UNITED STATES GOVERNMENT
MEMORANDUM

July 25, 2005

To: Public Information (MS 5034)

From: Plan Coordinator, FO, Plans Section (MS 5231)

Subject: Public Information copy of plan

Control #	-	N-08501
Type	-	Initial Exploration Plan
Lease(s)	-	OCS-G22971 Block - 511 Green Canyon Area
Operator	-	Nexen Petroleum U.S.A. Inc.
Description	-	Subsea Wells A, B, and C
Rig Type	-	SEMISUBMERSIBLE

Attached is a copy of the subject plan.

It has been deemed submitted as of this date and is under review for approval.

Karen Dunlap
Plan Coordinator

Site Type/Name	Botm Lse/Area/Blk	Surface Location	Surf Lse/Area/Blk
WELL/A	G22971/GC/511	7528 FNL, 1411 FEL	G22971/GC/511
WELL/B	G22971/GC/511	3625 FNL, 1130 FEL	G22971/GC/511
WELL/C	G22971/GC/511	6523 FNL, 4371 FEL	G22971/GC/511

NOTED-SCHEXNAILDRE

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N-8501

APPENDIX F
OIL SPILL INFORMATION

1. Site-Specific OSRP N/A

2. Regional OSRP Information

Nexen's Regional Oil Spill Response Plan (OSRP) was updated and submitted on June 30, 2005, and approved on July 7, 2005. Activities proposed in this EP will be covered by the Regional OSRP.

3. OSRO Information

Nexen's primary equipment provider is Clean Gulf Associates (CGA). The Marine Spill Response Corporation's (MSRC) STARS network will provide closest available personnel, as well as an MSRC supervisor to operate the equipment.

4. Worst-Case Scenario Comparison

Category	Regional OSRP WCD	EP WCD
Type of Activity	MODU	MODU
Facility Location (Area/Block)	MC 546	GC-511
Facility Designation	WELL #1	WELL #1
Distance to Nearest Shoreline (miles)	37	109
Volume Storage tanks (total) Uncontrolled blowout Total Volume	 20,000 20,000	 10,000 10,000
Type of Oil(s) (crude, condensate, diesel)	Condensate	Crude
API Gravity	42°	37°

Nexen has determined that the worst-case scenario from the activities proposed in this EP do not supercede the worst-cast scenario from our approved regional OSRP for far-shore activities.

Since Nexen has the capability to respond to the worst-case spill scenario included in our regional OSRP approved on July 7, 2005, and since the worst-case scenario determined for our EP does not replace the worst-case scenario in our regional OSRP, I hereby certify that Nexen has the capability to respond, to the maximum extent practicable, to a worst-case discharge, or a substantial threat of such a discharge, resulting from the activities proposed in our EP.

*5. **Facility Tanks, Production Facilities***
All facility tanks of 25 barrels or more.

Type of Storage Tank	Type of Facility	Tank Capacity (bbls)	Number of Tanks	Total Capacity (bbls)	Fluid Gravity (API)
Fuel Oil (Marine Diesel)	Semisubmersible	6906	4	27624	32.4
Production	N/A	N/A	N/A	N/A	N/A

APPENDIX D
BIOLOGICAL AND PHYSICAL INFORMATION

CHEMOSYNTHETIC INFORMATION

Activities proposed in this plan could disturb seafloor areas in water depths of 400 meters (1312 feet) or greater, therefore, information for the potential of encountering chemosynthetic communities is included as follows:

MAPS

Submitted under separate cover are maps prepared using 3-D seismic data depicting bathymetry, seafloor and shallow geological features, surface location of proposed well(s), positions of anchors and chains relative to the proposed operations, and a radius circle of 1500 feet around each such location.

ANALYSIS

Using 3-D seismic information, all seafloor features and areas that could be disturbed by the activities proposed in this plan have been identified. The likelihood of these proposed activities disturbing these seafloor and shallow geologic features is discussed in the following summary statement:

Associated Anchors – No Anchor Disturbances within 500 Feet of Chemosynthetic Communities

Well Locations A-C

- Features or areas that could support high-density chemosynthetic communities are **not** located within 1,500 feet of each proposed muds and cuttings discharge location.
- Features or areas that could support high-density chemosynthetic communities are not located within 500 feet of any seafloor disturbances resulting from our use of anchors (including those caused by anchors, anchor chains, and wire ropes).

TOPOGRAPHIC FEATURES INFORMATION

The activities proposed in this plan will not take place within 500 feet of any identified topographic feature; therefore topographic features information is not required.

LIVE BOTTOM (PINNACLE TREND) INFORMATION

Green Canyon Block 511 is not located within 100 feet of any pinnacle trend feature with vertical relief equal to or greater than 8 feet; therefore, live bottom information is not required.

PUBLIC COPY
June 28, 2005

INITIAL EXPLORATION PLAN

Lease Number (s):	OCS-G 22971
Area/Block:	Green Canyon Block 511
Prospect Name:	Knotty Head
Offshore:	Louisiana

Submitted by:

Nexen Petroleum U.S.A. Inc.
12790 Merit Drive
Suite 800
Dallas, Texas 75251-1270

Mary Patton
(972) 450-4489
Mary_Patton@nexeninc.com

Estimated start up date: December 1, 2005

Authorized Representative:

Cheryl Murphy
J. Connor Consulting, Inc.
16225 Park Ten Place, Suite 700
Houston, Texas 77084
(281) 578-3388
consultant@jccteam.com

No. Copies Being Submitted:

Proprietary:	5
Public Info:	4

For MMS:
Plan No. _____
Assigned to: _____

NEXEN PETROLEUM U.S.A. INC.

INITIAL EXPLORATION PLAN

LEASE OCS-G 22971

GREEN CANYON AREA BLOCK 511

APPENDIX A
CONTENTS OF PLAN

Nexen Petroleum U.S.A. Inc. (Nexen) is the designated operator of the subject oil and gas lease.

(A) DESCRIPTION, OBJECTIVES AND SCHEDULE

Appendix J contains a Plan Information Form, which provides a description of proposed activities, objectives, and a tentative schedule.

(B) LOCATION

Included as ***Attachment A-1*** is a map showing the location of the proposed wells. There will be anchors associated with the proposed operations and anchor plats are included as ***Attachment A-2.*** A Bathymetry Map depicting water depths is included as ***Attachment A-3***. Additional well information is included in Appendix J, on the Well Information Form.

(C) DRILLING UNIT

Nexen will utilize the Ocean Baroness, an anchored semisubmersible drilling rig for the proposed operations.

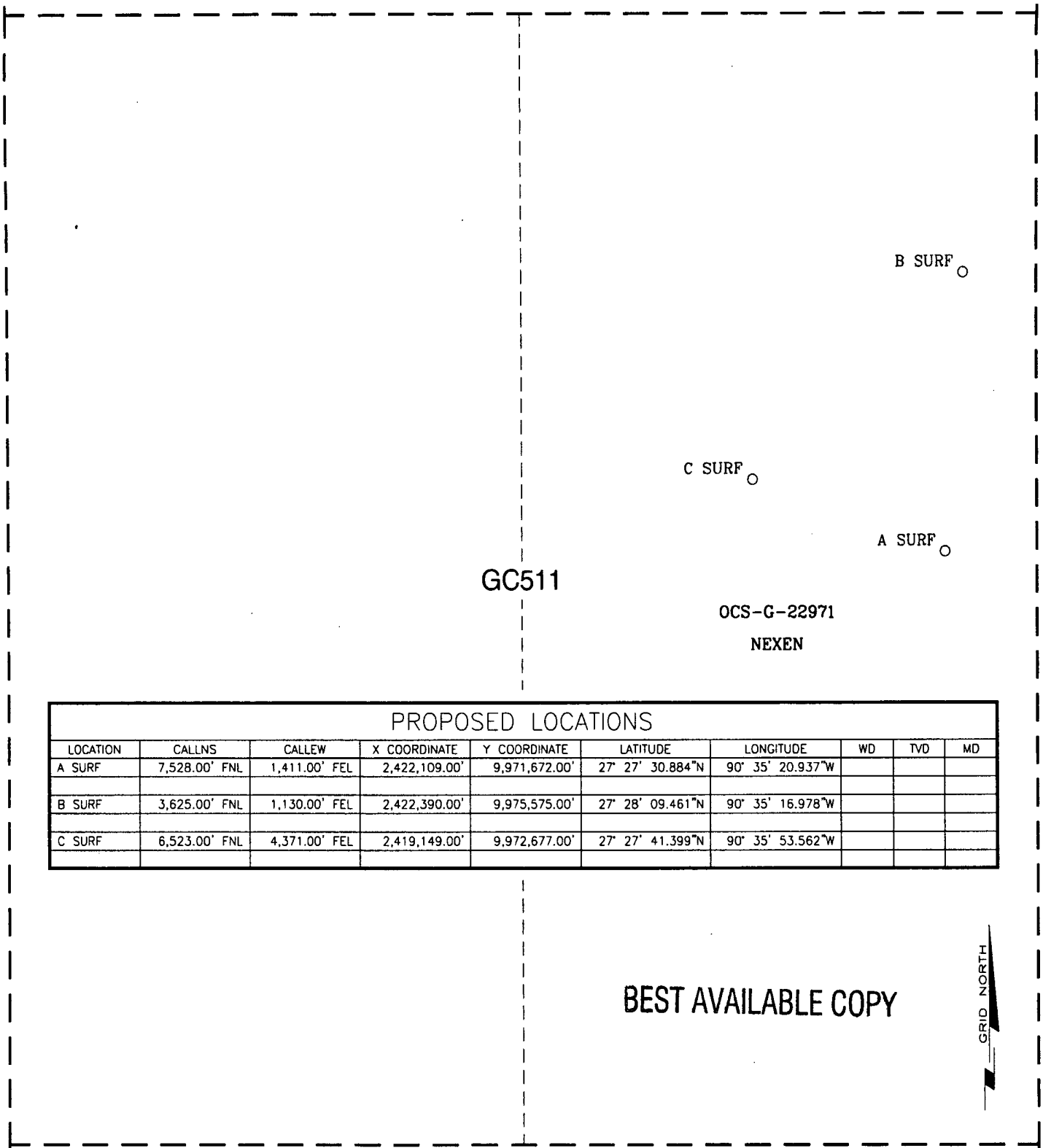
A description of the drilling unit is included in Appendix J on the Plan Information Form. Rig specifications will be made part of each Application for Permit to Drill.

Safety features on the drilling unit will include well control, pollution prevention, and blowout prevention equipment as described in Title 30 CFR Part 250, Subparts C, D, E, and G; and as further clarified by MMS Notices to Lessees, and current policy making invoked by the MMS, Environmental Protection Agency and the U.S. Coast Guard. Appropriate life rafts, life jackets, ring buoys, etc., will be maintained on the facility at all times.

Operator will ensure employees and contractor personnel engaged in well control operations understand and can properly perform their duties.

Pollution prevention measures include installation of curbs, gutters, drip pans, and drains on drilling deck areas to collect all contaminants and debris.

Nexen does not propose additional safety, pollution prevention, or early spill detection measures beyond those required by 30 CFR 250.



