areas of highly erosive soils will be avoided when drill sites, two-track access routes, and pipeline routes are surveyed and staked in order to substantially reduce the amount of soil loss," PRB FEIS Record of Decision, A-31.

1. And; "43 CFR 3162.5-1(b) specif[ies] operators shall exercise due care and diligence to assure leasehold operations do not result in undue damage to surface resources. Even if we assume that the construction of roads and development of well sites within a leasehold may cause necessary and due degradation, if after constructing these facilities, reclamation cannot be achieved consistent with the regulations, Onshore Order No. 1, the goals in the BLM WY Reclamation Policy and the Gold Book, and to ensure safe ingress and egress to the facilities, it becomes unnecessary and undue degradation."
 2. In addition to: "If Yates can submit an acceptable site-specific reclamation plan and also find (construct) a safe access route, we believe it is possible that the BFO could eventually approve the subject two APDs. Also, as the subject EA indicates, other options are available . . . which would allow more flexibility in well placement. While we encourage the BFO to continue to work with Yates to find solutions to the reclamation and safety issues, we will not make it a requirement of this decision."
 3. And; "The PRB FEIS supports the BFO decision to deny these [features] and associated access because of erosive soils and poor reclamation potential. The FEIS specifies that construction of wells, roads, and production facilities will be avoided on steep slopes whenever possible, especially on soils that are susceptible to erosion (FEIS at 4-135). The PRB FEIS also discloses certain soil series have characteristics indicating the soils would respond poorly to reclamation (FEIS at 4-141 & 149). Some of the soils series which exist within the Nemesis POD include a badlands component [map citation omitted]. . . . The construction of [features] can be considered necessary or due degradation. Construction of [features] in poor, erosive soils with little reclamation potential would constitute unnecessary or undue degradation
- g. SDR WY-2006-11 (Skyward), pp. 17-18 to include but not limited to: "It appears an access route to the three wells was considered and discussed . . . during the pre-disturbance on-site inspection, however, the "company did not follow-up by providing information necessary to adequately analyze that alternative" (EA at 8), therefore, this alternative was not pursued".

ADMINISTRATIVE REVIEW AND APPEAL: This decision is subject to administrative review in accordance with 43 CFR 3165. Request for administrative review of this decision must include information required under 43 CFR 3165.3(b) (State Director Review), including all supporting documentation. A request must be filed in writing with the State Director, Bureau of Land Management, P.O. Box 1828, Cheyenne, Wyoming 82003, no later than 20 business days after this Decision Record is received or considered to have been received. Any party who is adversely affected by the State Director's decision may appeal that decision to the Interior Board of Land Appeals, as provided in 43 CFR 3165.4.

Field Manager: _____/s/Duane W. Spencer_____

Date: _____8/26/14_____