



United States Department of the Interior

BUREAU OF SAFETY AND ENVIRONMENTAL ENFORCEMENT
PACIFIC OCS REGION
770 Paseo Camarillo, 2nd Floor
Camarillo, CA 93010-6064

September 24, 2013

Mike Ludwig
Truthout
1325 St. Bernard Avenue
New Orleans, LA 70116

Re: FOIA Request #BSEE-2013-00160

Dear Mr. Ludwig:

This is in response to your Freedom of Information Act (FOIA) request dated July 12, 2013, and received in our office on July 15, 2013, requesting copies of the following from 2011 to present:

1. Copies of any Application for Permit to Drill (APD) and/or Applications for Permit to Modify (APM) filed by operator DCOR LLC with BSEE to hydraulically fracture a well.
2. Copies of any permits and/or permit modifications granted by BSEE to DCOR LCC to hydraulically fracture a well.
3. Copy of the BSEE geo-hazard review of DCOR LLC's proposal to hydraulically fracture a sandstone well off the California coast.
4. Copies of any violations and/or notices of violation issued by BSEE to DCOR LLC related to oil and gas exploration.

Records responsive to your request may be viewed and retrieved on BSEE website address, <http://www.bsee.gov/About-BSEE/FOIA/FOIA.aspx>, BSEE FOIA Reading Room (Frequently Requested Documents). This page contains records that the bureau proactively discloses because they are frequently requested under the FOIA. As you can see, redactions are applied to 153 pages of the responsive records. These portions and pages are exempt from release in accordance with Exemption 5 of the FOIA (5 U.S.C. 552 (b)(5)), which pertains to predecisional expressions of opinions and recommendations in inter-agency or intra-agency records. Also, we have enclosed 23 pages of responsive material related to geo-hazard and have determined that 21 portions and pages are exempt from release in accordance with Exemption 9 of the FOIA (5 U.S.C. 552 (b)(9)), which pertains to geological and geophysical information concerning wells.

For your information, Congress excluded three discrete categories of law enforcement and national security records from the requirements of the FOIA. See 5 U.S.C. § 552 (c) (2006 & Supp. IV (2010)). This response is limited to those records that are subject to the requirements of the FOIA. This is a standard notification that is given to all our requesters and should not be taken as an indication that excluded records do, or do not, exist.

Mr. Lane Nemirow with the Office of the Solicitor was consulted in reaching this decision. If you disagree with this determination, you may appeal this partial denial to the FOIA Appeals Officer. The FOIA Appeals Officer must receive your FOIA appeal no later than 30 workdays from the date of this final letter responding to your FOIA request. Appeals arriving or delivered after 5 p.m. E.T., Monday through Friday, will be deemed received on the next workday. Your appeal must be delivered by mail, courier service, fax, or email to the address listed at <http://www.doi.gov/foia/appeals.cfm>. If appealing by mail your appeal and all correspondence must be addressed to:

Freedom of Information Act Appeals Officer
Department of the Interior
Office of the Solicitor
1849 C Street, NW, MS 6556
Washington, DC 20240

You must include with your appeal copies of all correspondence between you and the bureau concerning your FOIA request, including a copy of your original FOIA request and this partial denial letter, and an explanation of why you believe the bureau's response is in error. Failure to include this documentation with your appeal will result in the Department's rejection on your appeal. All communications concerning an appeal should be clearly marked with the words, "FREEDOM OF INFORMATION APPEAL."

Also, the Office of Government Information Services (OGIS) was created as part of the 2007 OPEN Government Act amendments to the FOIA to offer mediation services to resolve disputes between FOIA requesters and Federal agencies as a nonexclusive alternative to litigation. Using OGIS services does not affect your right to pursue litigation. You may contact OGIS at:

Office of Government Information Services (OGIS)
National Archives and Records Administration
8601 Adelphia Road, Room 2510
College Park, Maryland, 20740-6001

This completes our response to your request. If you have any questions, please contact Rochelle Williams at (805) 389-7618, or you can send an email to rochelle.williams@bsee.gov.