PROPOSED LOCATIONS

LOCATION	CALLNS	CALLEW	X COORDINATE	Y COORDINATE	LATITUDE	LONGITUDE	WD	TVD	MD
A SURF	7,528.00' FNL	1,411.00' FEL	2,422,109.00'	9,971,672.00'	27° 27' 30.884"N	90° 35' 20.937"W			
B SURF	3,625.00' FNL	1,130.00' FEL	2,422,390.00'	9,975,575.00'	27° 28' 09.461"N	90° 35' 16.978"W			
C SURF	6,523.00' FNL	4,371.00' FEL	2,419,149.00'	9,972,677.00'	27° 27' 41.399"N	90° 35' 53.562"W			

GRID NORTH

PUBLIC INFORMATION

DIGITAL COPY
ORIGINAL PLAT 6/10/05

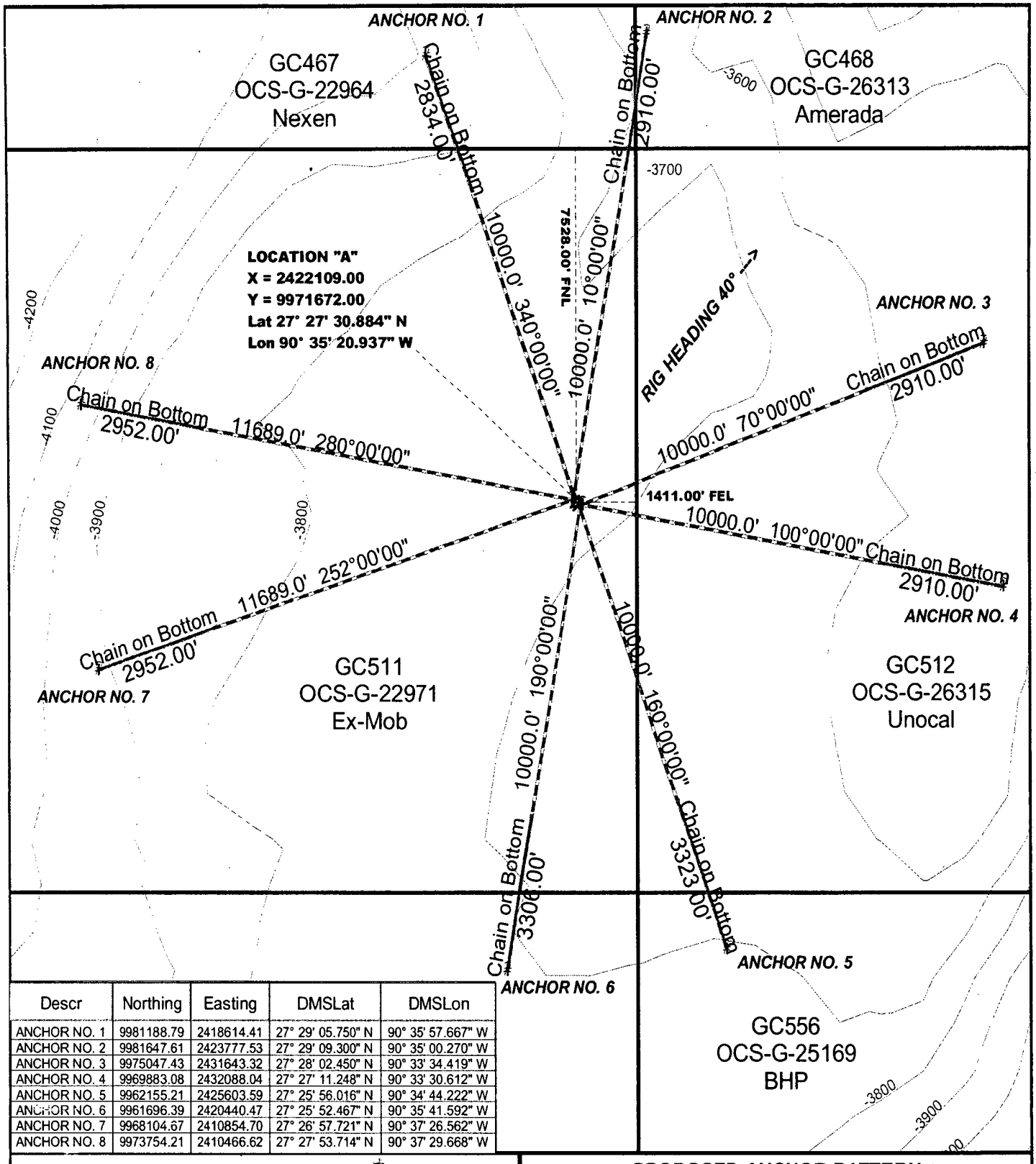
Printed: 6/13/05

nexen

EXPLORATION PLAN
OCS-G-22971
BLOCK 511
GREEN CANYON AREA
GULF OF MEXICO

FUGRO CHANCE INC.
200 Dulles Dr. Lafayette, Louisiana 70508-3001 (337) 237-1300

GEODETIC DATUM: NAD27 PROJECTION: U.T.M. 15 (NORTH) GRID UNITS: US SURVEY FEET		SCALE IN FEET 0 2,000'	
Job No.: 05-2163	Date: 6/10/05	Drwn: VAG	Chart: 1 Of: 1
Dwgfile: O:\WellPermit\UTM15\GC\Permit\511EP			



Descr	Northing	Easting	DMSLat	DMSLon
ANCHOR NO. 1	9981188.79	2418614.41	27° 29' 05.750" N	90° 35' 57.667" W
ANCHOR NO. 2	9981647.61	2423777.53	27° 29' 09.300" N	90° 35' 00.270" W
ANCHOR NO. 3	9975047.43	2431643.32	27° 28' 02.450" N	90° 33' 34.419" W
ANCHOR NO. 4	9969883.08	2432088.04	27° 27' 11.248" N	90° 33' 30.612" W
ANCHOR NO. 5	9962155.21	2425603.59	27° 25' 56.016" N	90° 34' 44.222" W
ANCHOR NO. 6	9961696.39	2420440.47	27° 25' 52.467" N	90° 35' 41.592" W
ANCHOR NO. 7	9968104.67	2410854.70	27° 26' 57.721" N	90° 37' 26.562" W
ANCHOR NO. 8	9973754.21	2410466.62	27° 27' 53.714" N	90° 37' 29.668" W

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FUGRO CHANCE INC.

A MEMBER OF THE FUGRO GROUP OF COMPANIES

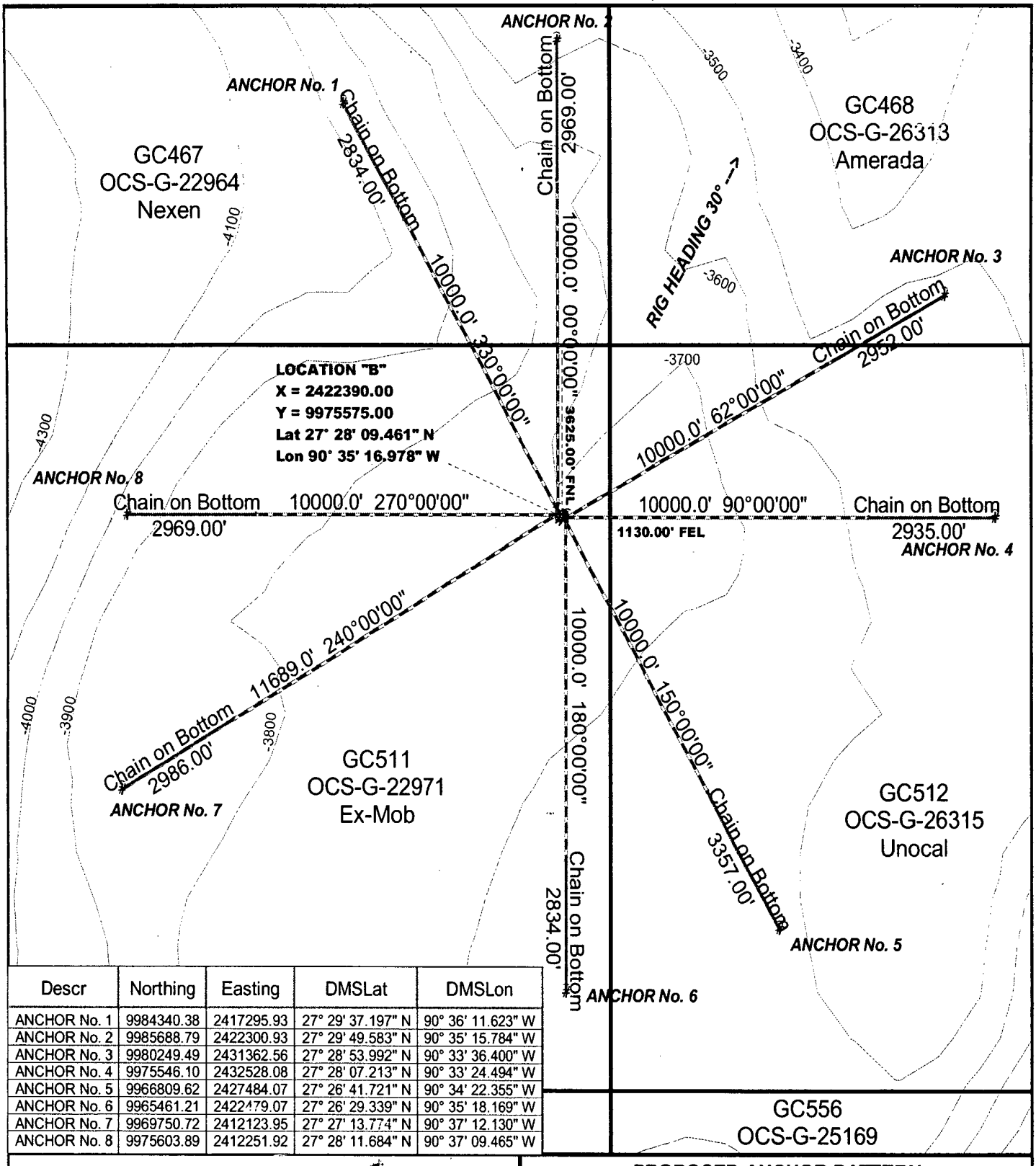
0 3000 Feet

GEODETIC DATUM: NAD 1927
ELLIPSOID: CLARKE 1866
PROJECTION: TM
ZONE: UTM ZONE 15
GRID UNITS: US SURVEY FEET

PROPOSED ANCHOR PATTERN
FOR LOCATION "A"
RIG "OCEAN BARONESS"
BLOCK 511
GREEN CANYON AREA

Job No.: 052365	File: 052365.apr (GC511-A)	SHEET NO. 1 OF 1
By: ADRIAN SALAS	PRINT: June 30, 2005	

Attachment A-2



Descr	Northing	Easting	DMSLat	DMSLon
ANCHOR No. 1	9984340.38	2417295.93	27° 29' 37.197" N	90° 36' 11.623" W
ANCHOR No. 2	9985688.79	2422300.93	27° 29' 49.583" N	90° 35' 15.784" W
ANCHOR No. 3	9980249.49	2431362.56	27° 28' 53.992" N	90° 33' 36.400" W
ANCHOR No. 4	9975546.10	2432528.08	27° 28' 07.213" N	90° 33' 24.494" W
ANCHOR No. 5	9966809.62	2427484.07	27° 26' 41.721" N	90° 34' 22.355" W
ANCHOR No. 6	9965461.21	2422479.07	27° 26' 29.339" N	90° 35' 18.169" W
ANCHOR No. 7	9969750.72	2412123.95	27° 27' 13.774" N	90° 37' 12.130" W
ANCHOR No. 8	9975603.89	2412251.92	27° 28' 11.684" N	90° 37' 09.465" W

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FUGRO CHANCE INC.

