

**U.S. Department of the Interior
Bureau of Land Management**

DOI-BLM-UT-G010-2014-0247-EA

**Final Environmental Assessment Crescent Point Energy US
Corp. Proposal to Drill Three Wells from Three New Well Pads
Horseshoe Bend Unit, Uintah County, Utah June 2015**

PREPARING OFFICE

U.S. Department of the Interior
Bureau of Land Management



DOI-BLM-UT-G010-2014-0247-EA
Final Environmental Assessment
Crescent Point Energy US Corp.
Proposal to Drill Three Wells
from Three New Well Pads
Horseshoe Bend Unit, Uintah County, Utah
June 2015

Prepared by

U.S. Department of the Interior
Bureau of Land Management

Location: Sections 28 and 29 Township 6 South, Range 21 East; Uintah County,
Utah

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Denver, CO

U.S. Department of the Interior

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Finding of No Significant Impact

Finding of No Significant Impact:

Based on the analysis of potential environmental impacts DOI-BLM-UT-G010-2014-0247-EA, I have determined that the proposed action will not have any significant impacts on the environment, and an environmental impact statement is not required.

Signatures:

Recommended by:

	Branon Rochelle	[Date]
	Natural Resource Specialist	

Approved by:

Jerry Kenczka	Authorized Officer AFM for Minerals	June 19, 2015
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Decision Record - Memorandum

Selected Action:

It is my decision to approve the Crescent Point Energy's (CP) proposal to develop three wells from two new pads within the Horseshoe Bend Unit, Uintah County, Utah. The development would occur on BLM-administered land.

CP's Proposed Action includes the following components as depicted in Table 1:

- Drilling of 3 new wells (Table 1, Appendix B), including:
 - 3 new wells from two new well pads (10.48 acres).
- Installation of approximately 3,013.3 feet of new surface gathering lines to collect and transport fluids from the wells
- Construction of approximately 2,871.5 feet (1.98 acres) of new access roads and re-routes of existing roads.

Applicant Committed Measures:

This decision is contingent on meeting all stipulations and monitoring requirements listed below, which were designed to minimize and/or avoid impacts.

Table 1. Applicant Committed Measures

Well Pad/Area	Resource	Conditions of Approval
	Threatened, Endangered, Candidate, and Special Status Animal Species - Yellow-billed Cuckoo <i>Coccyzus americanus</i>	<p>The following COAs and mitigation measures for <i>Coccyzus a,erocamus</i>:</p> <ul style="list-style-type: none"> • Noise from well pad would not exceed 10dBA above ambient conditions at the edge of Yellow-billed cuckoo nesting habitat, during construction and operation activities. • Construction and development activities would be prohibited during Yellow-billed cuckoo breeding and nesting period, from 6/15 through 8/31.
All proposed well pads and developments in the Project Area	Fish and Wildlife – Migratory Birds	<ul style="list-style-type: none"> • Bird exclusion netting will be installed over reserve pits containing water that are left open for more than 30 days to reduce possibility of exposure to hazardous chemicals. • The Operator will install bird-excluding devices that prevent the perching and entry of migratory birds on or into its new fired vessel exhaust stacks.

Source: GNB ROD (BLM 2012b), Vernal RMP (BLM 2008a)

Rationale:

The subject lands were leased for oil or gas development under authority of the Mineral Leasing Act of 1920, as modified by the Federal Land Policy and Management Act of 1976, and the Federal Onshore Oil and Gas Leasing Reform Act of 1987. The lessee/operator has the right to explore for oil and gas on the lease as specified in 43 CFR 3103.1-2, and if a discovery is made, to produce oil and/or natural gas for economic gain.

The selected alternative meets the BLM's need to acknowledge and allow development of valid existing leases. The BLM objective to reduce impacts is met by the imposing of mitigation measures to protect other resource values.

Land Use Plan Conformance:

The selected alternative is in conformance with the Vernal Field Office Resource Management Plan and Record of Decision (BLM 2008).

The selected alternative is consistent with *Uintah County General Plan* (published in 2011) that encompasses the location of the proposed wells. In general, the plan indicates support for development proposals such as the selected alternative through the plan's emphasis of multiple-use public land management practices, responsible use and optimum utilization.

There are no comprehensive State of Utah plans for the vicinity of the selected alternative. However, the State of Utah School and Institutional Trust Lands Administration (SITLA) have leased much of the nearby state land for oil and gas production. Because the objectives of SITLA are to produce funding for the state school system, and because production on federal leases could further interest in drilling on state leases in the area, it is assumed that the selected alternative is consistent with the objectives of the State.

Public Involvement:

The proposed project was posted on the Eplanning NEPA Register on 29 August 2014. No expression of public interest was received.

Alternatives Considered:

The EA analyzed the proposed action and no action alternatives. The No Action Alternative was not selected because it would not best meet the BLM's need to acknowledge and allow development of valid existing leases.

Appeal or Protest Opportunities:

This decision is effective upon the date it is signed by the authorized officer. The decision is subject to appeal. Under BLM regulation, this decision is subject to administrative review in accordance with 43 CFR 3165. Any request for administrative review of this decision must include information required under 43 CFR 3165.3(b) (State Director Review), including all supporting documentation. Such a request must be filed in writing with the State Director, Bureau

of Land Management, Utah State Office, P.O. Box 45155, Salt Lake City, Utah, 84145-0155, within 20 business days of the date this Decision is received or considered to have been received.

If you wish to file a petition for stay, the petition for stay should accompany your notice of appeal and shall show sufficient justification based on the following standards:

1. The relative harm to the parties if the stay is granted or denied;
2. The likelihood of the appellant's success on the merits;
3. The likelihood of irreparable harm to the appellant or resources if the stay is not granted; and,
4. Whether the public interest favors granting the stay.

Signature:

Authorizing Official:

/s/ Jerry Kenczka
Assistant Field Manager, Lands and Minerals

June 19, 2015

Chapter 1. Introduction and Need for Proposed Action

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1.1. Introduction

This Environmental Assessment (EA) has been prepared to analyze the potential impacts of Crescent Point Energy US Corp.'s oil wells in the north and south Stirrup area of Uintah County, Utah. The EA is a site-specific analysis of potential impacts that could result from the implementation of the Proposed Action or alternatives to the Proposed Action. The EA assists the Bureau of Land Management (BLM) in project planning and ensuring compliance with the National Environmental Policy Act (NEPA), and in making a determination as to whether any "significant" impacts could result from the analyzed actions. ("Significance" is defined by NEPA and is found in regulation 40 CFR 1508.27.) An EA provides evidence for determining whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI) statement. A FONSI statement is a document that briefly presents the reasons why implementation of the selected alternative would not result in "significant" environmental impacts (effects) beyond those already addressed in Vernal Field Office Resource Management Plan (BLM 2008a). If the decision maker determines that this project has "significant" impacts following the analysis in the EA, then an EIS would be prepared for the project. If not, a Decision Record (DR) may be signed for the EA approving the alternative selected.

Crescent Point Energy US Corp. proposes to drill three oil wells: Horseshoe Bend Federal 11-28-6-21E, Horseshoe Bend Federal 11-29-6-21E, and Horseshoe Bend Federal 15-29-6-21E. These wells are located on Federal leases UTU-34711, UTU-46699, and UTU-78854. The well pads are located in Sections 28 and 29; Township 6 South, Range 21 East, SLB in Uintah County, Utah. The proposed project area is located approximately 15 miles southwest of Vernal, Utah on BLM-administered lands. The proposed wells would be drilled utilizing new locations.

1.2. Purpose and Need for the Proposed Action

The BLM's need for the project is to allow beneficial use of the applicant's leases. The BLM's purpose is to minimize environmental impacts. Private exploration and production from federal oil and gas leases is an integral part of the BLM oil and gas leasing program under authority of the Mineral Leasing Act of 1920, as amended by the Federal Land Policy and Management Act of 1976 and the Federal Onshore Oil and Gas Leasing Reform Act of 1987. The operator has a valid existing right to extract mineral resources from Federal Leases UTU-34711, UTU-46699, and UTU-78854 subject to the lease's terms and conditions. The BLM oil and gas leasing program encourages development of domestic oil and gas reserves and the reduction of U.S. dependence on foreign energy sources.

1.3. Conformance with BLM Land Use Plans

The proposed wells and related facilities would be in conformance with the Vernal Field Office RMP/ROD (October 31, 2008) and the terms of the lease. The Minerals and Energy Resources Management Objectives encourage the drilling of oil and gas wells by private industry (RMP/ROD, p. 97). It has been determined that the proposed action and alternative(s) would not conflict with other decisions throughout the plan.

1.4. Relationship to Statutes, Regulations, or Other Plans

The Proposed Action and No Action Alternative are consistent with federal, state, and local laws, regulations, and plans (see below).