Sincerely,



Janice R. Hall
FOIA Officer

Enclosures

February 27, 2013

Memorandum

To: Drew Mayerson, Regional Supervisor, Office of Production and Development
From: Office of Production and Development Geology Staff
Subject: Geologic Hazards Analysis for S-005 ST01 Development Well APD (Proprietary)

NOTE: THIS GEOLOGIC SAFETY ANALYSIS IS INTENDED TO ALERT THE OPERATOR AND DISTRICT ENGINEERS TO POTENTIAL GEOLOGIC HAZARDS THAT MAY BE ENCOUNTERED DURING DRILLING OPERATIONS. THIS ANALYSIS DOES NOT RELIEVE THE OPERATOR OF THE RESPONSIBILITY TO CONDUCT THEIR OWN GEOHAZARD ANALYSIS PRIOR TO AND DURING DRILLING THIS WELL. A WORST CASE DISCHARGE ANALYSIS WAS NOT REQUESTED BY THE DISTRICT OFFICE FOR THIS DEVELOPMENT WELL AND WAS NOT INCLUDED IN THIS REVIEW.

Well No: S-005 ST01

Operator: DCOR

Unit: Santa Clara

Lease OCS-P: 0216 (bottom)

Lease OCS-P: 0216 (top)

Field: Santa Clara

Platform: Gilda

KB Elevation: 107 ft

Water Depth: 205 ft

Locations (est.)	X (ft)	Y (ft)	MD (ft)	TVD (ft)
Surface (Slot No. 78; OCS-P 0216)	1041766	747956	+52	0

(b) (9)

Summary of the Planned Operation

DCOR has submitted an Application for Permit to Drill (APD) for the proposed well S-005 ST01, within the Santa Clara Unit, Offshore Ventura, California (Figure 1). The proposed well is a new, single completion sidetrack well originating from Platform Gilda targeting production from **(b) (9)** within the Santa Clara Field. In order to stimulate production

from the (b) (9) DCOR plans to fracture pack several production zones to maximize reservoir pressure and prevent sand flux into the well bore.

1. Geohazards Review Methodology:

This APD Geohazards review was carried out using 3D seismic reflection data, mud logs from previously drilled wells within the Santa Clara Field, shallow hazards mapping guidelines recommended in NTL 01-P01 and by the IODP, to constrain well path lithology, shallow gas potential, and fault hazards and other safety-related concerns that may impact the success of the S-005 ST01 drilling program.

2. Existing Wells:

No existing wells lie nearby the proposed S-005 ST01 kick-off point or well path. Baker Hughes has prepared a well anti-collision report showing the proposed S-005 ST01 well path does not intersect any existing wells.

3. Regional Geologic Setting

The Santa Clara Field is located in the eastern Santa Barbara Channel region of Western Transverse Ranges (WTR) Tectonic Province. The WTR is an east-west trending tectonic province characterized by strong north-south compression and widespread high-angle thrust faults due to transform motion on the San Andreas Fault to the east. Dominant structures near the Santa Clara Unit include the Pitas Point and Oak Ridge faults. The major hydrocarbon trap within the Santa Clara Field is the Montalvo Anticline, a regional structure associated with uplift on the Oak Ridge and Mid Channel Faults. Hydrocarbon production within the Santa Clara Field is constrained to rocks of Tertiary age, including the Pliocene Pico and Repetto Formations, and the Miocene Monterey and Topanga Formations.

4. Potential Oil and Gas Reservoirs

The target hydrocarbon zone for the S-005 ST01 as mapped by DCOR (b) (9) (b) (9) From the kick-off point within the existing S-005 well (b) (9) the well will be drilled southeast through the crest of the Montalvo anticline and completed within the (b) (9) (b) (9)

5. Interpreted Well Stratigraphy

Stratigraphy for the S-005 ST01 well was constrained using well logs from the Santa Clara Field and 3D time-migrated seismic reflection data. The S-005 ST01 well is interpreted to pass through 2 different stratigraphic zones during drilling operations: (b) (9) (b) (9) A tophole prognosis chart (Figure 2) shows anticipated well lithology (b) (9)

6. Possible Shallow Water Flow

There have been no previous instances of shallow water flow in any adjacent wells within the Santa Clara Field.

7. Possible Lost Circulation Zones

No significant events of lost circulation were noted in the mud logs of the primary S-005 development well, or nearby S-001 and S-002 wells. No previous instances of lost circulation were reported for wells drilled (b) (9) in the Santa Clara Field.

8. Faulting and Fluid Flow Potential

The Santa Clara Field is bounded to the north by the Oak Ridge Fault and to the south by the World's End Fault, both of which are high-angle thrust faults. While other wells drilled within the Santa Clara Field have crossed minor bending moment faults associated with uplift of the regional Montalvo anticline, the S-005 ST01 well path does not cross any major or minor interpreted fault splays. The nearest interpreted fault to the S-005 ST01 well bore is the World's End Fault, located approximately 1,500' south of the well TD (Figure 3). (b) (9)

(b) (9)

(b) (9) Due to the lack of local fault proximity to the producing well zones, no migratory pathway for drilling or hydrocarbon fluids to younger sedimentary units or the seafloor was identified for the S-005 ST01 well.