A MEMBER OF THE FUGRO GROUP OF COMPANIES

0 3000 Feet

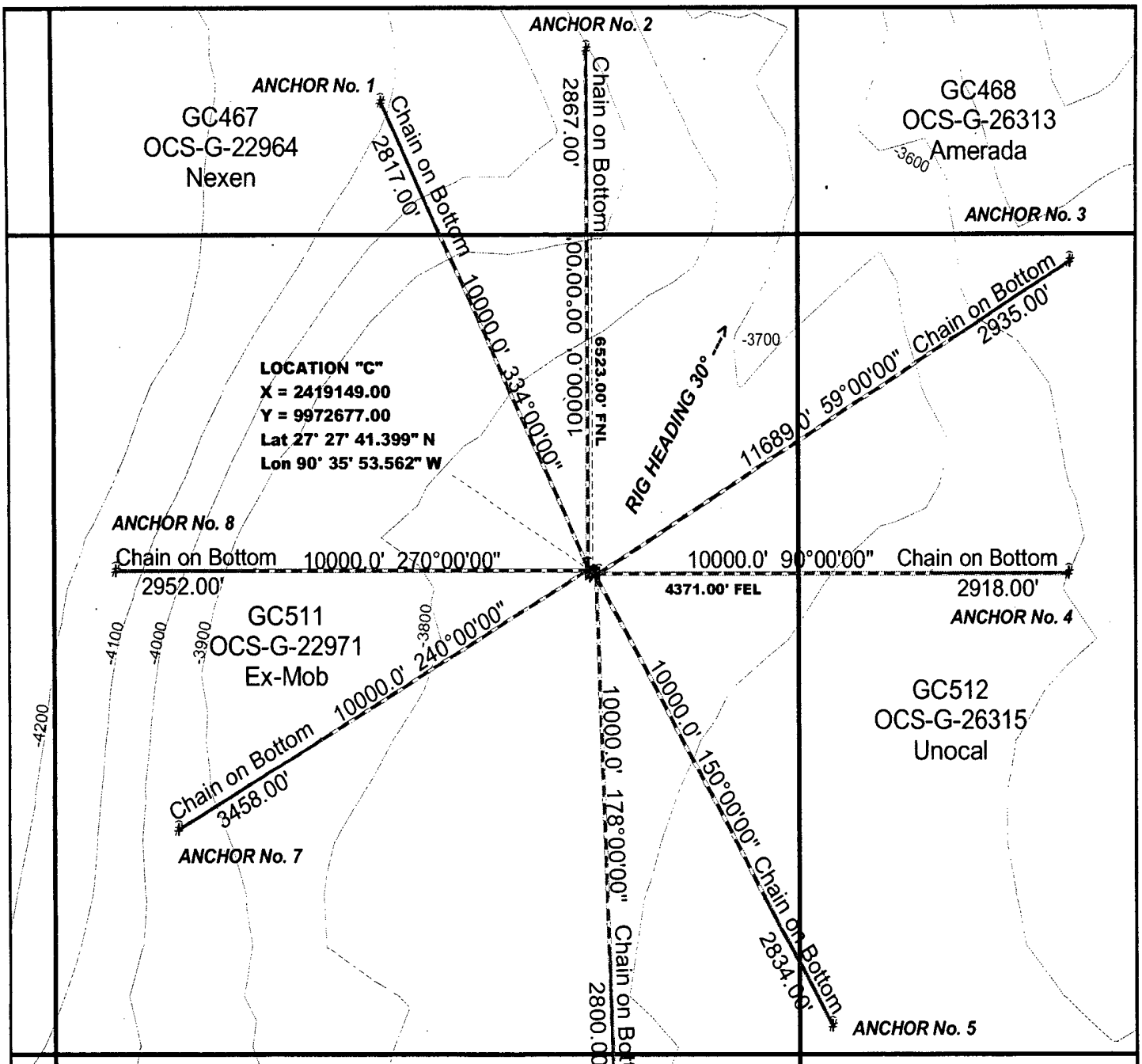
GEODETIC DATUM: NAD 1927
ELLIPSOID: CLARKE 1866
PROJECTION: TM
ZONE: UTM ZONE 15
GRID UNITS: US SURVEY FEET

PROPOSED ANCHOR PATTERN
FOR LOCATION "B"
RIG "OCEAN BARONESS"
BLOCK 511
GREEN CANYON AREA

Job No.: 052365	File: 052365.apr (GC511-B)	SHEET NO. 1 OF 1
By: ADRIAN SALAS	PRINT: June 30, 2005	

Attachment A-2

BEST AVAILABLE COPY



Descr	Northing	Easting	DMSLat	DMSLon
ANCHOR No. 1	9981770.07	2414671.22	27° 29' 12.257" N	90° 36' 41.303" W
ANCHOR No. 2	9982790.80	2419059.94	27° 29' 21.522" N	90° 35' 52.379" W
ANCHOR No. 3	9978677.04	2429311.51	27° 28' 38.827" N	90° 33' 59.503" W
ANCHOR No. 4	9972648.09	2429287.08	27° 27' 39.159" N	90° 34' 01.085" W
ANCHOR No. 5	9963911.61	2424243.06	27° 26' 13.662" N	90° 34' 58.935" W
ANCHOR No. 6	9962569.29	2419587.05	27° 26' 01.270" N	90° 35' 50.871" W
ANCHOR No. 7	9967697.24	2410345.66	27° 26' 53.785" N	90° 37' 32.295" W
ANCHOR No. 8	9972705.90	2409010.92	27° 27' 43.614" N	90° 37' 46.043" W

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FUGRO CHANCE INC.

A MEMBER OF THE FUGRO GROUP OF COMPANIES

0 3000 Feet

GEODETIC DATUM: NAD 1927
ELLIPSOID: CLARKE 1866
PROJECTION: TM
ZONE: UTM ZONE 15
GRID UNITS: US SURVEY FEET

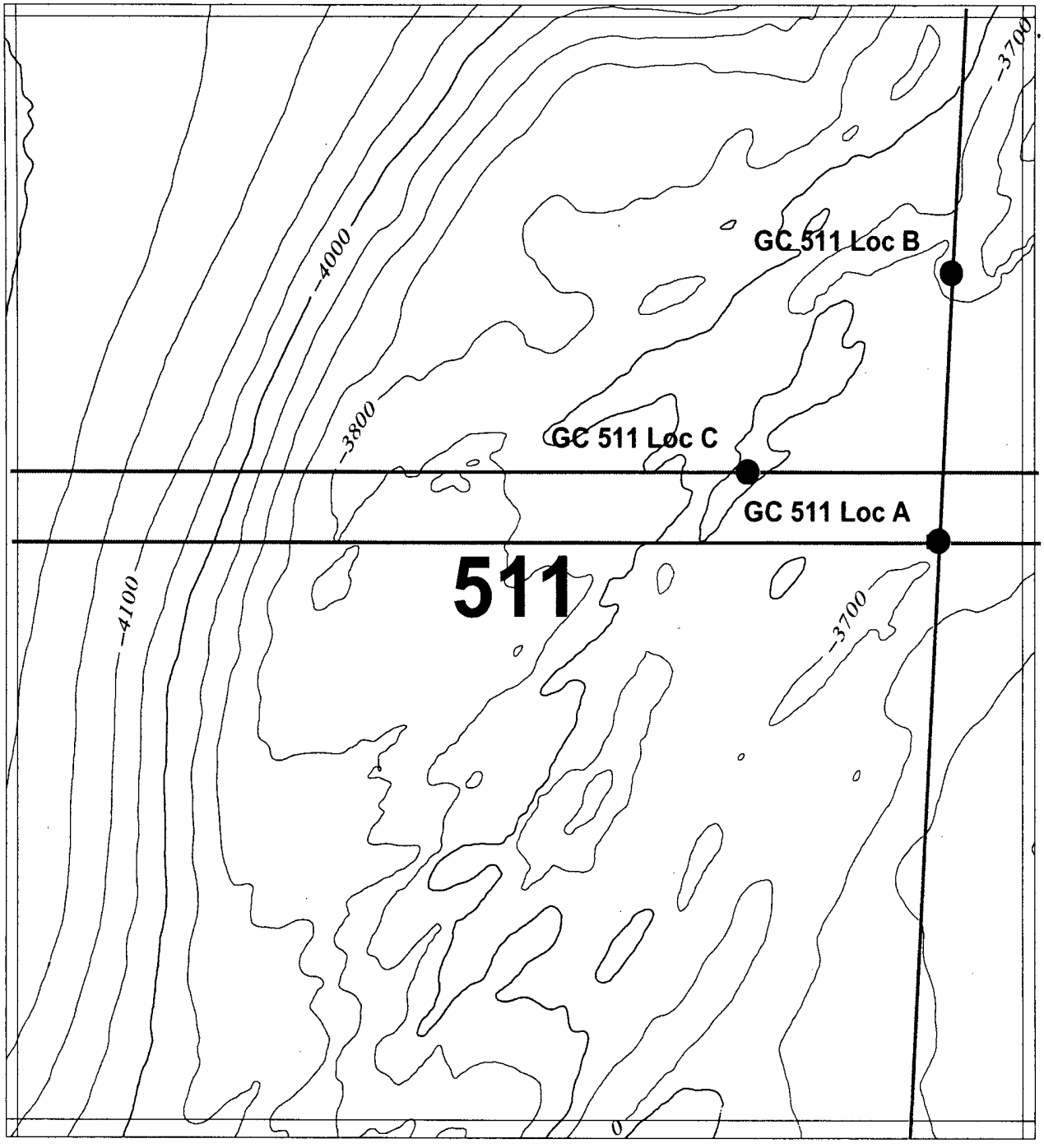
PROPOSED ANCHOR PATTERN
FOR LOCATION "C"
RIG "OCEAN BARONESS"
BLOCK 511
GREEN CANYON AREA

Job No.: 052365	File: 052365.apr (GC511-C)	SHEET NO. 1 OF 1
By: ADRIAN SALAS	PRINT: June 30, 2005	

Attachment A-2

BEST AVAILABLE COPY

Knotty Head Prospect
Green Canyon Block 511
Seafloor Bathymetry



APPENDIX B
GENERAL INFORMATION

(A) CONTACT
Inquiries may be made to the following authorized representative:

Cheryl Murphy
J. Connor Consulting, Inc.
16225 Park Ten Place, Suite 700
Houston, Texas 77084
(281) 578-3388
E-mail address: Cheryl.murphy@jccteam.com