Utah's Standards for Rangeland Health (BLM 1997) address upland soils, riparian/wetlands, desired and native species, and water quality. These resources are analyzed later in this document or, if not affected, are listed in Appendix A.

1.4.1. Federal Laws and Statutes

The subject lands were leased for oil or gas development under authority of the Mineral Leasing Act of 1920, as modified by the Federal Land Policy and Management Act of 1976, and the Federal Onshore Oil and Gas Leasing Reform Act of 1987. The lessee/operator has the right to explore for oil and gas on the leases as specified in 43 CFR 3103.1-2, and if a discovery is made, to produce oil and/or natural gas for economic gain.

1.4.2. State and Local Laws and Statutes

There are no comprehensive State of Utah plans for the vicinity of the Proposed Action.

The proposed project is consistent with the *Uintah County General Plan (Uintah County 2011-as amended)* that encompasses the location of the proposed wells. In general, the Plan indicates support for development proposals such as the Proposed Action through the Plan's emphasis on multiple-use public land management practices, responsible use and optimum utilization.

The State of Utah School and Institutional Trust Lands Administration (SITLA) have leased much of the nearby state land for oil and gas production. Because the objectives of SITLA are to produce funding for the state school system, and because production on federal leases could further interest in drilling on state leases in the area, it is assumed that the alternatives analyzed, except the No Action Alternative, are consistent with the objectives of the state.

Chapter 2. Description of Alternatives

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2.1. Introduction:

This EA analyzes the Proposed Action and No Action Alternatives. The No Action Alternative is considered and analyzed to provide a baseline for comparison of the impacts of the Proposed Action Alternative.

2.2. Proposed Action

2.2.1. Well Pads

Crescent Point Energy US Corp. proposes to drill three wells to develop Federal leases UTU-34711 and UTU-78854. The well pads are located in Sections 28 and 29; Township 6 South, Range 21 East, SLB in Uintah County, Utah. The proposed project area is located approximately 15 miles southwest of Vernal, Utah. The proposed wells are all on BLM surface and would develop Federal leases. If dry, the well would be plugged and abandoned as per BLM and State of Utah requirements. Table 2-1 lists the disturbance associated with the well pads.

Table 2.1. Surface Disturbance

Well	Existing Disturbance (acres)	Proposed Well Pad disturbance (acres)	Surface Pipeline (feet)	Surface Pipeline (acres)*	Road (feet)	Road (acres)	Total Acres of New Surface Disturbance (acres)
Horseshoe Bend Federal 11-28-6-21E	0	2.7	784	0.54	576	0.24	3.48
Horseshoe Bend Federal 15-29-6-21E	0	3.2	1,156.00	0.8	1,263.00	0.52	4.52
Horseshoe Bend Federal 11-29-6-21E	1.31	3.03	0	0	0	0	1.72
TOTAL	1.31	8.93	1,940	1.34	1,839	0.76	9.72

*Assumes a 30-foot permanent width for maintenance. The pipeline will be up to an 8 inch diameter, polyethylene, gas pipeline. Surface pipelines are not considered surface disturbance.

2.2.2. Access

A total of 1,839 feet (0.76 acres) of new roads would be built, or upgraded, to access the proposed wells as described in Table 2-1. The new roads would be crowned (2 to 3%), ditched, and constructed with a running surface of 18 feet and a maximum disturbed width of 30 feet during construction. Maintenance graveling or capping of the roadbed would be performed as necessary to provide a safe road. Should conditions warrant, rock, gravel, or culverts will be installed as needed.

2.2.3. Well Site Layout

The proposed wells would be drilled utilizing two new pads and one existing pad. The construction of the new pads and access roads would result in approximately 9.72 acres of new

surface disturbance. Prior to construction, the topsoil would be stripped to a depth determined on the onsite and placed on predetermined sites, segregated from the subsoil.

The reserve pits would be constructed on the location and not be located within natural drainages, where a flood hazard exists or surface runoff would destroy or damage the pit walls. The reserve pits would be constructed so that they would not leak, break, or allow discharge of liquids. The reserve pits would be fenced on three sides prior to drilling activity and closed off on the fourth side after drilling is finished. The reserve pit for the proposed wells would be lined with a 12 ml (minimum) liner. A felt pit liner would be required if bedrock is encountered.

2.2.4. Surface Facilities

All production facilities would be located on the disturbed portion of the well pad and a minimum of 25 feet from the toe of the back slope or the top of the fill slope. A dike would be constructed around those production facilities that contain fluids (i.e. production tanks, produced water tanks, and/or heater-treaters). The dikes would be constructed of compacted subsoil. They would be impervious, hold 110 percent of the capacity of the largest tank, and be independent of the back cut.

All permanent (meaning on site for six months or longer) structures would be painted Covert Green to match the surrounding landscape color unless otherwise authorized. This would include all facilities except those required to comply with Occupational Safety and Health Act (OSHA) regulations.

2.2.5. Pipelines

There would be 1,940 feet of new collocated surface pipelines as described in table 2-1. surface pipelines are not considered surface disturbance. The pipelines will operate year round and the authorized access is requested for a minimum term of 30 years. Construction will commence upon the approval of all permits. To minimize new disturbance, construction of pipelines will utilize existing disturbance of roads.

The proposed surface pipelines will be strung along the pipeline route with either a flatbed trailer and rubber tired backhoe or a tracked typed side boom. Where surface conditions do not allow the pipe to be strung using conventional methods, Crescent Point Energy US Corp. will pull sections of pipeline from central staging areas along the pipeline route. When the surface terrain prohibits Crescent Point Energy US Corp. from safely installing the pipeline along the pipeline route, grading of the route will be required. Erosion control Best Management Practices will be installed as needed prior to the start of any grading activities. Surface grading will be limited to what is needed to safely install the pipeline. Track type bulldozers and track type backhoes will be utilized for grading activities.

2.2.6. Invasive Plants and Noxious Weeds

The operator would control noxious/invasive weeds along their roads, pipelines, well sites, or other applicable facilities by the application of herbicides or by mechanical removal until reclamation is considered to be successful by the Authorized Officer (AO) and the bond for the well is released. A list of noxious weeds would be obtained from the BLM or the appropriate county extension office. On BLM-administered land, the operator would submit a Pesticide Use

Proposal and obtain approval prior to the application of herbicides, other pesticides, or possible hazardous chemicals.

2.2.7. Water Supply and Disposal

Up to 5.2 acre feet of fresh water per well, will be obtained from Johnson Water District water right # 43-7478 (which was filed on April 29, 1974). It was determined by the Fish and Wildlife Service that any water right number filed before 1989 is not depleting to the Upper Colorado River System.

2.2.8. Waste Disposal

Drill cuttings would be contained and buried in the reserve pits. Drilling fluids, including salts and chemicals, would be contained in the reserve pits. After first production, produced wastewater will be confined to the approved pit or storage tank for a period not to exceed 90 days. After the 90 day period, the produced water will be contained in tanks on location and then hauled by truck to one of the following pre-approved disposal sites: LaPoint Recycle & Storage located in Section 12, T5S, R19E; Dalbo, Inc. Ace Disposal located in Section 35, T5S, R20W and Section 2, T6S, R20W; Brennan Bottom Disposal located in Section 19, T6S, R21E; RN Industries, Inc. Bluebell located in Sections 2 and 9, T2S, R22E, or Western Water Solutions located in Sections 9 and 10, T4S, R1W. All sites are in Uintah County, UT.

Upon termination of drilling and completion operations, the liquid contents of the reserve pits would be used at the next drill site or would be removed and disposed of at an approved waste disposal facility within 6 months after drilling is terminated. Immediately upon well completion, any hydrocarbons in the pit would be removed in accordance with 43 CFR 3162.7-1.

Produced water, oil, and other byproducts would not be applied to roads or well pads for control of dust or weeds. The dumping of produced fluids on roads, well sites, or other areas would not be allowed.

Portable self-contained chemical toilets will be used for human waste disposal. As required, the toilet holdings will be pumped and the contents thereof disposed of in an approved sewage disposal facility

No hazardous wastes (as defined in 40 CFR 355 or subject to reporting under SARA Title III) would be used, produced, stored, transported, or disposed of annually in association with the drilling, testing, or completing of this well.

Immediately upon well completion, the locations and surrounding areas would be cleared of all unused tubing, equipment, debris, materials, and trash. Trash would be confined in a covered container and hauled to an approved landfill. No waste or oil would be burned.

2.2.9. Reclamation

2.2.9.1. Interim Reclamation

During construction, topsoil would be segregated from the subsoil (without mixing the two soil types) and stockpiled separately from other soil materials. Topsoil storage areas would be

maintained for future use in rehabilitating the locations. Topsoil piles stored beyond one growing season would be stabilized and seeded to prevent erosion.