9. Possible Shallow Gas Zones

No zones of possible shallow gas were interpreted in the 3D seismic data within the vicinity of the S-005 ST01 well path. While some gas has previously been encountered within the shallow Pleistocene and Pliocene Upper Pico Formations, the kick-off point lies well below the zone of gas-saturated sediments. In the event of encountering shallow gas during drilling operations, DCOR maintains a contingency plan to counteract the flow of gas by keeping sufficiently heavy drilling muds on hand on Platform Gilda.

10. Possible Overpressured or Depleted Zones

DCOR does not anticipate encountering overpressured zones while drilling the S-005 ST01 well, as the kick-off point lies below the gas-charged portion of the Upper Pico Formation (b) (9)

(b) (9) normally sub-pressured within the Santa Clara Field. DCOR has a well control contingency plan to account for any unexpected abnormal drilling pressures, (b) (9)

(b) (9)

11. Logging/Coring

DCOR plans to run Electric Logs (GR, AIT, Density, and Neutron) from the TD to 9-5/8" window. No sidewall cores are anticipated for the S-005 ST01 well.

12. H₂S Gas

No H₂S gas was reported in the original S-005 well, or in the adjacent S-001 and S-002 wells within (b) (9). However, based on the submitted APD, DCOR assumes any gas circulated to the surface will have hydrogen sulfide potential and will adhere to the BSEE approved "Platform Gilda Hydrogen Sulfide and Sulfur Dioxide Contingency Plan."

13. Worst Case Discharge Analysis

The District Supervisor did not request a Worst Case Discharge (WCD) analysis for this well. Should a WCD analysis be requested in the future, this would require modeling the maximum flow that could occur from an uncontrolled release of fluids derived from the uncased portion of the well within the Upper Repetto Formation.

14. Conclusions and Recommendations

The S-005 ST01 development well appears favorable for development. No significant safety hazards were interpreted within the vicinity of the proposed well path.

(b) (9)

(b) (9)

(b) (9)

June 12, 2013

Memorandum

To: Drew Mayerson, Regional Supervisor, Office of Production and Development
From: Robert Dame, Geophysicist, Office of Production and Development
Subject: Geologic Safety Analysis for S-71 Well APD (Proprietary)

NOTE: THIS GEOLOGIC SAFETY ANALYSIS IS INTENDED TO ALERT THE OPERATOR AND DISTRICT ENGINEERS TO POTENTIAL GEOHAZARDS THAT MAY BE ENCOUNTERED DURING DRILLING OPERATIONS. THIS ANALYSIS DOES NOT RELIEVE THE OPERATOR OF THE RESPONSIBILITY OF CONDUCTING THEIR OWN ANALYSIS PRIOR TO AND DURING THE DRILLING OF THIS WELL. A WORST CASE DISCHARGE ANALYSIS WAS NOT REQUESTED BY THE DISTRICT OFFICE FOR THIS WELL AND WAS NOT INCLUDED IN THIS REPORT.

Well No: S-71	Operator: DCOR
Lease OCS-P: 0216 (bottom)	Lease OCS-P: 0216 (top)
Field: Point Pedernales	Platform: Gilda
KB Elevation: 107 ft	Water Depth: 205 ft

Locations (est.)	X (ft)	Y (ft)	MD (ft)	TVD (ft)
Surface (Slot No. 9; OCS-P 0216)	1,039,415	747,950	+107	0

(b) (9)

Summary of the Planned Operation

DCOR has submitted an Approval for Permit to Drill (APD) for development well S-71 (Figure 1). Well S-71 is a new sidetrack well to be drilled from Platform Gilda on lease block OCS-P 0216 west into the Santa Clara Field **(b) (9)**. According to the APD, the well will be a single-completion well targeting production **(b) (9)**. **(b) (9)** Drilling operations are estimated by DCOR to require 31 days well completion.

1. Geologic Safety Review Methodology:

This APD review was carried out using 3D seismic reflection data, exploratory and development well logs within the Santa Clara Field, and safety guidelines recommended in NTL 01-P01 and by the International Ocean Drilling Program to constrain well path lithology, shallow gas potential, faulting, and other safety-related concerns that may impact the success of the S-71 well program. As stated previously, a worst-case discharge analysis (WCD) for the S-71 well was not included in this geohazards report.