(B) PROSPECT NAME
Knotty Head

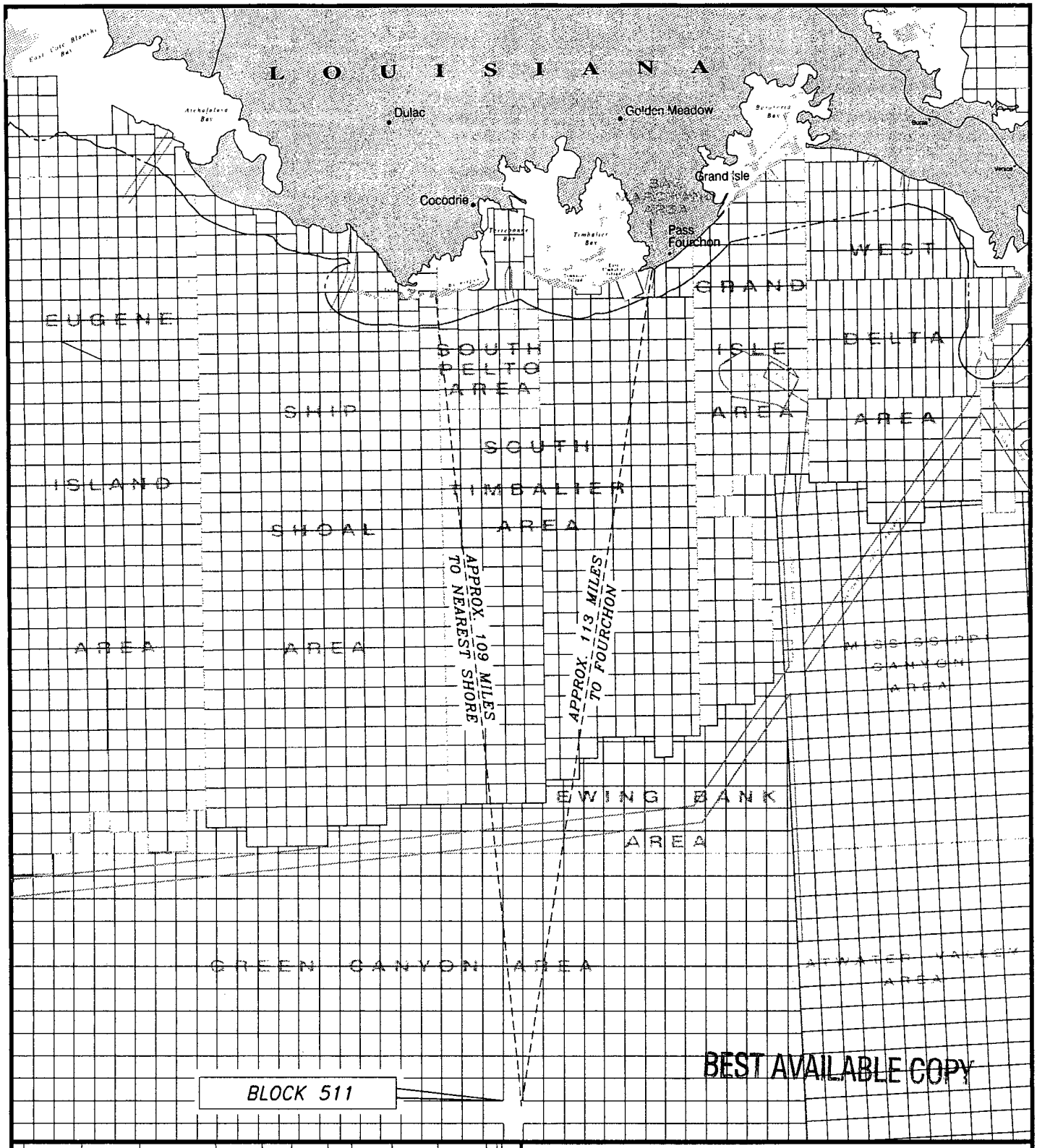
(C) NEW OR UNUSUAL TECHNOLOGY
Nexen does not propose to use any new or unusual technology to carry out the proposed exploration activities. New or unusual technology is defined as equipment and/or procedures that:

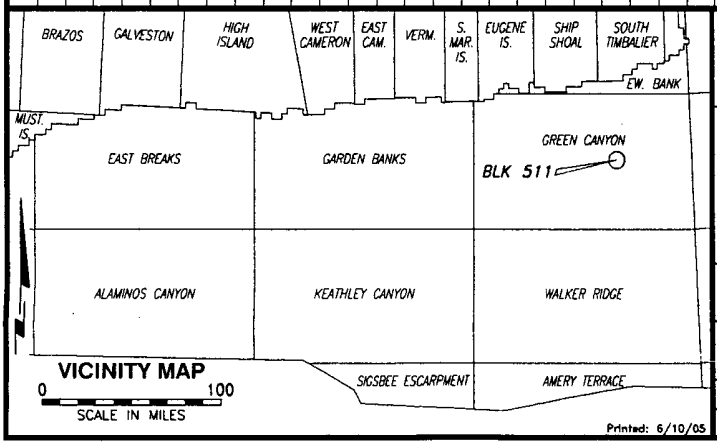
1. Function in a manner that potentially causes different impacts to the environment than the equipment or procedures did in the past;
2. Have not been used previously or extensively in an MMS OCS Region;
3. Have not been used previously under the anticipated operating conditions; or
4. Have operating characteristics that are outside the performance parameters established by 30 CFR 250.

(D) BONDING INFORMATION
The bond requirements for the activities and facilities proposed in this EP are satisfied by area wide bond, furnished and maintained according to 30 CFR 256, Subpart I; NTL No. 2000-G16, "Guidelines for General Lease Surety Bonds", dated September 7, 2000.

(E) ONSHORE BASE AND SUPPORT VESSELS
A Vicinity Map is included as ***Attachment B-1***, showing Green Canyon Block 511 located approximately 109 miles from the nearest shoreline and approximately 113 miles from the onshore support base in Fourchon, Louisiana.

The existing onshore base provides 24-hour service, a radio tower with a phone patch, dock space, equipment, and supply storage area, drinking and drill water, etc. The base serves as a loading point for tools, equipment, and machinery, and temporary storage for materials and equipment. The base also supports crew change activities. The proposed operations do not require expansion or major modifications to the base.





nexen

VICINITY MAP
OCS-G-22971

BLOCK 511
GREEN CANYON AREA
GULF OF MEXICO

FUGRO CHANCE INC.
200 Dulles Dr. Lafayette, Louisiana 70506-3001 (337) 237-1300

GEODETIC DATUM: NAD 1927 PROJECTION: U.T.M. 15 GRID UNITS: US SURVEY FEET		SCALE IN FEET 0 100,000'	
Job No.: 05-2163	Date: 6/10/05	Drwn: VAS	Chart: 1 Of: 1
Filename: H:\2005\052163\CAD\MARINE\2163VICINITY.DWG			

Attachment B-1

During the proposed activities, support vessels/helicopters and travel frequency are as follows:

Type	Weekly Estimate (No.) of Roundtrips
Crew Boat	6
Supply Boat	5
Helicopter	7

The most practical, direct route from the shorebase as permitted by weather and traffic conditions will be utilized.

(F) LEASE STIPULATION

1. Military Warning Area (MWA)

Green Canyon Block 511 is located within designated MWA-92. The Naval Air Station will be contacted in order to coordinate and control the electromagnetic emissions during the proposed operations.

APPENDIX C
GEOLOGICAL, GEOPHYSICAL, AND H_2S INFORMATION

(A) STRUCTURE CONTOUR MAPS
Proprietary data

(B) TRAPPING FEATURES
Proprietary data

(C) DEPTH OF GEOPRESSURE
Proprietary data

(D) INTERPRETED 3-D SEISMIC LINES
Proprietary data

(E) GEOLOGICAL STRUCTURE CROSS-SECTIONS
Proprietary data

(F) SHALLOW HAZARDS REPORT
A shallow hazards survey was conducted over Green Canyon Block 511. Three copies of a shallow hazard report are being submitted to the MMS under separate cover.

(G) SHALLOW HAZARDS ASSESSMENT
Utilizing the 3D seismic exploration data, a shallow hazards assessment was prepared for the proposed surface locations, and is included as ***Attachment C-4.***

(H) HIGH-RESOLUTION SEISMIC LINES
Proprietary data

(I) STRATIGRAPHIC COLUMN
Proprietary data

(J) HYDROGEN SULFIDE INFORMATION
In accordance with Title 30 CFR 250. 490(c) and NTL No. 2003-G17, Nexen requests that Green Canyon Block 511 be classified by the MMS as H_2S absent.

GEOSCIENCE EARTH & MARINE SERVICES, INC.
GEMS

10615 SHADOW WOOD DRIVE
SUITE 200
HOUSTON, TEXAS 77043
Phone: (713) 468-1410
Fax: (713) 468-1438
E-mail: gems@gemsinc.com

July 6, 2005

Project No. 0105-936

Nexen Petroleum U.S.A. Inc.
12790 Merit Drive, Suite 800
Dallas, Texas 75251-1270

Attention: Mr. Richard Redhead

Site Clearance Letter
Proposed Wellsite A Location
Block 511 (OCS-G-22971)
Green Canyon Area
Gulf of Mexico

The Proposed Wellsite A in GC 511 appears suitable for exploration drilling operations relevant to the shallow geologic and stratigraphic conditions.

Introduction

Geoscience Earth & Marine Services, Inc., (GEMS) was contracted by Nexen Petroleum U.S.A. Inc. (Nexen), to prepare a Site Clearance Letter for the Proposed Wellsite A in Block 511 (OCS-G-22971), Green Canyon area (GC). This letter addresses specific seafloor and subsurface geologic conditions to a depth of approximately 3,500 ft below the mudline (bml). The following discussion is based on the findings provided within the main body of the geohazard report submitted for Green Canyon Block 511. The text, maps, and figures included in the main section of this report provide detail to the regional geology of the study area. This letter is intended to supplement that report with details pertaining directly to the proposed wellsite.

The Proposed Wellsite A surface location is located in the east-central portion of Block 511, Green Canyon area, Gulf of Mexico. Nexen provided the following coordinates:

Proposed Wellsite GC 511 "A"			
Spheroid & Datum: Clarke 1866, NAD27 Projection: UTM Zone 15 North, U.S. ft		Line Reference	Block Calls
X: 2,422,109	Latitude: 27° 27' 30.884" N	Inline: 2411	7,528 ft FNL
Y: 9,971,672	Longitude: -90° 35' 20.936" W	Crossline: 4460	1,411 ft FEL

Attachments

The page-size maps and figures accompanying this letter have been extracted from the main report's original maps and 3-D data volume and centered on the proposed well location.

Map A A-1: Bathymetry Map
Map A A-2: Seafloor Rendering
Map A A-3: Seafloor Amplitude Rendering
Map A A-4: Geologic Features Map
Figure A A-1: Inline 2411 and Crossline 4460 Showing Conditions Beneath Proposed Wellsite A, Green Canyon Block 511
Figure A A-2: Tophole Prognosis Chart, Proposed Wellsite A, Green Canyon Block 511

Water Depth and Seafloor Conditions

Seafloor conditions are favorable (Map A A-1; Figures A A-1 and A A-2). The water depth at the proposed location is 1,134 m (3,720 ft). Soft clays cover the seafloor. The seafloor is relatively smooth and generally dips to the north-northwest at approximately 2.4° (~4.2 %) at the proposed location (Map A A-2).

Chemosynthetic Communities

There are no features or areas that could support high-density chemosynthetic communities within 1,500 ft of the proposed location (Map A A-3).

Man-Made Features

There are no man-made features within 1,500 ft of the proposed wellsite (Map A A-1).

Stratigraphy

Stratigraphic details are provided with the Tophole Prognosis Chart (Figure A A-2). There are at least 109 m (358 ft) of normally consolidated clays immediately below the seafloor. These normally consolidated clays should provide favorable conditions for anchoring and any bottom-founded structures. Mass transport or debris flow deposits occur below the clays down to about 528 m (1,732 ft), bml. Sands and/or sand lenses are likely within these predominantly clay-rich sediments. The sediments above the salt/sediment interface, estimated at 528 m, or 1,732 ft, bml, are composed of chaotic, discontinuous reflectors offset by salt-rooted faults.

Faults

Seafloor faults are 450 ft south and 925 ft northwest of the proposed wellsite (Maps A A-2 through A A-4). A vertical borehole will penetrate a buried fault at ~356 m (1,168 ft) bml (Figures A A-1 and A A-2).