Interim reclamation of the surface environment would take place after the well is put into production. The reserve pit would be filled in with subsoil, and the pit and portion of the well not needed for production facilities/operations would be re-contoured to the approximate natural contours within 180 days from the date of well completion, or as soon as environmental conditions allow. The stockpiled topsoil would be re-spread over the reclaimed area as soon as completion operations have been finished. The reclaimed area would then be seeded, preferably by rangeland drill, with a seed mixture that would be submitted via sundry. If reclamation seeding should take place using the broadcast method, the seed at a minimum would be walked into the soil with a dozer or other heavy equipment immediately after the seeding is completed. Seed application would follow all guidelines in the Green River Reclamation Guidelines (BLM 2009). If initial seeding is not successful, reseeding may be required.

2.2.9.2. Dry Hole/Abandoned Location

Abandoned well sites, roads and other disturbed areas would be restored as near as practical to their natural condition. Stockpiled topsoil would be spread across the re-contoured area then seeded with the seed mixture submitted via sundry. Reclamation of the well pad and access road would be done within six months, weather permitting, after final abandonment.

2.2.9.3. Monitoring

Vegetative monitoring locations and reference sites would conform to the Green River District Guidelines. Vegetation monitoring protocol would be designed to monitor percent basal vegetative cover. In general, reclaimed areas would be inspected annually and monitored to document location and extent of areas with successful revegetation, and areas needing further reclamation. A reclamation report would be submitted to the Authorized Officer by March 31 of each year. On Federal lands, the reclamation objective would be a vegetation community that within 5 years is comprised of desired and/or seeded species, and where the basal vegetative cover is 75 percent of a similar undisturbed adjacent native vegetation community. If after 3 years basal cover is less than 30 percent, then additional seeding and reclamation efforts may be required.

2.2.10. Applicant-Committed Environmental Protection Measures (ACEPMs)

2.2.10.1. Air Quality

Crescent Point Energy US Corp. agrees to implement the following measures to reduce emissions:

- All internal combustion equipment would be kept in good working order.
- Water or other approved dust suppressants would be used at construction sites and along roads, as determined appropriate by the Authorized Officer.
- Open burning of garbage or refuse would not occur at well sites or other facilities.
- Drill rigs would be equipped with Tier II or better diesel engines.

- Low bleed pneumatics would be installed on separator dump valves and other controllers. During completion, flaring would be limited as much as possible. Production equipment and gathering lines would be installed as soon as possible.
- Well site telemetry would be utilized as feasible for production operations.

2.2.10.2. Cultural Resources

- Class III archeological surveys were conducted by Western Archaeological Services on April 9, 2014, project report number, U-12-W6-0393b.

2.2.10.3. Paleontological Resources

- A paleontological survey was conducted on all areas where surface disturbance would occur (i.e., well locations, access roads, and pipelines). Surveys were conducted by Uinta Paleontological Associates Inc. on December 12, 2014.

2.3. No Action Alternative

Under the No Action Alternative, Crescent Point Energy US Corp. would not drill the three wells on Federal leases UTU-34711, UTU-46699, and UTU-78854. The well pads are located in Sections 28 and 29; Township 6 South, Range 21 East, SLB in Uintah County, Utah. Other oil and gas development, resource trends, and land use practices in the area would be expected to continue.

2.4. Alternatives Considered but Eliminated From Analysis

There were no other alternatives identified aside from the Proposed Action and No Action Alternatives that would meet the purpose and need of this project.

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Chapter 3. Affected Environment:

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The affected environment of the Proposed Action and No Action Alternatives were considered and analyzed by an interdisciplinary team, as documented in the Interdisciplinary Team Analysis Record Checklist (Appendix A). The checklist indicates which resources of concern are present, would be affected by the action, and would require analysis in the EA, or are either not present in the project area or would not be affected to a degree that requires detailed analysis.

The proposed wells would be located in the 12 Mile and Stirrup area of the BLM's Vernal Field Office (VFO). Mineral extraction activities, transportation corridors, agricultural and ranching activities, livestock grazing, and erosion have historically affected the project area. The project area is defined as Sections 28 & 29; Township 6 South, Range 21 East, SLB in Uintah County, Utah. The project boundary has been previously disturbed by the construction of roads and well locations.

3.1. Air Quality and Greenhouse Gas Emissions

The Project Area is located in the Uinta Basin, a semiarid, mid-continental climate regime typified by dry, windy conditions, limited precipitation and wide seasonal temperature variations subject to abundant sunshine and rapid nighttime cooling. The Uinta Basin is designated as unclassified/attainment by the EPA under the Clean Air Act. This classification indicates that the concentration of criteria pollutants in the ambient air is below National Ambient Air Quality Standards (NAAQS), or that adequate air monitoring is not available to determine attainment.

NAAQS are standards that have been set for the purpose of protecting human health and welfare with an adequate margin of safety. Pollutants for which standards have been set include ground level ozone, (O₃), sulfur dioxide (SO₂), nitrogen dioxide (NO₂), and carbon monoxide (CO), and particulate matter less than 10 microns in diameter (PM₁₀) or 2.5 microns in diameter (PM_{2.5}). Airborne particulate matter consists of tiny coarse-mode (PM₁₀) or fine-mode (PM_{2.5}) particles or aerosols combined with dust, dirt, smoke, and liquid droplets. PM_{2.5} is derived primarily from the incomplete combustion of fuel sources and secondarily formed aerosols, whereas PM₁₀ is primarily from crushing, grinding, or abrasion of surfaces. **Table 3-1** lists ambient air quality background values for the Uinta Basin and NAAQS standards.

Table 3–1. Ambient Air Quality Background Values

Pollutant	Averaging Period(s)	Uinta Basin Background Concentration (µg/m ³)	NAAQS (µg/m ³)
SO ₂	Annual	0.8 (2)	-- (1)
	24-hour	3.9 (2)	-- (1)
	3-hour	10.1 (2)	1,300
	1-hour	19.0 (2)	197
NO ₂	Annual	8.1 (3)	100
	1-hour	60.2 (3)	188
PM ₁₀	Annual	7.0 (4)	-- (6)
	24-hour	16.0 (4)	150
PM _{2.5}	Annual	9.4 (3)	15
	24-hour	17.8 (3)	35

Pollutant	Averaging Period(s)	Uinta Basin Background Concentration ($\mu\text{g}/\text{m}^3$)	NAAQS ($\mu\text{g}/\text{m}^3$)
CO	8-hour	3,450 (4)	10,000
CO	1-hour	6,325 (4)	40,000
O ₃	8-hour	100.0 (3,5)	75
<p>(1) – The 24-hour and annual SO₂ NAAQS have been revoked by USEPA</p> <p>(2) – Based on 2009 data from Wamsutter Monitoring Station Data (USEPA AQS Database)</p> <p>(3) – Based on 2010/2011 data from Redwash Monitoring Station (USEPA AQS Database)</p> <p>(4) – Based on 2006 data disclosed in the Greater Natural Buttes FEIS. (BLM, 2012)</p> <p>(5) – Ozone is measured in parts per billion (ppb)</p> <p>(6) – The annual PM₁₀ NAAQS has been revoked by USEPA</p>			

Existing point and area sources of air pollution within the Uinta Basin include the following:

- Exhaust emissions (primarily CO, NO_x, PM_{2.5}, and HAPs) from existing natural gas fired compressor engines used in transportation of natural gas in pipelines;
- Natural gas dehydrator still-vent emissions of CO, NO_x, PM_{2.5}, and HAPs;
- Gasoline and diesel-fueled vehicle tailpipe emissions of VOCs, NO_x, CO, SO₂, PM₁₀, and PM_{2.5};
- Oxides of sulfur (SO_x), NO_x, fugitive dust emissions from coal-fired power plants, and coal mining/ processing;
- Fugitive dust (in the form of PM₁₀ and PM_{2.5}) from vehicle traffic on unpaved roads, wind erosion in areas of soil disturbance, and road sanding during winter months; and,
- Long-range transport of pollutants from distant sources.

Two year-round air quality monitoring sites were established in the summer of 2009 near Red Wash (southeast of Vernal, Utah) and Ouray (southwest of Vernal). These monitors were certified as Federal Reference Monitors in fall of 2011, which means they can be used to make a NAAQS compliance determination. The complete EPA Ouray and Redwash monitoring data can be found at: <http://www.epa.gov/airexplorer/index.htm>

Both monitoring sites have recorded numerous exceedences of the 8-hour ozone standard during the winter months (January through March 2010, 2011, 2013, and 2014). It is thought that high concentrations of ozone are being formed under a “cold pool” process. This process occurs when stagnate air conditions form with very low mixing heights under clear skies, with snow-covered ground, and abundant sunlight. These conditions, combined with area precursor emissions (NO_x and VOCs), can create intense episodes of ozone. The high numbers did not occur in January through March 2012 due to a lack of snow cover. This phenomenon has also been observed in similar locations in Wyoming. Winter ozone formation is a newly recognized issue, and the methods of analyzing and managing this problem are still being developed. Existing photochemical models are currently unable to reliably replicate winter ozone formation. This is

due to the very low mixing heights associated with unique meteorology of the ambient conditions. Further research is needed to definitively identify ozone precursor sources that contribute to observed ozone concentrations.