2. Local Wells:

InterAct has prepared a well clearance report indicating the planned S-71 well trajectory does not intersect any existing wells drilled within the Santa Clara Field.

3. Potential Oil and Gas Reservoirs

The target hydrocarbon zone for the S-71 ST01 well as mapped by DCOR (b) (9) (b) (9) From the kick-off point at the existing S-71 well (b) (9) the well will be drilled west through the crest of the Montalvo anticline and completed (b) (9) (b) (9) be penetrated by the S-71 ST01 well.

4. Regional Geologic Setting

The Santa Clara Field is located in the eastern Santa Barbara Channel region of Western Transverse Ranges (WTR) Tectonic Province. The WTR is an east-west trending tectonic province characterized by strong north-south compression and widespread high-angle thrust faults due to transform motion on the San Andreas Fault to the east. Dominant structures near the Santa Clara Unit include the Pitas Point and Oak Ridge faults. The major hydrocarbon trap within the Santa Clara Field is the Montalvo Anticline, a regional structure associated with uplift on the Oak Ridge and Mid Channel Faults. Hydrocarbon production within the Santa Clara Field is constrained to rocks of Tertiary age, including the Pliocene Pico and Repetto Formations, and the Miocene Monterey and Topanga Formations.

5. Interpreted Well Stratigraphy

Stratigraphy for the S-71 well was constrained using mud logs from previous exploratory and development wells drilled near the Santa Clara Field and 3D time-migrated seismic reflection data. The S-71 well is interpreted to pass through 2 different stratigraphic zones during drilling operations: (b) (9) (b) (9)

6. Possible Shallow Water Flow

There have been no previous instances of shallow water flow in any adjacent wells within the Santa Clara Field.

7. Possible Lost Circulation Zones

The potential for lost circulation during drilling is considered low for the S-71 sidetrack well, as no significant events of lost circulation were noted in the mud logs of the primary S-71 development well or other wells drilled in the Upper Repetto Formation in the Santa Clara Field.

8. Faulting

The Santa Clara Field is bounded to the north by the Oak Ridge fault and to the south by the World's End fault, both of which are high-angle thrust faults. While other wells drilled within the Santa Clara Field have crossed minor bending moment faults associated with uplift of the regional Montalvo anticline, the S-71 ST01 well path does not cross any major or minor interpreted fault splays.

9. Possible Shallow Gas Zones

No zones of possible shallow gas were interpreted in the 3D seismic data within the vicinity of the S-71 ST01 well path. While some shallow gas was previously encountered in the youngest section of the Pico Formation, the kick-off point for the S-71 well (b) (9) lies well below the zone of gas-saturated sediments. In the event of encountering shallow gas during drilling operations, DCOR maintains a contingency plan to counteract the flow of gas by keeping sufficiently heavy drilling muds on hand on Platform Gilda.

10. Possible Overpressured or Depleted Zones

DCOR does not anticipate encountering overpressured zones while drilling the S-71 ST01 well, as the kick-off point lies below the gas-charged portion of the Upper Pico Formation (b) (9) (b) (9) within the Santa Clara Field. DCOR has a well control contingency plan to account for any unexpected abnormal drilling pressures, (b) (9) (b) (9)

11. Logging/Coring

DCOR plans to run Electric Logs (GR, AIT, Density, and Neutron) from the TD to 9-1/2" window. No sidewall cores are anticipated for the S-71 ST01 well.

12. H2S Gas

No H2S gas was reported in the original S-71 well, or in the adjacent S-16 and S-59 wells (b) (9). However, based on the submitted APD, DCOR assumes any gas circulated to the surface will have hydrogen sulfide potential and will adhere to the BSEE approved "Platform Gilda Hydrogen Sulfide and Sulfur Dioxide Contingency Plan."

13. Worst Case Discharge Analysis

The District Supervisor did not request a Worst Case Discharge (WCD) analysis for this well. Should a WCD analysis be requested in the future, this would require modeling the maximum flow that could occur from an uncontrolled release of fluids derived from the uncased portion of the well within the (b) (9)

14. Conclusions and Recommendations

The S-71 ST01 development well appears favorable for development. No significant safety hazards were interpreted within the vicinity of the proposed well path.

1. The first part of the document discusses the importance of maintaining accurate records of all transactions and activities. It emphasizes that proper record-keeping is essential for compliance with various regulations and for the effective management of the organization's resources.