Shallow Gas and Shallow Water Flow

Our general assessment is that there is a negligible to low potential for gas or overpressured water at this well location (Figures A A-1 and A A-2).

Shallow Gas. There are no apparent subsurface high-amplitude anomalies directly below the proposed wellsite (Map A A-4; Figures A A-1 and A A-2). The nearest amplitude anomalies are located about 600 ft east/northeast and west/northwest of the proposed wellsite at about 677 ft and 671 ft, bml (Map A A-4). A large amplitude anomaly is 950 ft southeast of the proposed wellsite at about 704 ft bml (Map A A-4) Most of these anomalies are associated with shallow faults extending upward from the salt structure.

The potential for encountering shallow gas at Proposed Wellsite A is negligible for the upper 109 m (358 ft) of sediments. There is a low potential for encountering small pockets of gas between 109 m (358 ft) and about 528 m (1,732 ft), bml (Figures A A-1 and A A-2). The likelihood of sands increases within the chaotic, discontinuous reflectors near the top of salt. However, shallow gas is not expected below the wellsite.

Water Flow. The nearest reported shallow water flow event occurred 7.5 miles to the south-southeast in GC 644. Proposed Wellsite A will penetrate mass-transport and debris flow deposits between 109 m (358 ft) and about 528 m (1,732 ft), bml. Sands and/or sand lenses are expected within these rapidly deposited sediments.

The potential for shallow water flow is negligible to 109 m (358 ft) bml. There is a low potential for overpressured water in the possible sand-bearing sediments below Horizon 10, (109 m, or 358 ft, bml), Figures A A-1 and A A-2; however, sustained flow from thin and discontinuous sands is unlikely. Water flow is not expected at the Proposed Wellsite A location.

Conclusion

The Proposed Wellsite A in GC 511 appears suitable for exploration drilling operations using industry standard safe drilling practices.

Sincerely,

GEOSCIENCE EARTH & MARINE SERVICES, INC.

Michael J. Kaluza
President/Marine Geologist

Jeanne Lecler Honganen
Marine Geologist

GEOSCIENCE EARTH & MARINE SERVICES, INC.
GEMS

10615 SHADOW WOOD DRIVE
SUITE 200
HOUSTON, TEXAS 77043
Phone: (713) 468-1410
Fax: (713) 468-1438
E-mail: gems@gemsinc.com

July 6, 2005

Project No. 0105-936

Nexen Petroleum U.S.A. Inc.
12790 Merit Drive, Suite 800
Dallas, Texas 75251-1270

Attention: Mr. Richard Redhead

Site Clearance Letter
Proposed Wellsite B Location
Block 511 (OCS-G-22971)
Green Canyon Area
Gulf of Mexico

The Proposed Wellsite B in GC 511 appears suitable for exploration drilling operations relevant to the shallow geologic and stratigraphic conditions.

Introduction

Geoscience Earth & Marine Services, Inc., (GEMS) was contracted by Nexen Petroleum U.S.A. Inc. (Nexen), to prepare a Site Clearance Letter for the Proposed Wellsite B in Block 511 (OCS-G-22971), Green Canyon area (GC). This letter addresses specific seafloor and subsurface geologic conditions to a depth of approximately 3,500 ft below the mudline (bml). The following discussion is based on the findings provided within the main body of the geohazard report submitted for Green Canyon Block 511. The text, maps, and figures included in the main section of this report provide detail to the regional geology of the study area. This letter is intended to supplement that report with details pertaining directly to the proposed wellsite.

The Proposed Wellsite B surface location is located in the northeast quadrant of Block 511, Green Canyon area, Gulf of Mexico. Nexen provided the following coordinates:

Proposed Wellsite GC 511 "B"			
Spheroid & Datum: Clarke 1866, NAD27 Projection: UTM Zone 15 North, U.S. ft		Line Reference	Block Calls
X: 2,422,390	Latitude: 27° 28' 09.4612" N	Inline: 2469	3,625 ft FNL
Y: 9,975,575	Longitude: -90° 35' 16.977" W	Crossline: 4466	1,130 ft FEL

Attachments

The page-size maps and figures accompanying this letter have been extracted from the main report's original maps and 3-D data volume and centered on the proposed well location.

Map A B-1: Bathymetry Map
Map A B-2: Seafloor Rendering
Map A B-3: Seafloor Amplitude Rendering
Map A B-4: Geologic Features Map
Figure A B-1: Inline 2469 and Crossline 4466 Showing Conditions Beneath Proposed Wellsite B, Green Canyon Block 511
Figure A B-2: Tophole Prognosis Chart, Proposed Wellsite B, Green Canyon Block 511

Water Depth and Seafloor Conditions

Seafloor conditions are favorable (Map A B-1; Figures A B-1 and A B-2). The water depth at the proposed location is 1,124 m (3,688 ft). Soft clays cover the seafloor. The seafloor is slightly hummocky and generally dips to the southwest at approximately 3.2° (5.6%) at the proposed location (Map A B-2).

Chemosynthetic Communities

There are no features or areas that could support high-density chemosynthetic communities within 1,500 ft of the proposed location (Map A B-3).

Man-Made Features

There are no man-made features within 1,500 ft of the proposed wellsite (Map A B-1).

Stratigraphy

Stratigraphic details are provided with the Tophole Prognosis Chart (Figure A B-2). There are at least 100 m (328 ft) of normally consolidated clays immediately below the seafloor. These normally consolidated clays should provide favorable conditions for anchoring and any bottom-founded structures. Mass transport or debris flow deposits occur below the clays down to about 767 m (2,516 ft) bml. Sands and/or sand lenses are likely within these predominantly clay-rich sediments. The sediments above the salt/sediment interface, estimated at 767 m, or 2,516 ft, bml, are composed of chaotic, discontinuous reflectors offset by salt-rooted faults.

Faults

Seafloor faults are 500 ft and 1,275 ft northwest, and 825 ft southeast of the proposed wellsite (Maps A B-2 through A B-4). A vertical borehole will penetrate buried faults at ~186 m (610 ft) and 324 m (1,063 ft), bml (Figures A B-1 and A B-2).

Shallow Gas and Shallow Water Flow

Our general assessment is that there is a negligible to low potential for gas or overpressured water at this well location (Figures A B-1 and A B-2).

Shallow Gas. There are no apparent subsurface high-amplitude anomalies directly below the proposed wellsite (Map A B-4; Figures A B-1 and A B-2). The nearest amplitude anomalies are located about 435 ft west/northwest and 550 ft southwest of the proposed wellsite at about 683 ft and 812 ft, bml (Map A A-4). Most of these anomalies are associated with shallow faults extending upward from the salt structure.

The potential for encountering shallow gas at Proposed Wellsite B is negligible for the upper 100 m (328 ft) of sediments. There is a low potential for encountering small pockets of gas between 100 m (328 ft) and about 767 m (2,516 ft), bml (Figures A B-1 and A B-2). The likelihood of sands increases within the chaotic, discontinuous reflectors above 767 m (2,516 ft), bml. However, shallow gas is not expected below the wellsite.

Water Flow. The nearest reported shallow water flow event occurred 7.5 miles to the south-southeast in GC 644. Proposed Wellsite B will penetrate mass-transport and debris flow deposits between 100 m (328 ft) and about 767 m (2,516 ft), bml. Sands and/or sand lenses are expected within these rapidly deposited sediments.

The potential for shallow water flow is negligible to 100 m (328 ft), bml. There is a low potential for overpressured water in this possible sand-bearing sediments below Horizon 10 (100 m, or 328 ft, bml), Figures A B-1 and A B-2; however, sustained flow from thin and discontinuous sands is unlikely. Water flow is not expected at the Proposed Wellsite B location.

Conclusion

The Proposed Wellsite B in GC 511 appears suitable for exploration drilling operations using industry standard safe drilling practices.

Sincerely,

GEOSCIENCE EARTH & MARINE SERVICES, INC.

Michael J. Kaluza
President/Marine Geologist

Jeanne Lecler Honganen
Marine Geologist

GEOSCIENCE EARTH & MARINE SERVICES, INC.

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July 6, 2005

Project No. 0105-936

Nexen Petroleum U.S.A. Inc.
12790 Merit Drive, Suite 800
Dallas, Texas 75251-1270

Attention: Mr. Richard Redhead

Site Clearance Letter
Proposed Wellsite C Location
Block 511 (OCS-G-22971)
Green Canyon Area
Gulf of Mexico

The Proposed Wellsite C in GC 511 appears suitable for exploration drilling operations relevant to the shallow geologic and stratigraphic conditions.

Introduction

Geoscience Earth & Marine Services, Inc., (GEMS) was contracted by Nexen Petroleum U.S.A. Inc. (Nexen), to prepare a Site Clearance Letter for the Proposed Wellsite C in Block 511 (OCS-G-22971), Green Canyon area (GC). This letter addresses specific seafloor and subsurface geologic conditions to a depth of approximately 3,500 ft below the mudline (bml). The following discussion is based on the findings provided within the main body of the geohazard report submitted for Green Canyon Block 511. The text, maps, and figures included in the main section of this report provide detail to the regional geology of the study area. This letter is intended to supplement that report with details pertaining directly to the proposed wellsite.

The Proposed Wellsite C surface location is located in the northeast quadrant of Block 511, Green Canyon area, Gulf of Mexico. Nexen provided the following coordinates:

Proposed Wellsite GC 511 "C"			
Spheroid & Datum: Clarke 1866, NAD27 Projection: UTM Zone 15 North, U.S. ft		Line Reference	Block Calls
X: 2,419,149	Latitude: 27° 27' 41.399" N	Inline: 2425	6,523 ft FNL
Y: 9,972,677	Longitude: -90° 35' 53.562" W	Crossline: 4388	4,371 ft FEL

Attachments

The page-size maps and figures accompanying this letter have been extracted from the main report's original maps and 3-D data volume and centered on the proposed well location.

Map A C-1: Bathymetry Map
Map A C-2: Seafloor Rendering
Map A C-3: Seafloor Amplitude Rendering
Map A C-4: Geologic Features Map
Figure A C-1: Inline 2425 and Crossline 4388 Showing Conditions Beneath Proposed Wellsite C, Green Canyon Block 511
Figure A C-2: Tophole Prognosis Chart, Proposed Wellsite C, Green Canyon Block 511

Water Depth and Seafloor Conditions

Seafloor conditions are favorable (Map A C-1; Figures A C-1 and A C-2). The water depth at the proposed location is 1,147 m (3,763 ft). Soft clays cover the seafloor. The seafloor is relatively smooth and generally dips to the southeast at approximately 1.4° (2.4%) at the proposed location (Map A C-2).

Chemosynthetic Communities

There are no features or areas that could support high-density chemosynthetic communities within 1,500 ft of the proposed location (Map A C-3).

Man-Made Features

There are no man-made features within 1,500 ft of the proposed wellsite (Map A C-1).

Stratigraphy

Stratigraphic details are provided with the Tophole Prognosis Chart (Figure A C-2). There are at least 87 m (285 ft) of normally consolidated clays immediately below the seafloor. These normally consolidated clays should provide favorable conditions for anchoring and any bottom-founded structures. Mass transport or debris flow deposits occur below the clays down to about 416 m (1,365 ft) bml. Sands and/or sand lenses are likely within these predominantly clay-rich sediments. The sediments above the salt/sediment interface, estimated at 416 m, or 1,365 ft, bml, are composed of chaotic, discontinuous reflectors offset by salt-rooted faults.