The UDAQ conducted limited monitoring of PM_{2.5} in Vernal, Utah in December 2006. During the 2006-2007 winter seasons, PM_{2.5} levels were higher than the PM_{2.5} health standards that became effective in December 2006. The PM_{2.5} levels recorded in Vernal were similar to other areas in northern Utah that experience wintertime inversions. The most likely causes of elevated PM_{2.5} at the Vernal monitoring station are those common to other areas of the western U.S. (combustion and dust) plus nitrates and organics from oil and gas activities in the Basin. PM_{2.5} monitoring that has been conducted in the vicinity of oil and gas operations in the Uinta Basin by the Red Wash and Ouray monitors beginning in the summer of 2009 have not recorded any exceedences of either the 24-hour or annual NAAQS.

HAPs are pollutants that are known or suspected to cause cancer or other serious health effects, such as reproductive effects or birth defects, or adverse environmental impacts. The EPA has classified 187 air pollutants as HAPs. Examples of listed HAPs associated with the oil and gas industry include formaldehyde, benzene, toluene, ethylbenzene, isomers of xylene (BTEX) compounds, and normal-hexane (n-hexane). There are no applicable Federal or State of Utah ambient air quality standards for assessing potential HAP impacts to human health.

Greenhouse Gases

Greenhouse gases keep the planet's surface warmer than it otherwise would be. According to NOAA and NASA data, the Earth's average surface temperature has increased by about 1.2 to 1.4° F in the last 100 years. The eight warmest years on record (since 1850) have all occurred since 1998, with the warmest year being 1998. However, according to the British Meteorological Office's Hadley Centre (BMO 2009), the United Kingdom's foremost climate change research center, the mean global temperature has been relatively constant for the past nine 18 years after the warming trend from 1950 through 2000. Predictions of the ultimate outcome of global warming remain to be seen.

The analysis of the Regional Climate Impacts prepared by the U.S. Global Change Research Program (USGCRP) in 2009 suggests that recent warming in the region (including the project area) was nationally among the most rapid. Past records and future projections predict an overall increase in regional temperatures, largely in the form of warmer nights and effectively higher average daily minimum temperatures. They conclude that this warming is causing a decline in spring snowpack and reduced flows in the Colorado River. The USGCRP projects a region-wide decrease in precipitation, although with substantial variability in interannual conditions. For eastern Utah, the projections range from an approximate 5 percent decrease in annual precipitation to decreases as high as 40 percent of annual precipitation.

Equilibrium climate sensitivity quantifies the response of the climate system to constant radiative forcing on multicentury time scales. It is defined as the change in global mean surface temperature at equilibrium that is caused by a doubling of the atmospheric CO₂ concentration. Equilibrium climate sensitivity is likely in the range 1.5°C to 4.5°C (high confidence), extremely unlikely less than 1°C (high confidence), and very unlikely greater than 6°C (medium confidence). The lower temperature limit of the assessed likely range is thus less than the 2°C in the AR4, but the upper limit is the same. This assessment reflects improved understanding, the extended temperature record in the atmosphere and ocean, and new estimates of radiative forcing. No best estimate for

equilibrium climate sensitivity can now be given because of a lack of agreement on values across assessed lines of evidence and studies (IPCC, 2013).

3.2. Invasive Plants/Noxious Weeds, Soils, and Vegetation

The invasive species, cheat grass (*Bromus tectorum*), Russian thistle (*Salsola iberica*), and halogeton (*Halogeton glomeratus*) are present in the project area.

The soils are a sandy loam with a number of rocky outcrops in some locations. Soils in the project area tend to be shallow and well drained with moderate susceptibility to erosion. Nonsaline to slightly saline characteristics are described in the Uintah Area Soil Survey.

The vegetation in the project area includes Wyoming big sagebrush (*Artemisia tridentate* var. *wyomingensis*), shadscale (*Atriplex confertifolia*), spiny hopsage (*Grayia spinosa*), broom snakeweed (*Gutierrezia sarothrae*), greasewood (*Sarcobatus vermiculatus*), milkvetch (*Astragalus* sp.), catseye cryptantha (*Cryptantha* sp.), globemallow (*Sphaeralcea* sp.), Indian ricegrass (*Achnatherum hymenoides*), ephedra (*Ephedra* sp.), and prickly pear cactus (*Opuntia* sp.)

3.3. Paleontology

No fossils were found at the surface but may be found when cutting into bedrock.

3.4. Threatened, Endangered, proposed or Candidate Animal Species

3.4.1. Colorado River Fish Species

Water depletion will occur to the Upper Colorado system in association with the drilling of the wells in the project area. The U.S. Fish & Wildlife Service (USFWS) has identified four federally listed fish species historically associated with the Upper Colorado River Basin, including the Green and White Rivers. These fish are the Colorado pikeminnow, humpback chub, bonytail, and razorback sucker. The four fish species are federally and state-listed as endangered and have experienced severe population declines due to flow alterations, habitat loss or alteration, and introduction of non-native fish species. The Green and White River and their 100-year floodplains have been designated critical habitat for these four endangered fish species (USFWS 1994).

3.5. Fish and Wildlife Species Excluding USFWS Designated Species

3.5.1. Roundtail Chub, Flannelmouth Sucker, and Bluehead Sucker (BLM Sensitive)

These three fish species are endemic to the Colorado River Basin, including the Green and White Rivers. All three species are listed as BLM sensitive species due to declining population numbers and distribution.

3.5.2. Migratory Birds

The Migratory Bird Treaty Act (MBTA) was implemented for the protection of migratory birds. Unless permitted by regulations, the MBTA makes it unlawful to pursue, hunt, kill, capture, possess, buy, sell, purchase, or barter any migratory bird, including the feathers or other parts, nests, eggs, or migratory bird products. In addition to the MBTA, Executive Order 13186 sets forth the responsibilities of Federal agencies to further implement the provisions of the MBTA by integrating bird conservation principles and practices into agency activities and by ensuring that Federal actions evaluate the effects of actions and agency plans on migratory birds.

This section identifies migratory birds that may inhabit the Project Area, including those species classified as High-Priority birds by Utah Partners in Flight. High-Priority species are denoted by an asterisk (*). Without conducting comprehensive migratory bird surveys, it is not known if these species are present or not. Species listed below are based on GIS reviews, and a field review during on-site inspections.

Migratory bird species commonly associated with the sagebrush-steppe community within the Project Area include: the mountain bluebird* (*Sialia currocoides*), grasshopper sparrow* (*Ammodramus savannarum*), Brewer's sparrow* (*Spizella breweri*), sage sparrow* (*Amphispiza belli*), sage thrasher* (*Oreoscoptes montanus*), green-tailed towhee* (*Pipilo chlorurus*), horned lark (*Eremophila alpestris*), loggerhead shrike (*Lanius ludovicianus*), western kingbird (*Tyrannus verticalis*), northern mockingbird (*Mimus polyglottos*), vesper sparrow (*Pooecetes gramineus*) and western meadowlark (*Sturnella neglecta*)[???].

Raptors

Some of the more common and visible birds within the Project Area include raptors, or birds of prey. The Project Area provides diverse breeding and foraging habitat for raptors: mixed desert shrub communities, rocky outcrops, and pinyon-juniper woodlands. All raptor species and their nests are protected from take or disturbance under the MBTA.

Red Tailed Hawk(*Buteo jamaicensis*)

This species is considered to be a permanent resident of Utah. There is a wide variety of habitat utilized by this species to included woodlands, deserts and forests. Nests can be found in crags, trees and other raptor nests. There are documented red-tailed hawk nests within 0.5 miles of host well 11-29-6-21E

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Chapter 4. Environmental Impacts

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The potential direct, indirect, and cumulative impacts from Alternative A (the Proposed Action) and Alternative B (the No Action Alternative) are discussed in the following sections of Chapter 4. Direct impacts to soils and vegetation in the following analyses are described as short-term and long-term impacts. In areas where interim reclamation is implemented, ground cover by herbaceous and woody species could be re-established to approximately 75 percent of initial basal cover within five years following seeding of native plant species and diligent weed control efforts. These reclaimed areas are categorized as short-term disturbance.