2. The second part of the document outlines the specific requirements for record-keeping, including the need to maintain records for a minimum of seven years. It also discusses the importance of ensuring that records are easily accessible and up-to-date.

3. The third part of the document provides guidance on how to implement a robust record-keeping system. This includes the use of standardized forms and procedures, as well as the implementation of internal controls to ensure the accuracy and integrity of the records.

4. The fourth part of the document discusses the consequences of non-compliance with record-keeping requirements. It notes that failure to maintain accurate records can result in significant penalties and may also damage the organization's reputation.

5. The fifth part of the document provides a checklist of key record-keeping requirements to ensure that the organization is fully compliant with all applicable regulations.

(b) (9)

(b) (9)

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June 13, 2013

Memorandum

To: Drew Mayerson, Regional Supervisor, Office of Production and Development
From: Robert Dame, Geophysicist, Office of Production and Development
Subject: Geologic Safety Analysis for S-75 Well APD (Proprietary)

NOTE: THIS GEOLOGIC SAFETY ANALYSIS IS INTENDED TO ALERT THE OPERATOR AND DISTRICT ENGINEERS TO POTENTIAL GEOHAZARDS THAT MAY BE ENCOUNTERED DURING DRILLING OPERATIONS. THIS ANALYSIS DOES NOT RELIEVE THE OPERATOR OF THE RESPONSIBILITY OF CONDUCTING THEIR OWN ANALYSIS PRIOR TO AND DURING THE DRILLING OF THIS WELL. A WORST CASE DISCHARGE ANALYSIS WAS NOT REQUESTED BY THE DISTRICT OFFICE FOR THIS WELL AND WAS NOT INCLUDED IN THIS REPORT.

Well No: S-75	Operator: DCOR
Lease OCS-P: 0216 (bottom)	Lease OCS-P: 0216 (top)
Field: Point Pedernales	Platform: Gilda
KB Elevation: 107 ft	Water Depth: 205 ft

Locations (est.)	X (ft)	Y (ft)	MD (ft)	TVD (ft)
Surface (Slot No. 8; OCS-P 0216)	1,041,684	747,998	+107	0

(b) (9)

Summary of the Planned Operation

DCOR has submitted an Approval for Permit to Drill (APD) for development well S-75 (Figure 1). Well S-75 is a new sidetrack well to be drilled from Platform Gilda on lease block OCS-P 0216 southwest into the Santa Clara Field to a depth **(b) (9)**. According to the APD, the well will be a single-completion well targeting production from **(b) (9)**. **(b) (9)** Drilling operations are estimated by DCOR to require 48 days for well completion.

1. Geologic Safety Review Methodology:

This APD review was carried out using 3D seismic reflection data, exploratory and development well logs within the Santa Clara Field, and safety guidelines recommended in NTL 01-P01 and by the International Ocean Drilling Program to constrain well path lithology, shallow gas potential, faulting, and other safety-related concerns that may impact the success of the S-75 well program. As stated previously, a worst-case discharge analysis (WCD) for the S-75 well was not included in this geohazards report.

2. Local Wells:

InterAct has prepared a well clearance report indicating the planned S-75 well trajectory does not intersect any existing wells drilled within the Santa Clara Field.

3. Potential Oil and Gas Reservoirs

The target hydrocarbon zone for the S-75 ST01 well as mapped by DCOR is the (b) (9). From the kick-off point at the existing S-75 well (b) (9) the well will be drilled southwest through the crest of the Montalvo anticline (b) (9). A maximum hydrocarbon column of approximately (b) (9) by the S-75 ST01 well.

4. Regional Geologic Setting

The Santa Clara Field is located in the eastern Santa Barbara Channel region of Western Transverse Ranges (WTR) Tectonic Province. The WTR is an east-west trending tectonic province characterized by strong north-south compression and widespread high-angle thrust faults due to transform motion on the San Andreas Fault to the east. Dominant structures near the Santa Clara Unit include the Pitas Point and Oak Ridge faults. The major hydrocarbon trap within the Santa Clara Field is the Montalvo Anticline, a regional structure associated with uplift on the Oak Ridge and Mid Channel Faults. Hydrocarbon production within the Santa Clara Field is constrained to rocks of Tertiary age, including the Pliocene Pico and Repetto Formations, and the Miocene Monterey and Topanga Formations.