Faults

Seafloor faults are 600 ft north, 1,200 ft northwest, 1,175 ft south-southeast, and 975 ft and 1,300 ft southeast of the proposed wellsite (Maps A C-2 through A C-4). All seafloor faults are downthrown to the southeast. A vertical borehole will penetrate a buried fault at ~225 m (738 ft) bml (Figures A C-1 and A C-2).

Shallow Gas and Shallow Water Flow

Our general assessment is that there is a negligible to low potential for gas or overpressured water at this well location (Figures A C-1 and A C-2).

Shallow Gas. There are no apparent subsurface high-amplitude anomalies directly below the proposed wellsite (Map A C-4; Figures A C-1 and A C-2). The nearest amplitude anomalies are located about 375 ft south, 425 ft northwest, and 525 ft west-southwest of the proposed wellsite at depths of about 468 ft, 589 ft, and 422 ft, bml (Map A C-4). Most of these anomalies are associated with shallow faults extending upward from the salt structure.

The potential for encountering shallow gas at Proposed Wellsite C is negligible for the upper 87 m (285 ft) of sediments. There is a low potential for encountering small pockets of gas between 87 m (285 ft) and about 416 m (1,365 ft), bml (Figures A C-1 and A C-2). The likelihood of sands increases within the chaotic, discontinuous reflectors near the salt/sediment interface (416 m or 1,365 ft, bml). However, shallow gas is not expected below the wellsite.

Water Flow. The nearest reported shallow water flow event occurred 7.5 miles to the south-southeast in GC 644. Proposed Wellsite C will penetrate mass-transport and debris flow deposits between 87 m (285 ft) and about 416 m (1,365 ft), bml. Sands and/or sand lenses are expected within these high-energy deposits.

The potential for shallow water flow is negligible to 87 m (285 ft) bml. There is a low potential for overpressured water in this possible sand-bearing sediments below Horizon 10 (87 m, or 285 ft, bml); however, sustained flow from thin and discontinuous sands is unlikely (Figures A C-1 and A C-2). Water flow is not expected at the Proposed Wellsite C location.

Conclusion

The Proposed Wellsite C in GC 511 appears suitable for exploration drilling operations using industry standard safe drilling practices.

Sincerely,

GEOSCIENCE EARTH & MARINE SERVICES, INC.

Michael J. Kaluza
President/Marine Geologist

Jeanne Lecler Honganen
Marine Geologist

APPENDIX D
BIOLOGICAL AND PHYSICAL INFORMATION

CHEMOSYNTHETIC INFORMATION

Activities proposed in this plan could disturb seafloor areas in water depths of 400 meters (1312 feet) or greater, therefore, information for the potential of encountering chemosynthetic communities is included as follows:

MAPS

Submitted under separate cover are maps prepared using 3-D seismic data depicting bathymetry, seafloor and shallow geological features, surface location of proposed well(s), positions of anchors and chains relative to the proposed operations, and a radius circle of 1500 feet around each such location.

ANALYSIS

Using 3-D seismic information, all seafloor features and areas that could be disturbed by the activities proposed in this plan have been identified. The likelihood of these proposed activities disturbing these seafloor and shallow geologic features is discussed in the following summary statement:

No Associated Anchors – No Disturbances within 1500 Feet of Chemosynthetic Communities

Well Locations A-C

- Features or areas that could support high-density chemosynthetic communities are **not** located within 1,500 feet of each proposed muds and cuttings discharge location.

TOPOGRAPHIC FEATURES INFORMATION

The activities proposed in this plan will not take place within 500 feet of any identified topographic feature; therefore topographic features information is not required.

LIVE BOTTOM (PINNACLE TREND) INFORMATION

Green Canyon Block 511 is not located within 100 feet of any pinnacle trend feature with vertical relief equal to or greater than 8 feet; therefore, live bottom information is not required.

REMOTELY OPERATED VEHICLE (ROV) SURVEYS

Pursuant to NTL No. 2003-G03, operators may be required to conduct remotely operated vehicle (ROV) surveys during pre-spudding and post-drilling operations for the purpose of biological and physical observations.

If required, surveys will be conducted immediately prior and upon completion of drilling operations.

A semisubmersible rig based ROV equipped with video imaging capabilities will be used. The survey pattern will consist of six transects centered on the well location with tracks extending approximately 100 meters away from the well on bearings of 30 degrees, 90 degrees, 150 degrees, 210 degrees, 270 degrees and 330 degrees. The seafloor will be videotaped continuously along each track.

Biological and physical observations as described in the subject NTL and Form MMS-141 will be made prior to commencing drilling operations and also following the completion of drilling operations, but prior to moving the rig off location. The observations will be documented using Form MMS-141 or a facsimile and submitted to the MMS within 60 days after the second survey is completed.

APPENDIX E
WASTES AND DISCHARGES INFORMATION

DISCHARGES

All discharges associated with operations proposed in this Exploration Plan will be in accordance with regulations implemented by Minerals Management Service (MMS), U. S. Coast Guard (USCG) and the U.S. Environmental Protection Agency (EPA).

Discharge information is not required per NTL No. 2003-G17.

WASTES

For disposed wastes, the type and general characteristics of the wastes, the amount to be disposed of (volume, rate, or weight), the daily rate, the name and location of the disposal facility, a description of any treatment or storage, and the methods for transporting and final disposal are provided in tabular format in ***Attachment E-1.*** For purposes of this Appendix, disposed wastes describes those wastes generated by the proposed activities that are disposed of by means other than by releasing them in to the waters of the Gulf of Mexico at the site where they are generated. These wastes can be disposed of by offsite release, injection, encapsulation, or placement at either onshore or offshore permitted locations for the purpose of returning them back to the environment.

Disposal Table (Wastes to be disposed of, not discharged)

Type of Waste Approximate Composition	Amount*	Rate per Day	Name/Location of Disposal Facility	Treatment and/or Storage, Transport and Disposal Method
Spent synthetic-based drilling fluids and cuttings	1,000 bbl/well	200 bbl/day	Newpark Environmental, Venice, La.	Transport to shore base in cuttings boxes on crew boat then inject down hole at offshore waste disposal facility
Waste Oil	200 bbl/yr	0.5 bbl/day	Newpark Environmental, Venice, La.	Pack in drums and transport to an onshore Incineration site
Trash and debris	1,000 ft^3	3 ft^3 /day	Newpark Environmental, Venice, La.	Transport in storage bins on crew boat to shorebase; truck to landfill
Chemical product wastes	50 bbl/yr	2 bbl/day	Newpark Environmental Venice, La.	Transport in barrels on supply boat/crew boat to landfill.

*can be expressed as a volume, weight, or rate

APPENDIX F
OIL SPILL INFORMATION

1. Site-Specific OSRP N/A

2. Regional OSRP Information

Nexen's Regional Oil Spill Response Plan (OSRP) was updated and submitted on May 25, 2005, and approved on June 14, 2005. Activities proposed in this EP will be covered by the Regional OSRP.

3. OSRO Information

Nexen's primary equipment provider is Clean Gulf Associates (CGA). The Marine Spill Response Corporation's (MSRC) STARS network will provide closest available personnel, as well as an MSRC supervisor to operate the equipment.

4. Worst-Case Scenario Comparison

Category	Regional OSRP WCD	EP WCD
Type of Activity	MODU	MODU
Facility Location (Area/Block)	MC 546	GC-511
Facility Designation	WELL #1	WELL #1
Distance to Nearest Shoreline (miles)	37	109
Volume Storage tanks (total) Uncontrolled blowout Total Volume	 20,000 20,000	 10,000 10,000
Type of Oil(s) (crude, condensate, diesel)	Condensate	Crude
API Gravity	42°	37°

Nexen's OSRP does not currently contain an exploratory worst case discharge scenario. An amendment to our Regional OSRP will be filed no later than July 5, 2005 to reflect Nexen's anticipated exploratory drilling scenario (MC 546 as shown above).

5. Facility Tanks, Production Facilities

All facility tanks of 25 barrels or more.

Type of Storage Tank	Type of Facility	Tank Capacity (bbls)	Number of Tanks	Total Capacity (bbls)	Fluid Gravity (API)
Fuel Oil (Marine Diesel)	Semisubmersible	6906	4	27624	32.4
Production	N/A	N/A	N/A	N/A	N/A

APPENDIX G
AIR EMISSIONS INFORMATION

AIR EMISSIONS INFORMATION

Screen Procedures for EP's	Yes	No
Is any calculated Complex Total (CT) Emission amount (tons) associated with your proposed exploration activities more than 90% of the amounts calculated using the following formulas: CT = $3400D^{2/3}$ for CO, and CT = 33.3D for the other air pollutants (where D = distance to shore in miles)?		X
Do your emission calculations include any emission reduction measures or modified emission factors?		X
Are your proposed exploration activities located east of 87.5° W longitude?		X
Do you expect to encounter H_2S at concentrations greater than 20 parts per million (ppm)?		X
Do you propose to flare or vent natural gas for more than 48 continuous hours from any proposed well?		X
Do you propose to burn produced hydrocarbon liquids?		X

Summary Information

There are no existing facilities or activities co-located with the currently proposed activities, therefore the Complex Total Emissions are the same as the Plan Emissions and are provided in the table below.

Air Pollutant	Plan Emission Amounts[1] (tons)	Calculated Exemption Amounts[2] (tons)	Calculated Complex Total Emission Amounts[3] (tons)
Particular matter (PM)	94.59	3629.70	94.59
Sulphur dioxide (SO_2)	433.92	3629.70	433.92
Nitrogen oxides (NO_x)	3251.41	3629.70	3251.41
Volatile organic compounds (VOC)	97.54	3629.70	97.54
Carbon Monoxide (CO)	709.40	77582.41	709.40

[1]For activities proposed in your EP, list the projected emissions calculated from the worksheets.
[2]List the exemption amounts for your proposed activities calculated by using the formulas in 30 CFR 250.303(d).
[3]List the complex total emissions associated with your proposed activities calculated from the worksheets.

This information was calculated by: Carol Garcia
(281) 578-3388
carol.garcia@onsultant@jccteam.com

Based on this data, emissions from the proposed activities will not cause any significant effect on onshore air quality.