4.1. Proposed Action Environmental Impacts

4.1.1. Air Quality and Greenhouse Gas Emissions

This Proposed Action is considered to be a minor air pollution source under the Clean Air Act at present control technology on some emissions sources (e.g. drill rigs) is not required by regulatory agencies. The Proposed Action would result in different emission sources associated with two project phases: well development and well production. Annual estimated emissions from the Proposed Action are summarized in **Table 4-1**.

Table 4-1. Proposed Action Annual Emissions – three wells (tons/year)

Pollutant	Development 2	Production	Total
NOx	9.81	5.76	15.57
CO	5.25	14.88	20.13
VOC	19.89	18.66	38.55
SO2	0.204	N/A	0.204
PM10	25.59	6.06	31.65
PM2.5	3.06	0.81	3.87
Benzene	0.036	0.024	0.63
Toluene	0.039	0.024	0.063
Ethylbenzene	N/A	0.00009	0.00009
Xylene	0.00105	0.0006	0.00165
n-Hexane	N/A	0.096	0.096
Formaldehyde	0.0012	0.075	0.0762

1 Emissions include three, (3), producing well and associated operations traffic during the year in which the project is developed. Average oil production is assumed to be 59 barrels of oil per day. It is assumed that the proposed well would have two, (2), oil storage tanks on location and that tank emissions would be controlled (98% destruction efficiency), as required per NSPS Subpart OOOO.

2 Development activities include all emissions associated with construction, drilling, completion, interim reclamation, and wind erosion.

Well development includes NOx, SO2, and CO tailpipe emissions from earth-moving equipment, vehicle traffic, drilling, and completion activities. Fugitive dust concentrations would occur from vehicle traffic on unpaved roads and from wind erosion where soils are disturbed. Drill rig and fracturing engine operations would result mainly in NOX and CO emissions, with lesser amounts of SO2. These emissions would be short-term during the drilling and completion phases.

During well production, continuous NOx, CO, VOC, and HAP emissions would originate from well pad separators, condensate storage tank vents, and daily tailpipe and fugitive dust emissions

from operations traffic. Road dust (PM10 and PM2.5) would also be produced by vehicles servicing the wells.

Under the proposed action, emissions of NO_x and VOC, ozone precursors, are 38.55 tons/yr for NO_x, and 15.57 tons/yr of VOC (**Table 4-1**). Emissions would be dispersed and/ or diluted to the extent where any local ozone impacts from the Proposed Action would be indistinguishable from background conditions.

The primary sources of HAPs are from oil storage tanks and smaller amounts from other production equipment. Small amounts of HAPs are emitted by construction equipment. These emissions are estimated to be minor and less than 1 ton per year.

Greenhouse Gases

The assessment of greenhouse gas emissions and climate change remains in its earliest stages of formulation. Applicable EPA rules do not require any controls and have yet to establish any emission limits related to GHG emissions or impacts. The lack of scientific models that predict climate change on regional or local level prohibits the quantification of potential future impacts of decisions made at the local level, particularly for small scale projects such as the Proposed Action. Drilling and development activities from the Proposed Action are anticipated to release a negligible amount of greenhouse gases into the local air-shed.

Mitigation:

- All new and replacement internal combustion gas field engines of less than or equal to 300 design-rated horsepower must not emit more than 2 grams of NO_x per horsepower-hour. This requirement does not apply to gas field engines of less than or equal to 40 design-rated horsepower-hour.
- All new and replacement internal combustion gas field engines of greater than 300 design rated horsepower must not emit more than 1.0 grams of NO_x per horsepower-hour.
- Green completions would be used for all well completion activities where technically feasible.
- Employ enhanced VOC emission controls with 95% control efficiency on production equipment having a potential to emit greater than 5 tons per year.

4.1.2. Invasive Plants/Noxious Weeds, Soils, and Vegetation

The Proposed Action would disturb approximately 9.72 acres of soils and vegetation. Under the Proposed Action, reclamation would occur on approximately 25 percent of the well pad upon completion of drilling. The remaining 75 percent of the well pad would be re-vegetated after abandonment of the well (approximately 25 years). If interim reclamation is not successful, the entire area could remain disturbed for the life of the well (an average of 25 years or until reclamation is successful).

Direct impacts to soils include mixing of soil horizons, soil compaction, short-term loss of topsoil and site productivity, and loss of soil/topsoil through wind and water erosion. Soil and vegetation disturbance would also increase competition by weed species because they are adapted to disturbed conditions, and have less stringent moisture and soil nutrient requirements than do

perennial native species. The severity of any weed invasions would depend on the success of reclamation and re-vegetation, and the degree and success of noxious weed control efforts.

In addition to the applicant committed measures outlined within Crescent Point Energy US Corp.'s Surface Use Plans for this project, the following mitigation measures would reduce the risk of establishment or spread of non-native invasive plant species.

Mitigation:

- All vehicles and equipment would be cleaned either through power-washing, or other approved method, if the vehicles or equipment are brought in from areas outside the Uinta Basin, to prevent weed seed introduction.

4.1.3. Paleontology

No fossils were found at the surface but may be found when cutting into bedrock. Since this bedrock formation is known to contain important fossils, any construction or excavation that affects the bedrock could damage or destroy any existing fossils on the Horseshoe Bend Federal 15-29-6-21E.

Mitigation:

- A BLM permitted paleontologist should spot check the debris during construction of the Horseshoe Bend Federal 15-29-6-21E well pad (Uinta Paleo, 6/7/12).

4.1.4. Threatened, Endangered, Proposed, or Candidate Animal Species

4.1.4.1. Colorado River Fish Species

The Proposed Action would result in up to 15.6 acre-feet of water depletion, increased sedimentation through erosion, and contamination through accidental spills. These impacts could result in increased stream temperatures, reduced dissolved oxygen levels, reduced food supply, reduced downstream sedimentation transport, and altered flow regimes that may favor nonnative fishes which could result in increased predation and competition. Such impacts may be more pronounced during natural low-flow (fall and winter months) or during periods of drought.

The proposed action will have a “*may affect, likely to adversely affect*” determination for the endangered Colorado pikeminnow, humpback chub, bonytail, and razorback sucker.

4.1.5. Fish and Wildlife Species Excluding USFWS Designated Species

4.1.5.1. Roundtail Chub, Flannelmouth Sucker, and Bluehead Sucker

The analysis for the three special status fish species is the same as the analysis for threatened, endangered or candidate fish species.

4.1.5.2. Migratory Birds

The proposed action would result in a loss of 9.72 acres of habitat. Impacts to birds during the spring could include nest abandonment, reproductive failure, displacement, and destruction of nests. Construction would likely have a greater impact on Utah Partners in Flight high-priority migratory bird species that may be utilizing the project area due to their declining populations, habitat requirements dependence in restricted or vulnerable habitats and limited distribution. Successful reclamation efforts would return disturbed habitats to pre-disturbance levels. These impacts are not seen as contributing to the decline in overall migratory bird species' populations.

Raptors

Implementation of the Proposed Action could affect nesting and breeding Species affected which utilize the Project Area. Impacts to these species could occur. Some impacts include displacement from suitable nesting habitats during the breeding season due to increased noise levels and visual disturbances on the landscape, nest abandonment, reduced habitat values in foraging areas due to prey displacement, potential loss of prey habitat, and an increased potential for collisions with vehicles traveling in the project area.

Mitigation

Red Tailed Hawk(*Buteo jamaicensis*)

If the surface disturbing activities are planned during the current timing restrictions for the red tail hawk (March 15 through August 15) a survey for nesting red tailed hawk would be required. Based on the results of the survey, permission to proceed may or may not be granted. This restriction applies to the 11-29-6-21E host location.

4.2. No Action Alternative Environmental Impacts

4.2.1. Air Quality and Greenhouse Gas Emissions

Under the No Action Alternative, the proposed oil well(s) would not be drilled and there would be no additional impacts to air quality. The existing gas wells will continue to produce. Effects on ambient air quality would continue at present levels from existing oil and gas development in the region and other emission producing sources.

4.2.2. Invasive Plants/Noxious Weeds, Soils, and Vegetation

Under the No Action Alternative, there would be no direct disturbance or indirect effects to soils and vegetation from surface-disturbing activities associated the proposed wells. The existing gas wells will continue to produce. Current land use trends in the area would continue, including increased industrial development, increased off-highway vehicles (OHV) traffic, and increased recreation use for hunting, bird watching, and sightseeing.

4.2.3. Paleontology

Under the No Action Alternative, fossil resources in the project area would remain the same as they currently are.