5. Interpreted Well Stratigraphy

Stratigraphy for the S-75 well was constrained using mud logs from previous exploratory and development wells drilled near the Santa Clara Field and 3D time-migrated seismic reflection data. The S-75 well is interpreted to pass through 2 different stratigraphic zones during drilling operations: the Pliocene Pico and Upper Repetto Formations. (b) (9)

6. Possible Shallow Water Flow

There have been no previous instances of shallow water flow in any adjacent wells within the Santa Clara Field.

7. Possible Lost Circulation Zones

The potential for lost circulation during drilling is considered low for the S-75 sidetrack well, as no significant events of lost circulation were noted in the mud logs of the primary S-75 development well or other wells drilled (b) (9)

8. Faulting

The Santa Clara Field is bounded to the north by the Oak Ridge fault and to the south by the World's End fault, both of which are high-angle thrust faults. While other wells drilled within the Santa Clara Field have crossed minor bending moment faults associated with uplift of the regional Montalvo anticline, the S-75 ST01 well path does not cross any major or minor interpreted fault splays.

9. Possible Shallow Gas Zones

No zones of possible shallow gas were interpreted in the 3D seismic data within the vicinity of the S-75 ST01 well path. While some shallow gas was previously encountered in the youngest section of the Pico Formation, the kick-off point for the S-75 well (b) (9) lies well below the zone of gas-saturated (b) (9). In the event of encountering shallow gas during drilling operations, DCOR maintains a contingency plan to counteract the flow of gas by keeping sufficiently heavy drilling muds on hand on Platform Gilda.

10. Possible Overpressured or Depleted Zones

DCOR does not anticipate encountering overpressured zones while drilling the S-75 ST01 well, as the kick-off point lies below the gas-charged portion of the Upper Pico Formation and the Repetto Formation is normally sub-pressured within the Santa Clara Field. DCOR has a well control contingency plan to account for any unexpected abnormal drilling pressures, (b) (9) (b) (9)

11. Logging/Coring

DCOR plans to run Electric Logs (GR, AIT, Density, and Neutron) from the TD to 9-1/2" window. No sidewall cores are anticipated for the S-75 ST01 well.

12. H₂S Gas

No H₂S gas was reported in the original S-75 well, or in the adjacent S-49, S-85, S-39, and S-59 wells (b) (9). However, based on the submitted APD, DCOR assumes any gas circulated to the surface will have hydrogen sulfide potential and will adhere to the BSEE approved "Platform Gilda Hydrogen Sulfide and Sulfur Dioxide Contingency Plan."