Nexen Petroleum U.S.A. Inc. (Nexen)

Initial Exploration Plan
Green Canyon Block 511
OCS-G 22971

(A) Impact Producing Factors

ENVIRONMENTAL IMPACT ANALYSIS WORKSHEET

Environment Resources	Impact Producing Factors (IPFs) Categories and Examples Refer to recent GOM OCS Lease Sale EIS for a more complete list of IPFs					
	Emissions (air, noise, light, etc.)	**Effluents (muds, cutting, other discharges to the water column or seafloor)**	**Physical disturbances to the seafloor (rig or anchor emplacements, etc.)**	**Wastes sent to shore for treatment or disposal**	**Accidents (e.g., oil spills, chemical spills, H_2S releases)**	**Discarded Trash & Debris**
Site-specific at Offshore Location						
Designated topographic features		(1)	(1)		(1)	
Pinnacle Trend area live bottoms		(2)	(2)		(2)	
Eastern Gulf live bottoms		(3)	(3)		(3)	
Chemosynthetic communities			(4)			
Water quality		X	X		X	
Fisheries		X	X		X	
Marine Mammals	X(8)	X			X(8)	X
Sea Turtles	X(8)	X			X(8)	X
Air quality	X(9)					
Shipwreck sites (known or potential)			(7)			
Prehistoric archaeological sites			(7)			
Vicinity of Offshore Location						
Essential fish habitat		X	X		X(6)	
Marine and pelagic birds	X				X	X
Public health and safety					(5)	
Coastal and Onshore						
Beaches					X(6)	X
Wetlands					X(6)	
Shore birds and coastal nesting birds					X(6)	X
Coastal wildlife refuges					X	
Wilderness areas					X	

Footnotes for Environmental Impact Analysis Matrix

1) Activities that may affect a marine sanctuary or topographic feature. Specifically, if the well or platform site or any anchors will be on the seafloor within the:
   - o 4-mile zone of the Flower Garden Banks, or the 3-mile zone of Stetson Bank;
   - o 1000-m, 1-mile or 3-mile zone of any topographic feature (submarine bank) protected by the Topographic Features Stipulation attached to an OCS lease;
   - o Essential Fish Habitat (EFH) criteria of 500 ft. from any no-activity zone; or
   - o Proximity of any submarine bank (500 ft. buffer zone) with relief greater than 2 meters that is not protected by the Topographic Features Stipulation attached to an OCS lease.
2) Activities with any bottom disturbance within an OCS lease block protected through the Live Bottom (Pinnacle Trend) Stipulation attached to an OCS lease.
3) Activities within any Eastern Gulf OCS block where seafloor habitats are protected by the Live Bottom (Low-Relief) Stipulation attached to an OCS lease.
4) Activities on blocks designated by the MMS as being in water depths 400 meters or greater.
5) Exploration or production activities where H2S concentrations greater than 500 ppm might be encountered.
6) All activities that could result in an accidental spill of produced liquid hydrocarbons or diesel fuel that you determine would impact these environmental resources. If the proposed action is located a sufficient distance from a resource that no impact would occur, the EIA can note that in a sentence or two.
7) All activities that involve seafloor disturbances, including anchor emplacements, in any OCS block designated by the MMS as having high-probability for the occurrence of shipwrecks or prehistoric sites, including such blocks that will be affected that are adjacent to the lease block in which your planned activity will occur. If the proposed activities are located a sufficient distance from a shipwreck or a prehistoric site that no impact would occur, the EIA can note that in a sentence or two.
8) All activities that you determine might have an adverse effect on endangered or threatened marine mammals or sea turtles or their critical habitats.
9) Production activities that involve transportation of produced fluids to shore using shuttle tankers or barges.

(B) Analysis

Site-Specific at Green Canyon Block 511

Proposed operations consist of the drilling and temporary abandonment of Wells A, B, and C. These operations will be conducted using a semisubmersible rig.

1. Designated Topographic Features

Potential IPFs on topographic features include physical disturbances to the seafloor, effluents, and accidents.

Physical disturbances to the seafloor: Green Canyon Block 511 is 40 miles from the closest designated Topographic Features Stipulation Block (Diaphus Bank); therefore, no adverse impacts are expected.

Effluents: Green Canyon Block 511 is 40 miles from the closest designated Topographic Features Stipulation Block (Diaphus Bank); therefore, no adverse impacts are expected.

Accidents: It is unlikely that an accidental surface or subsurface spill would occur from the proposed activities (refer to statistics in **Item 5**, Water Quality). Oil spills cause damage to benthic organisms only if the oil contacts the organisms. Oil from a surface spill can be driven into the water column; measurable amounts have been documented down to a 10 m depth. At this depth, the oil is found only at concentrations several orders of magnitude lower than the amount shown to have an effect on corals. Because the crests of topographic features in the Northern Gulf of Mexico are found below 10 m, no oil from a surface spill could reach their sessile biota. Oil from a subsurface spill is not applicable due to the distance of these blocks from a topographic area. The activities proposed in this plan will be covered by Nexen's Regional OSRP (refer to information submitted in **Appendix F**).

There are no other IPFs (including emissions and wastes sent to shore for disposal) from the proposed activities, which could impact topographic features.

2. Pinnacle Trend Area Live Bottoms

Potential IPFs on pinnacle trend area live bottoms include physical disturbances to the seafloor, effluents, and accidents.

Physical disturbances to the seafloor: Green Canyon Block 511 is 177 miles from the closest live bottom (pinnacle trend) area; therefore, no adverse impacts are expected.

Effluents: Green Canyon Block 511 is 177 miles from the closest live bottom (pinnacle trend) area; therefore, no adverse impacts are expected.

Accidents: It is unlikely that an accidental surface or subsurface spill would occur from the proposed activities (refer to statistics in **Item 5**, Water Quality). Oil spills have the potential to foul benthic communities and cause lethal and sublethal effects on live bottom organisms. Oil from a surface spill can be driven into the water column; measurable amounts have been documented down to a 10 m depth. At this depth, the oil is found only at concentrations several orders of magnitude lower than the amount shown to have an effect on marine organisms. Oil from a subsurface spill is not applicable due to the distance of these blocks from a live bottom (pinnacle trend) area. The activities proposed in this plan will be covered by Nexen's Regional OSRP (refer to information submitted in **Appendix F**).

There are no other IPFs (including emissions and wastes sent to shore for disposal) from the proposed activities which could impact a live bottom (pinnacle trend) area.

3. Eastern Gulf Live Bottoms

Potential IPFs on Eastern Gulf live bottoms include physical disturbances to the seafloor, effluents, and accidents.

Physical disturbances to the seafloor: Green Canyon Block 511 is not located in an area characterized by the existence of live bottoms, and this lease does not contain a Live-Bottom Stipulation requiring a photo documentation survey and survey report.

Effluents: Green Canyon Block 511 is not located in an area characterized by the existence of live bottoms; therefore, no adverse impacts are expected.

Accidents: It is unlikely that an accidental surface or subsurface spill would occur from the proposed activities (refer to statistics in **Item 5**, Water Quality). Oil spills cause damage to live bottom organisms only if the oil contacts the organisms. Oil from a surface spill can be driven into the water column; measurable amounts have been documented down to a 10 m depth. At this depth, the oil is found only at concentrations several orders of magnitude lower than the amount shown to have an effect on marine invertebrates. Oil from a subsurface spill is not applicable due to the distance of these blocks from a live bottom area. The activities proposed in this plan will be covered by Nexen's Regional OSRP (refer to information submitted in **Appendix F**).

There are no other IPFs (including emissions and wastes sent to shore for disposal) from the proposed activities which could impact an Eastern Gulf live bottom area.

4. Chemosynthetic Communities

Green Canyon Block 511 is located in water depths 1,312 feet (400 meters) or greater. IPFs that could result in impacts to chemosynthetic communities from the proposed activities include physical disturbances to the seafloor.

Physical disturbances to the seafloor: Green Canyon Block 511 is approximately 14 miles from a known chemosynthetic community site (Green Canyon Block 293), listed in NTL 2000-G20. This initial exploration plan submittal includes the required maps, analyses, and statement(s). The proposed activities will be conducted in accordance with NTL 2000-G20, which will ensure that features or areas that could support high-density chemosynthetic communities will not be impacted.

There are no other IPFs (including emissions, effluents, wastes sent to shore for disposal, or accidents) from the proposed activities which could impact chemosynthetic communities.

5. Water Quality

IPFs that could result in water quality degradation from the proposed operations in Green Canyon Block 511 include disturbances to the seafloor, effluents and accidents.

Physical disturbances to the seafloor: Bottom area disturbances resulting from the emplacement of drill rigs, the drilling of wells and the installation of platforms and pipelines would increase water-column turbidity and re-suspension of any accumulated pollutants, such as trace metals and excess nutrients. This would cause short-lived impacts on water quality conditions in the immediate vicinity of the emplacement operations.

Effluents: Levels of contaminants in drilling muds and cuttings and produced water discharges, discharge-rate restrictions and monitoring and toxicity testing are regulated by the EPA NPDES permit, thereby eliminating many significant biological or ecological effects. Operational discharges are not expected to cause significant adverse impacts to water quality.

Accidents: Oil spills have the potential to alter offshore water quality; however, it is unlikely that an accidental surface or subsurface spill would occur from the proposed activities. Between 1980 and 2000, OCS operations produced 4.7 billion barrels of oil and spilled only 0.001 percent of this oil, or 1 bbl for every 81,000 bbl produced. The spill risk related to a diesel spill from drilling operations is even less. Between 1976 and 1985, (years for which data were collected), there were 80 reported diesel spills greater than one barrel associated with drilling activities. Considering that there were 11,944 wells drilled, this is a 0.7 percent probability of an occurrence. If a spill were to occur, the water quality of marine waters would be temporarily affected by the dissolved components and small oil droplets. Dispersion by currents and microbial degradation would remove the oil from the water column and dilute the constituents to background levels. Historically, changes in offshore water quality from oil spills have only been

detected during the life of the spill and up to several months afterwards. Most of the components of oil are insoluble in water and therefore float. The activities proposed in this plan will be covered by Nexen's Regional Oil Spill Response Plan (refer to information submitted in **Appendix F**).

There are no other IPFs (including emissions, physical disturbances to the seafloor, and wastes sent to shore for disposal) from the proposed activities which could cause impacts to water quality.

6. Fisheries

IPFs that could cause impacts to fisheries as a result of the proposed operations in Green Canyon Block 511 include physical disturbances to the seafloor, effluents and accidents.

Physical disturbances to the seafloor: The emplacement of a structure or drilling rig results in minimal loss of bottom trawling area to commercial fishermen. Pipelines cause gear conflicts which result in losses of trawls and shrimp catch, business downtime and vessel damage. Most financial losses from gear conflicts are covered by the Fishermen's Contingency Fund (FCF). The emplacement and removal of facilities are not expected to cause significant adverse impacts to fisheries.

Effluents: Effluents such as drilling fluids and cuttings discharges contain components and properties which are detrimental to fishery resources. Moderate petroleum and metal contamination of sediments and the water column can occur out to several hundred meters down-current from the discharge point. Offshore discharges are expected to disperse and dilute to very near background levels in the water column or on the seafloor within 3,000 m of the discharge point, and are expected to have negligible effect on fisheries.

Accidents: An accidental oil spill has the potential to cause some detrimental effects on fisheries; however, it is unlikely that such an event would occur from the proposed activities (refer to **Item 5**, Water Quality). The effects of oil on mobile adult finfish or shellfish would likely be sublethal and the extent of damage would be reduced to the capacity of adult fish and shellfish to avoid the spill, to metabolize hydrocarbons, and to excrete both metabolites and parent compounds. The activities proposed in this plan will be covered by Nexen's Regional OSRP (refer to information submitted in **Appendix F**).

There are no IPFs from emissions, or wastes sent to shore for disposal from the proposed activities which could cause impacts to fisheries.

7. Marine Mammals

GulfCet II studies revealed that cetaceans of the continental shelf and shelf-edge were almost exclusively bottlenose dolphin and Atlantic spotted dolphin. Squid eaters, including dwarf and pygmy killer whale, Risso's dolphin, rough-toothed dolphin, and Cuvier's beaked whale, occurred most frequently along the upper slope in areas outside of anticyclones. IPFs that could cause impacts to marine mammals as a result of the proposed operations in Green Canyon Block 511 include emissions, effluents, discarded trash and debris, and accidents.

Emissions: Noises from drilling activities, support vessels and helicopters may elicit a startle reaction from marine mammals. This reaction may lead to disruption of marine mammals' normal activities. Stress may make them more vulnerable to parasites, disease, environmental contaminants, and/or predation (Majors and Myrick, 1990). There is little conclusive evidence for long-term displacements and population trends for marine mammals relative to noise.

Effluents: Drilling fluids and cuttings discharges contain components which may be detrimental to marine mammals. Most operational discharges are diluted and dispersed upon release. Any potential impact from drilling fluids would be indirect, either as a result of impacts on prey items or possibly through ingestion in the food chain (API, 1989).