4.2.4. Threatened, Endangered or Candidate Animal Species and Fish and Wildlife Species Excluding USFWS Designated Species

Under the No Action Alternative, there would be no direct disturbance and mortality, indirect effects or cumulative effects to threatened, endangered, and proposed, candidate, or sensitive wildlife species/habitat from surface disturbing activities associated with the construction of the proposed action. The existing gas wells will continue to produce.

4.2.5. Fish and Wildlife Species Excluding USFWS Designated Species

Under the No Action Alternative there would be no impacts to wildlife species including; migratory birds, fish and wildlife species, and threatened, endangered or candidate animal species. There would be no additional water depletion to the Green or White River systems.

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Chapter 5. Cumulative Impacts Analysis

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Cumulative impacts are those impacts that result from the incremental impact of an action when added to other past, present, and reasonably foreseeable actions, regardless of which agency or person undertakes such other actions. The cumulative impacts area varies by resource and will be defined in the section for each resource.

5.1. Air Quality and Greenhouse Gas Emissions

The cumulative impact area for air quality is the Uinta Basin, plus all regional Class I areas and other environmentally sensitive areas (e.g., national parks and monuments, wilderness areas, etc.) near the Uinta Basin. The Air Resource Management Strategy (ARMS) Modeling Project is a cumulative assessment of potential future air quality impacts associated with predicted oil and gas activity in the Uinta Basin (BLM, 2011). Consequently, past, present and reasonably foreseeable wells in the Uinta Basin are a part of the cumulative actions considered in this analysis. The ARMS is incorporated by reference and summarized below.

The ARMS Modeling Project predicted the following impacts to air quality and air quality related values for the 2010 typical year and four 2021 future year scenarios: 2021 on-the-books (OTB); 2021 Scenario 1 (NO_x controls); 2021 Scenario 2 (VOC controls); and 2021 Scenario 3 (NO_x and VOC controls).

- Ozone
 - The highest modeled ozone occurs in the Uinta Basin study area regardless of model scenario, and all scenarios predict exceedences of the ozone NAAQS and state AAQS in the Uinta Basin.
 - In the Uinta Basin, the ozone concentrations are highest during the winter period. In Class I and Class II areas outside the Uinta Basin study area, ozone concentrations are highest during the summer period.
 - During non-winter months in the Uinta Basin the model predicts that ozone may exceed the NAAQS and state AAQS (Ambient Air Quality Standards); however, model-adjusted results from the MATS tool (which accounts for model performance biases) indicate that non-winter ozone concentrations are below the NAAQS and state AAQS for all monitors and areas analyzed. Also, the 2021 scenarios have minimal effect on model-predicted ozone concentrations during non-winter months.
 - 2021 Scenario 2 tends to have the lowest 8-hour ozone concentration relative to all other 2021 scenarios (4th highest daily maximum is 3 ppb lower compared to the 2021 OTB Scenario). When comparing Scenario 2 to the OTB Scenario, a potential reduction in ozone concentrations occurs in the vicinity of the Ouray site (where the concentrations are already largest). There is no predicted ozone disbenefit associated with Scenario 2 mitigation measures (i.e., there is no area with predicted ozone increases relative to the OTB Scenario). This supports the assessment that peak ozone impacts are in VOC-limited areas.
 - 2021 Scenarios 1 and 3 are predicted to have higher ozone impacts than either the 2010 Typical year and the 2021 OTB Scenario. Both scenarios predict a relatively large increase in ozone concentrations within the vicinity of Ouray indicating potential ozone disbenefits associated with NO_x control mitigation measures.
- NO₂, CO, SO₂, PM_{2.5}, and PM₁₀

- There are seven monitoring stations within the 4- km domain with daily PM_{2.5} concentrations that exceed the NAAQS and state AAQS in the baseline emissions inventory.
- All modeled NO₂, CO, SO₂, PM_{2.5}, and PM₁₀ values are well below the NAAQS and state AAQS in the Uinta Basin.
- The model-predicted PM_{2.5} and PM₁₀ concentrations may underestimate future impacts due to a negative model bias throughout the year in the 4-km domain with the largest bias occurring in summer (AECOM and STI 2014).
- Results from the MATS tool (which accounts for model performance biases) indicate that PM_{2.5} concentrations may exceed the NAAQS and state AAQS for select monitors and assessment areas in the 2010 Typical year. All 2021 scenarios predict that only one of these monitoring station would continue to exceed the NAAQS and state AAQS.
- No monitoring stations within the 4-km domain exceed the annual PM_{2.5} NAAQS and state AAQS during the 2010 typical or 2021 Scenarios.
- Two unmonitored areas within the Uinta Basin exceed the annual PM_{2.5} NAAQS and state AAQS during the 2010 typical year, and impacts in these areas tend to increase under 2021 Scenarios 1 and 2. Under 2021 Scenario 3, the annual PM_{2.5} impacts decrease in the Uinta Basin due to combustion control measures.
- The 2021 scenarios generally have lower NO₂, CO, SO₂, PM_{2.5}, and PM₁₀ concentrations than the 2010 Typical Year scenario, except for within the Uinta Basin.
- Under the 2021 scenarios, all assessment areas are within the PSD (Prevention of Significant Deterioration) increments for annual NO₂, 3-hour SO₂, annual SO₂, and annual PM₁₀.
- Under the 2021 scenarios, most assessment areas exceed the 24-hour PM_{2.5} PSD increment.
- **Visibility**
 - Visibility conditions in Class I and sensitive Class II areas generally show improvement in the 2021 Scenarios relative to the 2010 Typical Year.
 - There also are no substantial differences in the 20th percentile best and worst visibility days between the 2021 Scenarios.
- **Deposition and Acid Neutralizing Capacity**
 - Results generally show a decrease in deposition for the 2021 Scenarios relative to the 2010 Typical Year.
 - The differences in estimated deposition between the 2021 Scenarios are generally very small.
 - Acid Neutralizing Capacity change at all seven sensitive lakes exceeds the 10 percent limit of acceptable change for all model scenarios.

It is anticipated that the impact to ambient air quality and air quality related values associated with the Proposed Action would be indistinguishable from and dwarfed by the model and emission inventory scope and margin of error. The No Action alternative would not result in an accumulation of impacts.

Greenhouse Gases

It is not currently possible to determine a climate change impact from project specific GHG emissions, nor is it possible to assign a significance value to project specific GHG emissions. GHG emissions will be reported per guidance established by CEQ and the Interagency Air Quality MOU (USDA/USDOJ, 2011). Drilling and development activities from the Proposed Action are anticipated to release a negligible amount of greenhouse gases, into the local airshed, resulting in a negligible cumulative impact. The No Action Alternative would not result in an accumulation of impacts.

5.2. Invasive Plants/Noxious Weeds, Soils, and Vegetation

The cumulative impacts analysis area (CIAA) for this resource is the project area. The well pads are located in Sections 28 and 29; Township 6 South, Range 21 East, SLB in Uintah County, Utah; which contains approximately 1280 acres. This area has a history of oil well and pipeline development. Other roads and pipelines associated with the oil industry already cross this area. Past activity in the CIAA includes 5 oil and gas wells. Assuming 3.7 acres of disturbance for each well, the past and present disturbance is approximately 18.5 acres. Reasonably foreseeable development includes an estimated 4 wells within the CIAA. Assuming 3.7 acres of disturbance per well, the reasonably foreseeable development would result in approximately 14.8 acres of disturbance. Total cumulative disturbance would be 33.3 acres

Cumulative impacts include increased soil erosion, vegetation disturbance, and weed invasion. In general, soils in the Uinta Basin are very thin, slow to develop, and difficult to reclaim because of the arid climate and lack of organic material. The Proposed Action would add 9.72 acres of surface disturbance with its associated impacts. The No Action Alternative would not result in an accumulation of impacts.

5.3. Paleontology

The CIAA for this resource is the project area. The well pads are located in Sections 28 and 29; Township 6 South, Range 21 East, SLB in Uintah County, Utah. This area has a history of oil well and pipeline development. Other roads, and pipelines associated with the oil industry already cross this area. Past, present, and reasonably foreseeable activities are as described in the previous section. Historically, fossil resources have been protected during oil field development by conducting paleo surveys and applying the required mitigation measures. However, cumulative impacts could include damage or destruction of fossils.

5.4. Wildlife: Migratory Birds (Including Raptors)

The CIAA for wildlife would be the same as soils and vegetation including invasive plants and noxious weeds. Impacts to migratory birds and raptors would continue by construction activities (s). Habitat fragmentation and degradation across the landscape would increase. Harassment to wildlife would increase by noise and activities associated with construction. The Proposed Action would add 9.72 acres of surface disturbance with its associated impacts, and up to 15.6 acre feet of water depletion. The No Action Alternative would not result in an accumulation of impacts.