13. Worst Case Discharge Analysis

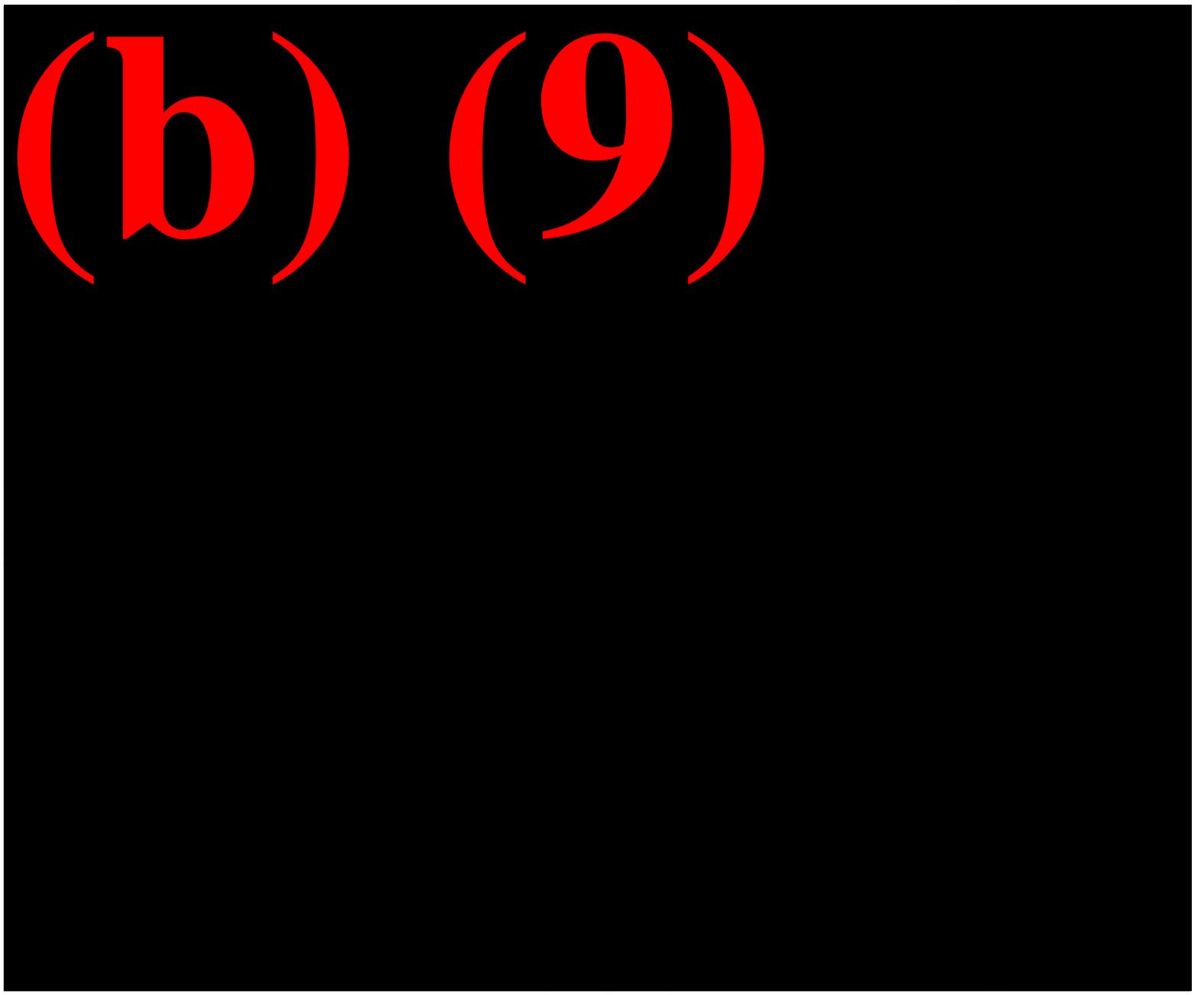
The District Supervisor did not request a Worst Case Discharge (WCD) analysis for this well. Should a WCD analysis be requested in the future, this would require modeling the maximum flow that could occur from an uncontrolled release of fluids derived from the uncased portion of the well (b) (9)

14. Conclusions and Recommendations

The S-75 ST01 development well appears favorable for development. No significant safety hazards were interpreted within the vicinity of the proposed well path.

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(b) (9)



(b) (9)

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June 20, 2013

Memorandum

To: Drew Mayerson, Regional Supervisor, Office of Production and Development
From: Robert Dame, Geophysicist, Office of Production and Development
Subject: Geologic Hazards Analysis for S-33 ST03 Well APD (Proprietary)

NOTE: THIS GEOLGIC SAFETY ANALYSIS IS INTENDED TO ALERT THE OPERATOR AND DISTRICT ENGINEERS TO POTENTIAL GEOHAZARDS THAT MAY BE ENCOUNTERED DURING DRILLING OPERATIONS. THIS ANALYSIS DOES NOT RELIEVE THE OPERATOR OF THE RESPONSIBILITY OF CONDUCTING THEIR OWN ANALYSIS PRIOR TO AND DURING THE DRILLING OF THIS WELL. A WORST CASE DISCHARGE ANALYSIS WAS NOT REQUESTED BY THE DISTRICT OFFICE FOR THIS WELL AND WAS NOT INCLUDED IN THIS REPORT.

Well No: S-33RD

Operator: DCOR

Lease OCS-P: 0216 (bottom)

Lease OCS-P: 0216 (top)

Field: Santa Clara

Platform: Gilda

KB Elevation: 107 ft

Water Depth: 205 ft

Locations (est.)	X (ft)	Y (ft)	MD (ft)	TVD (ft)
Surface (Slot No. 37; OCS-P 0216)	1,041,688	747,967	+107	0

(b) (9)

Summary of the Planned Operation

DCOR has submitted an Approval for Permit to Drill (APD) for development well S-33RD (Figure 1). Well S-33RD is a new sidetrack well to be drilled from Platform Gilda on lease block OCS-P 0216 west in the Santa Clara Field to a depth **(b) (9)**. According to the APD submitted by DCOR, the well will be a single completion **(b) (9)**.

(b) (9) The original S-33 well was plugged and abandoned in 2002 due to well liner failure. Drilling operations are estimated by DCOR to require 25 days to well completion.