5.5. Wildlife: Threatened, Endangered, Proposed or Candidate

The cumulative impacts analysis area for the fish resource is the Colorado River system. Cumulative impacts in this area include oil and gas exploration and development, irrigation, urban development, recreational activities, and activities associated with the Upper Colorado River Endangered Fish Recovery Program. Cumulative impacts such as decreased water quality and quantity, decreased habitat quality, habitat fragmentation, and mortality result from decreased stream flow, erosion, improperly placed culverts, elevated salinity, and contamination. Decreased stream-flows reduce or eliminate both the extent and quality of suitable habitat by increasing stream temperatures, and subsequently by reducing dissolved oxygen levels. Such impacts may be more pronounced during periods of natural cyclic flow reductions (fall and winter or periods of drought). A loss of streamflow can also reduce a stream's ability to transport sediment downstream. Sediment amount is influenced by the number of road/stream crossings, bank slope, amount of exposed soil, type of vegetation in the area, frequency and intensity of rainfall, soil type (amount of salinity), soil contamination, and the implementation and effectiveness of erosion control measures. Sediment loads above background levels can reduce pool depths, bury stream substrates and spawning gravels, adhere to aquatic insects and the gills of fish, alter channel form and function, and result in other forms of habitat degradation. Elevated salinity levels, over extended periods of time, may become toxic for aquatic ecosystems and fish species. In addition, improperly placed, shaped, and sized culverts in roads can act as fish barriers on key streams or exacerbate erosion and cause headcutting. The Proposed Action would add 9.72 acres of surface disturbance with its associated impacts, and up to 15.6 acre feet of water depletion. The No Action Alternative would not result in an accumulation of impacts.

Reasonably foreseeable future activities that may affect river-related resources in the area include oil and gas exploration and development, irrigation, urban development, recreational activities, and activities associated with the Upper Colorado River Endangered Fish Recovery Program. Implementation of all or any of these projects has affected and continues to affect the environment including, but not limited to, water quality, water rights, socioeconomic, and wildlife resources.

Chapter 6. Persons, Groups, and Agencies Consulted

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6.1. Agency and Tribal Consultation

Name	Purpose and Authorities	Findings and Conclusions
State Historic Preservation Office (SHPO)	Historic Preservation Act.	SHPO has concurred with a No Historic Properties Effected 36CFR800.4(d)(1) determination on 9/25/2012. No eligible cultural properties are within the proposed project areas.
Ute Mountain Ute Tribe, Hopi Tribe, Goshute Indian Tribe, Zia Pueblo Tribe, White Mesa Ute Tribe, Navajo Nation, Northwest Band of Shoshone Tribe, Southern Ute Tribe, Eastern Shoshone Tribe, Ute Indian Tribe, Santa Clara Pueblo Tribe, and Pueblo of Laguna Tribe.	Consultation with Native American Tribes.	Tribal Consultation was completed under the Gusher EA 2008. No concerns were submitted. The project will not restrict Native American access.

6.2. Summary of Public Participation

The BLM posted notification of this EA on the Eplanning NEPA Register on 29 August 2014. No public interest has been expressed.

6.3. List of Preparers

Table 6.1. List of Preparers

Name	Title	Responsible for the Following Section(s) of this Document
<i>BLM Preparers</i>		
Branon Rochelle	Natural Resource Specialist	Project manager Chapters 1, 2, 3, 4, 5, and 6
Daniel Emmett	Wildlife Biologist	Review and revision of Migratory birds (including raptors).
Elizabeth Gamber	Paleontology Specialist	Review and revision of the Paleontology resource section.

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Chapter 7. References Cited

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Appendix A. Interdisciplinary Team Checklist

Project Title: Crescent Point Energy US Corp. proposes to drill three oil wells on Federal leases. The well pads are located in Sections 28 & 29; Township 6 South, Range 21 East, SLB in Uintah County, Utah.

NEPA Log Number: DOI-BLM-UT-G010-2014-0247-EA

File/Serial Number: various lease numbers

Project Leader: Branon Rochelle

DETERMINATION OF STAFF: (Choose one of the following abbreviated options for the left column)

NP = not present in the area impacted by the proposed or alternative actions

NI = present, but not affected to a degree that detailed analysis is required

PI = present with potential for relevant impact that need to be analyzed in detail in the EA

NC = (DNAs only) actions and impacts not changed from those disclosed in the existing NEPA documents cited in Section D of the DNA form. The Rationale column may include NI and NP discussions.

Table A.1. ID Team Checklist

Determination	Resource/Issues	Rationale for Determination	Signature	Date
RESOURCES AND ISSUES CONSIDERED (INCLUDES SUPPLEMENTAL AUTHORITIES APPENDIX 1 H-1790-1)				
PI	Air Quality & Greenhouse Gas Emissions	<p>Emissions from construction, drilling, and production equipment could adversely affect air quality.</p> <p>No standards have been set by EPA or other regulatory agencies for greenhouse gases. In addition, the assessment of greenhouse gas emissions and climate change is still in its earliest stages of formulation. Global scientific models are inconsistent, and regional or local scientific models are lacking so that it is not technically feasible to determine the net impacts to climate due to greenhouse gas emissions. It is anticipated that greenhouse gas emissions associated with this action and its alternative(s) would be negligible.</p>	Branon Rochelle	6/16/2015
NP	BLM Natural Areas	None are present in the project area per the Vernal Field Office RMP and GIS review.	Alec Bryan	9/9/2014

Determination	Resource/Issues	Rationale for Determination	Signature	Date
NI	Cultural: Archaeological Resources	The proposed project area has been covered by multiple Class III intensive cultural resource inventories. No cultural resources eligible for inclusion into the National Register of Historic Places (NRHP) are identified within the APE of the proposed undertaking. SHPO Consultation completed on 9/25/2012.	Jimmie McKenzie	9/10/2014
NI	Cultural: Native American Religious Concerns	No Traditional Cultural Properties (TCPs) are identified within the APE. The proposed project will not hinder access to or use of Native American religious sites. Tribal Consultation completed under the Gusher EA 2008.	Jimmie McKenzie	9/10/2014
NP	Designated Areas: Areas of Critical Environmental Concern	None are present in the project area per the Vernal Field Office RMP and GIS review.	Alec Bryan	9/9/2014
NP	Designated Areas: Wild and Scenic Rivers	None are present in the project area per the Vernal Field Office RMP and GIS review.	Alec Bryan	9/9/2014
NP	Designated Areas: Wilderness Study Areas	None are present in the project area per the Vernal Field Office RMP and GIS review.	Alec Bryan	9/9/2014
NP	Environmental Justice	No minority or economically disadvantaged communities or populations would be disproportionately adversely affected by the Proposed Action or alternatives.	Branon Rochelle	6/16/2015

Determination	Resource/Issues	Rationale for Determination	Signature	Date
NP	Farmlands (prime/unique)	Prime or unique farmlands are not present in the Project Area, as designated by the NRCS.	Branon Rochelle	6/16/2015
NP	Fuels/Fire Management	No fire or fuel management activities are planned for the Project Area. The proposed project would not conflict with fire management activities due to the use of existing and proposed well pad operations.	Branon Rochelle	6/16/2015
NI	Geology/Minerals/Energy Production	<p>No known gilsonite is in the project area. If gilsonite is encountered during drilling or construction, please report that information to BLM VFO. The depth and thickness of the vein is important information that should be provided to BLM. Operator must notify any active gilsonite operation within 2 miles of the location 48 hours prior to any blasting for this well.</p> <p>Natural gas, oil, gilsonite, oil shale and tar sand are the only mineral resources that could be impacted by the project. Production of natural gas or oil would deplete reserves, but the proposed project allows for the recovery of natural gas and oil per 43 CFR 3162.1(a), under the existing Federal lease. Compliance with “Onshore Oil and Gas Order No. 2, Drilling Operations” would assure that the project would not adversely affect gilsonite, oil shale, or</p>	Elizabeth Gamber	9/3/2014

Determination	Resource/Issues	Rationale for Determination	Signature	Date
		<p>tar sand deposits. Due to the state-of-the-art drilling and wells completion techniques, the possibility of adverse degradation of tar sand or oil shale deposits by the proposed action would be negligible.</p> <p>Wells completion must be accomplished in compliance with “Onshore Oil and Gas Order No. 2, Drilling Operations”. These guidelines specify the following: ... <i>proposed casing and cementing programs shall be conducted as approved to protect and/or isolate all usable water zones, potentially productive zones, lost circulation zones, abnormally pressured zones, and any prospectively valuable deposits of minerals. Any isolating medium other than cement shall receive approval prior to use.</i></p>		
PI	Invasive Plants/Noxious Weeds, Soils & Vegetation	<p>IP/NW: Proposed disturbance would provide suitable habitat for the establishment and spread of non-native plant species.</p> <p>Operator would control invasive species in all disturbed areas as discussed in Chapter 2.</p> <p>Soils: 8.51 acres of soil disturbance would occur during construction until reclamation is successful.</p>	Branon Rochelle	6/16/2015