1. Geohazards Review Methodology:

This APD Geohazards review was carried out using 3D seismic reflection data, exploratory and development well logs from the Santa Clara Field, and shallow hazards mapping guidelines recommended in NTL 01-P01 and by the International Ocean Drilling Program to constrain well path lithology, shallow gas potential, fault hazards, and other safety-related concerns that may impact the success of the S-33RD well drilling program. A worst-case discharge analysis (WCD) for the S-33RD well was not included in this geohazards review.

2. Local Wells:

InterAct has prepared a well clearance report for DCOR that indicates the planned S-33RD well trajectory does not intersect any existing wells in the Santa Clara Field.

3. Potential Oil and Gas Reservoirs

The hydrocarbon zone of interest for the S-33RD (b) (9) The S-33RD well is to be drilled west through the crest of the Montalvo Anticline, and is anticipated to penetrate the (b) (9)

(b) (9)

4. Regional Geologic Setting

The Santa Clara Field is located in the eastern Santa Barbara Channel geomorphic region, part of the Western Transverse Ranges (WTR) Tectonic Province. The WTR is an east-west trending province characterized by strong north-south compression and widespread high-angle thrust faults due to strike-slip motion along the San Andreas Fault to the east. Dominant structures near the Santa Clara Field include the Pitas Point, Oak Ridge, and World's End faults. The major hydrocarbon trap within the Santa Clara Field is the Montalvo Anticline, a regional structure associated with uplift on the Oak Ridge and World's End faults. Hydrocarbon production within the Santa Clara Field is constrained to rocks of Tertiary age, including the Pico Formation, the Upper and Lower Repetto Formations, and the Monterey Formation.

5. Interpreted Well Stratigraphy

Stratigraphy for the S-33RD well was constrained using mud logs from previous exploratory and development wells drilled in the Santa Clara Field and 3D time-migrated seismic reflection data. The S-33RD well is interpreted to pass through 2 different stratigraphic units during drilling operations: the Pico Formation and the Upper Repetto Formation. (b) (9)

(b) (9)

6. Possible Shallow Water Flow

There have been no previous instances of shallow water flow in any adjacent wells within the Santa Clara Field.

7. Possible Lost Circulation Zones

The potential for lost circulation is considered low for the S-33RD well, as no significant events of lost circulation were noted in the mud logs of the primary S-33 development well or other wells drilled within (b) (9) Santa Clara Field.

8. Faulting

The Santa Clara Field is bounded to the north by the Oak Ridge fault and in the south by the World's End fault. While other wells drilled within the Santa Clara Field have crossed minor bending-moment faults associated with uplift of the Montalvo anticline, the S-33RD well path is not interpreted to cross any active fault splays.

9. Possible Shallow Gas Zones

No zones of possible shallow gas were interpreted in the 3D seismic data within the vicinity of the S-33RD well path. While some shallow gas was encountered in several wells in the Upper Pico Formation, the kick-off point for the S-33 (b) (9) lies about 1,000' below the zone of gas-saturated Upper Pico sediments. In the event that formation gas is encountered during drilling operations, DCOR maintains a contingency plan to counteract any upward flow of gas by keeping sufficiently heavy drilling mud on hand on Platform Gilda..

10. Possible Overpressured or Depleted Zones

DCOR does not anticipate encountering overpressured formation zones while drilling the S-33RD well. As stated in section 9, the kick-off point is located much deeper than the gas-charged section of the Upper Pico Formation, and the Lower Pico and Upper Repetto Formations are typically sub-pressured due to several decades of reservoir depletion in the Santa Clara Field. DCOR has a well control contingency plan to account for any unexpected abnormal drilling pressures (b) (9)

11. Logging/Coring

DCOR plans to run Electric Logs from the TD to 9-1/2" casing window. No sidewall cores are anticipated for the S-33RD well.

12. H2S Gas

No H2S gas has been reported in development wells drilled in the Santa Clara (b) (9) (b) (9) Based on the submitted APD, DCORP assumes any gas circulated to the surface will have hydrogen sulfide potential and will adhere to the BSEE approved "Platform Gilda Hydrogen Sulfide and Sulfur Dioxide Contingency Plan"

13. Worst Case Discharge Analysis

The District Supervisor did not request a Worst Case Discharge (WCD) analysis for this well. Should a WCD analysis be requested in the future, OPD staff would model the maximum flow that would occur from an uncontrolled release of fluids from the uncased, productive portion of the S-33RD (b) (9)

14. Conclusions and Recommendations

The S-33RD well appears favorable for development. No significant safety hazards were interpreted within the vicinity of the proposed well path.

(b) (9)

(b) (9)