Determination	Resource/Issues	Rationale for Determination	Signature	Date
		<p>Soils would be re-contoured and reseeded during reclamation. Locations would be seeded with the seed mix approved by the BLM Authorized Officer.</p> <p>Veg: 8.51 acres of initial vegetation disturbance/removal. Upon construction completion, the disturbed area would be reseeded and re-contoured to the approximate natural contours. This would reduce the effects of the disturbance when the seeding becomes established. Locations would be seeded with the seed mix approved by the BLM Authorized Officer.</p>		
NI	Lands/Access	<p>The Project Area is located within the Vernal Field Office Resource Management Plan planning area which allows for oil and gas development with associated road and pipeline right-of-ways. No existing land uses would be changed or modified by the implementation of the Proposed Action; therefore there would be no adverse effects.</p> <p>The proposed area is located within the Vernal Field Office Resource Management Plan area which allows for oil and gas development with</p>	Branon Rochelle	6/16/2015

Determination	Resource/Issues	Rationale for Determination	Signature	Date
		<p>associated road and pipeline right-of-ways. The roads and pipelines for the Gusher Federal 15-29-6-21E would require ROWs be in place prior to the approval of the APDs.</p> <p>No existing land uses would be changed or modified by the implementation of the proposed action; therefore there would be no adverse effect.</p>		
NP	Lands with Wilderness Characteristics (LWC)	None are present in the project area per the Vernal Field Office RMP and GIS review.	Alec Bryan	9/9/2014
NI	Livestock Grazing & Rangeland Health Standards	The proposed action will place 2 new well pads in the Stirrup allotment.	Branon Rochelle	6/16/2015
PI	Paleontology	Uinta Paleo (June 3, 2013) surveyed the location for Well 15-29-6-21E, and recommended that a paleo monitor spot check the debris during construction. The June 7, 2012 Uinta Paleo Survey Report addressed the 11-28-6-21E Well Site and cleared it for paleo.	Elizabeth Gamber	9/3/2014

Determination	Resource/Issues	Rationale for Determination	Signature	Date
NI	Plants: BLM Sensitive	<p>The following UT BLM sensitive plant species are present or expected in the same or an adjacent subwatershed as the proposed project: Horseshoe milkvetch (<i>Astragalus equisolensis</i>), Hamilton milkvetch (<i>Astragalus hamiltonii</i>), and <i>Yucca sterilis</i>. The Project Area was surveyed by Grasslands Consulting on 5/24/2014 to determine if suitable habitat was present, and to survey for <i>Astragalus equisolensis</i>, and <i>Y. sterilis</i>. No individuals or populations of either species were found.</p> <p>Additional BLM Sensitive plant species are precluded based on GIS soil, elevation, known location and range data, and onsite field review for Green River shale habitats.</p>	Christine Cimiluca	9/8/2014
NP	Plants: Threatened, Endangered, Proposed, or Candidate	<p>The proposed project is located outside of the potential habitat polygon for threatened <i>Sclerocactus ssp.</i>(<i>Sclerocactus wetlandicus</i> or <i>S. brevispinus</i>) per BLM GIS data review, and no individuals or populations of either species have been previously documented in the Project Area. No suitable habitat for cactus was observed during on-site visits on 3/12/2014 and 12/03/13. Green River shale</p>	Christine Cimiluca	9/8/2014

Determination	Resource/Issues	Rationale for Determination	Signature	Date
		<p>outcrops were also noted as absent.</p> <p>Additional TEPC plant species are precluded based on GIS soil, elevation, known location data, and onsite field review for riparian and Green River shale habitats.</p>		
NI	Plants: Wetland/Riparian	None are present in the project area per the Vernal Field Office RMP and GIS review.	Branon Rochelle	6/16/2015
NI	Recreation	<p>The Project Area is located in the Vernal Extensive Recreation Management Area; currently the VFO does not track quantifiable visitor use data within the Project Area. Recreational use may occur associated with the White River in the western portion of the Project Area. Portions of the proposed well pad expansions of 922-34H and 922-34H4 may be within the viewshed of the White River (assuming 22-foot tank height). Due to the very limited portion of proposed development that may be visible from the White River, impacts to recreational users of the White River would be negligible.</p>	Alec Bryan	9/9/2014

Determination	Resource/Issues	Rationale for Determination	Signature	Date
NI	Socio-Economics	No impact to the social or economic status of the county or nearby communities would occur from this project due to its small size in relation to ongoing development throughout the basin. Cumulative effects on socio-economic conditions resulting from past, present, and future development (including the Proposed Action) are described in the GNB Final EIS (BLM 2012a)	Branon Rochelle	6/16/2015
NI	Visual Resources	The proposed project is in a VRM Class IV areas, per the Vernal Field Office GIS Data Base & RMP/ROD. New projects can be approved that are not large scale, dominating features Class IV objective states: The objective of this class is to provide for management activities which require major modifications of the existing character of the landscape. The level of change to the characteristic landscape can be high. These management activities may dominate the view and be the major focus of viewer attention. However, every attempt should be made to minimize the impact of these activities through careful location, minimal disturbance, and repeating the basic elements. The proposal will follow existing form, line and texture in the	Alec Bryan	9/9/2014

Determination	Resource/Issues	Rationale for Determination	Signature	Date
		landscape, but will contrast in color temporarily with the landscape. The contrast in color, form, line and texture is within the class IV objectives.		
NI	Wastes (hazardous/solid)	<p>Hazardous Waste: No chemicals subject to reporting under SARA Title III in an amount equal to or greater than 10,000 pounds will be used, produced, stored, transported, or disposed of annually in association with the project.</p> <p>Solid Wastes: Trash would be confined in a covered container and hauled to an approved landfill. Burning of waste or oil would not be done. Human waste would be contained and be disposed of at an approved sewage treatment facility.</p>	Branon Rochelle	6/16/2015
NI	Water: Floodplains	None are present in the disturbance areas per the Vernal Field Office RMP and GIS review.	Branon Rochelle	6/16/2015
NI	Water: Groundwater Quality	Ground Water: Compliance with "Onshore Oil and Gas Order No. 1 will assure that the project will not adversely affect groundwater quality. Due to the state-of-the-art drilling and wells completion techniques, the possibility of adverse degradation of groundwater quality or prospectively valuable mineral deposits by the proposed action will be negligible.	Elizabeth Gamber	9/3/2014

Determination	Resource/Issues	Rationale for Determination	Signature	Date
NI	Water: Hydrologic Conditions (stormwater)	The proposed construction of the well pads, and roads, would alter the topography of the area to a small degree. It is not expected that surface water or storm water would be created to the level of concern for Clean Water Act Section 402 (storm water) review. In addition federal law has exempted energy development from storm water requirements.	Branon Rochelle	6/16/2015
NI	Water: Surface Water Quality	Surface waters: The only potential for the proposed project to negatively impact water quality would be increased potential for chemical spills or increased disturbance to surface soils which could cause soil erosion. This would not be expected to occur in a way that would be negative to surface waters	Branon Rochelle	6/16/2015
NI	Water: Waters of the U.S.	The proposed disturbance would not impact waters of the U.S.	Branon Rochelle	6/16/2015
NI	Wild Horses	No herd areas or herd management areas are present in the project area per BLM GIS database.	Branon Rochelle	6/16/2015
PI	Wildlife: Migratory Birds (including raptors)	Migratory birds are present (see Appendix B). Crescent Point has committed to installing a muffler system that will minimize noise (see chapter 2). There are known or documented raptor nests within ½ mile of the proposed project area.	Daniel Emmett	10/28/2014

Determination	Resource/Issues	Rationale for Determination	Signature	Date
PI	Wildlife: Non-USFWS Designated	Project is not within any designated big game habitat. Water depletions associated with the Proposed Action could result in adverse impacts to sensitive fish species.	Daniel Emmett	10/28/2014
PI	Wildlife: Threatened, Endangered, Proposed or Candidate	Water depletions associated with the Proposed Action could result in adverse impacts to threatened and endangered fish species. Project is not within any designated T&E habitat. Is the proposed project in sage grouse PPH or PGH? Yes () No (X) If the answer is yes, the project must conform with WO IM 2012-043.	Daniel Emmett	10/28/2014
NP	Woodlands/Forestry	None are present in the project area per the Vernal Field Office RMP and GIS review.	Branon Rochelle	6/16/2015

Table A.2. Final Review

Reviewer Title	Signature	Date	Comments
Environmental Coordinator	/s/Kelly Buckner		
Authorized Officer	/s/Jerry Kenczka	June 19, 2015	