Discarded trash and debris: Both entanglement in, and ingestion of debris have caused the death or serious injury of marine mammals (Laist, 1997; MMC, 1999). The limited amount of marine debris, if any, resulting from the proposed activities is not expected to substantially harm marine mammals. Operators are prohibited from deliberately discharging debris as mandated by MARPOL-Annex V and the Marine Plastic Pollution Research and Control Act, and regulations imposed by various agencies including the United States Coast Guard (USCG) and the Environmental Protection Agency (EPA).

Nexen will operate in accordance with the regulations and also avoid accidental loss of solid waste items by maintaining waste management plans, manifesting trash sent to shore, and using special precautions such as covering outside trash bins to prevent accidental loss of solid waste. Special caution will be exercised when handling and disposing of small items and packaging materials, particularly those made of non-biodegradable, environmentally persistent materials such as plastic or glass.

Informational placards will be posted on all vessels and facilities having sleeping or food preparation capabilities. All offshore personnel, including contractors and other support services-related personnel (e.g. helicopter pilots, vessel captains and boat crews) will be indoctrinated on waste procedures, and will view the video (or Microsoft PowerPoint presentation), "All Washed Up: The Beach Litter Problem". Thereafter, all personnel will view the marine trash and debris training video annually.

Accidents: Collisions between support vessels and cetaceans would be unusual events, however should one occur, death or injury to marine mammals is possible. Contract vessel operators can avoid marine mammals and reduce potential deaths by maintaining a vigilant watch for marine mammals and maintaining a safe distance when they are sighted. Vessel crews should use a reference guide to help identify the twenty-eight species of whales and dolphins, and the single species of manatee that may be encountered in the Gulf of Mexico OCS. Vessel crews must report sightings of any injured or dead protected marine mammal species immediately, regardless of whether the injury or death is caused by their vessel, to the Marine Mammal and Sea Turtle Stranding Hotline at (800) 799-6637, or the Marine Mammal Stranding Network at (305) 862-2850. In addition, if the injury or death was caused by a collision with a contract vessel, the MMS must be notified within 24 hours of the strike by email to protectedspecies@mms.gov. If the vessel is the responsible party, it is required to remain available to assist the respective salvage and stranding network as needed.

Oil spills have the potential to cause sublethal oil-related injuries and spill-related deaths to marine mammals. However, it is unlikely that an accidental oil spill would occur from the proposed activities (refer to **Item 5**, Water Quality). Oil spill response activities may increase vessel traffic in the area, which could add to changes in cetacean behavior and/or distribution, thereby causing additional stress to the animals. The effect of oil dispersants on cetaceans is not known. The acute toxicity of oil dispersant chemicals included in Nexen's OSRP is considered to be low when compared with the constituents and fractions of crude oils and diesel products. The activities proposed in this plan will be covered by Nexen's OSRP (refer to information submitted in accordance with **Appendix F**).

There are no other IPFs (including physical disturbances to the seafloor) from the proposed activities which could impact marine mammals.

8. Sea Turtles

IPFs that could cause impacts to sea turtles as a result of the proposed operations include emissions, effluents, discarded trash and debris, and accidents. GulfCet II studies sighted most loggerhead, Kemp's ridley and leatherback sea turtles over shelf waters. Historically these species have been sighted up to the shelf's edge. They appear to be more abundant east of the Mississippi River than they are west of the river (Fritts et al., 1983b; Lohoefener et al., 1990). Deep waters may be used by all species as a transitory habitat.

Emissions: Noise from drilling activities, support vessels, and helicopters may elicit a startle reaction from sea turtles, but this is a temporary disturbance.

Effluents: Drilling fluids and cuttings discharges are not known to be lethal to sea turtles. Most operational discharges are diluted and dispersed upon release. Any potential impact from drilling fluids would be indirect, either as a result of impacts on prey items or possibly through ingestion in the food chain (API, 1989).

Discarded trash and debris: Both entanglement in, and ingestion of, debris have caused the death or serious injury of sea turtles (Balazs, 1985). The limited amount of marine debris, if any, resulting from the proposed activities is not expected to substantially harm sea turtles. Operators are prohibited from deliberately discharging debris as mandated by MARPOL-Annex V and the Marine Plastic Pollution Research and Control Act, and regulations imposed by various agencies including the United States Coast Guard (USCG) and the Environmental Protection Agency (EPA). Nexen will operate in accordance with the regulations and also avoid accidental loss of solid waste items by maintaining waste management plans, manifesting trash sent to shore, and using special precautions such as covering outside trash bins to prevent accidental loss of solid waste. Special caution will be exercised when handling and disposing of small items and packaging materials, particularly those made of non-biodegradable, environmentally persistent materials such as plastic or glass.

Informational placards will be posted on all vessels and facilities having sleeping or food preparation capabilities. All offshore personnel, including contractors and other support services-related personnel (e.g. helicopter pilots, vessel captains and boat crews) will be indoctrinated on waste procedures, and will view the video (or Microsoft PowerPoint presentation), "All Washed Up: The Beach Litter Problem". Thereafter, all personnel will view the marine trash and debris training video annually.

Accidents: Collisions between support vessels and sea turtles would be unusual events, however should one occur, death or injury to sea turtles is possible. Contract vessel operators can avoid sea turtles and reduce potential deaths by maintaining a vigilant watch for sea turtles and maintaining a safe distance when they are sighted. Vessel crews should use a reference guide to help identify the five species of sea turtles that may be encountered in the Gulf of Mexico OCS. Vessel crews must report sightings of any injured or dead protected sea turtle species immediately, regardless of whether the injury or death is caused by their vessel, to the Marine Mammal and Sea Turtle Stranding Hotline at (800) 799-6637, or the Marine Mammal Stranding Network at (305) 862-2850. In addition, if the injury or death was caused by a collision with a contract vessel, the MMS must be notified within 24 hours of the strike by email to protectedspecies@mms.gov. If the vessel is the responsible party, it is required to remain available to assist the respective salvage and stranding network as needed.

All sea turtle species and their life stages are vulnerable to the harmful effects of oil through direct contact or by fouling of their food. Exposure to oil can be fatal, particularly to juveniles and hatchlings. However, it is unlikely that an accidental oil spill would occur from the proposed activities (refer to **Item 5**, Water Quality). Oil spill response activities may increase vessel traffic in the area, which could add to the possibility of collisions with sea turtles. The activities proposed in this plan will be covered by Nexen's Regional Oil Spill Response Plan (refer to information submitted in accordance with **Appendix F**).

There are no other IPFs (including physical disturbances to the seafloor) from the proposed activities which could impact sea turtles.

9. Air Quality

The projected air emissions identified in Appendix G are not expected to affect the OCS air quality primarily due to distance to the shore or to any Prevention of Significant Deterioration Class I air quality area such as the Breton Wilderness Area. Green Canyon Block 511 is beyond the 200 kilometer (124 mile) buffer for the Breton Wilderness Area and is 109 miles from the coastline. Therefore, no special mitigation, monitoring, or reporting requirements apply with respect to air emissions.

Accidents and blowouts can release hydrocarbons or chemicals, which could cause the emission of air pollutants. However, these releases would not impact onshore air quality because of the prevailing atmospheric conditions, emission height, emission rates, and the distance of Green Canyon Block 511 from the coastline. There are no other IPFs (including effluents, physical disturbances to the seafloor, wastes sent to shore for treatment or disposal) from the proposed activities which could impact air quality.

10. Shipwreck Sites (known or potential)

IPFs that could impact known or unknown shipwreck sites as a result of the proposed operations in Green Canyon Block 511 include disturbances to the seafloor. Green Canyon Block 511 is not located in or adjacent to an OCS block designated by MMS as having a high probability for occurrence of shipwrecks. Nexen will report to MMS the discovery of any evidence of a shipwreck and make every reasonable effort to preserve and protect that cultural resource. There are no other IPFs (including emissions, effluents, wastes sent to shore for treatment or disposal, or accidents) from the proposed activities which could impact shipwreck sites.

11. Prehistoric Archaeological Sites

IPFs which could impact prehistoric archaeological sites as a result of the proposed operations in Green Canyon Block 511 include disturbances to the seafloor (structure emplacement) and accidents (oil spill). Green Canyon Block 511 is located outside the Archaeological Prehistoric high probability line. Nexen will report to MMS the discovery of any object of prehistoric archaeological significance and make every reasonable effort to preserve and protect that cultural resource.

Accidents: An accidental oil spill has the potential to cause some detrimental effects to prehistoric archaeological sites if the release were to occur subsea. However, it is unlikely that an accidental oil spill would occur from the proposed activities (refer to **Item 5**, Water Quality). The activities proposed in this plan will be covered by Nexen's Regional Oil Spill Response Plan (refer to information submitted in accordance with **Appendix F**).

There are no other IPFs (including emissions, effluents, wastes sent to shore for treatment or disposal) from the proposed activities which could impact prehistoric archaeological sites.

Vicinity of Offshore Location

1. Essential Fish Habitat (EFH)

IPFs that could cause impacts to EFH as a result of the proposed operations in Green Canyon Block 511 include physical disturbances to the seafloor, effluents and accidents. EFH includes all estuarine and marine waters and substrates in the Gulf of Mexico.

Physical disturbances to the seafloor: The Live Bottom Low Relief Stipulation, the Live Bottom (Pinnacle Trend) Stipulation, and the Eastern Gulf Pinnacle Trend Stipulation would prevent most of the potential impacts on live-bottom communities and EFH from bottom disturbing activities (e.g., anchoring, structure emplacement and removal).

Effluents: The Live Bottom Low Relief Stipulation, the Live Bottom (Pinnacle Trend) Stipulation, and the Eastern Gulf Pinnacle Trend Stipulation would prevent most of the potential impacts on live-bottom communities and EFH from operational waste discharges. Levels of contaminants in drilling muds and cuttings and produced-water discharges, discharge-rate restrictions, and monitoring and toxicity testing are regulated by the EPA NPDES permit, thereby eliminating many significant biological or ecological effects. Operational discharges are not expected to cause significant adverse impacts to EFH.

Accidents: An accidental oil spill has the potential to cause some detrimental effects on EFH. Oil spills that contact coastal bays and estuaries, as well as OCS waters when pelagic eggs and larvae are present, have the greatest potential to affect fisheries. However, it is unlikely that an oil spill would occur from the proposed activities (refer to **Item 5**, Water Quality). The activities proposed in this plan will be covered by Nexen's Regional OSRP (refer to information submitted in **Appendix F**).

There are no other IPFs (including emissions, or wastes sent to shore for treatment or disposal) from the proposed activities which could impact essential fish habitat.

2. Marine and Pelagic Birds

IPFs that could impact marine birds as a result of the proposed activities include air emissions, accidental oil spills, and discarded trash and debris from vessels and the facilities.

Emissions: Emissions of pollutants into the atmosphere from these activities are far below concentrations which could harm coastal and marine birds.

Accidents: An oil spill would cause localized, low-level petroleum hydrocarbon contamination. However, it is unlikely that an oil spill would occur from the proposed activities (refer to **Item 5**, Water Quality). Marine and pelagic birds feeding at the spill location may experience chronic,

nonfatal, physiological stress. It is expected that few, if any, coastal and marine birds would actually be affected to that extent. The activities proposed in this plan will be covered by Nexen's Regional OSRP (refer to information submitted in **Appendix F**).

Discarded trash and debris: Marine and pelagic birds could become entangled and snared in discarded trash and debris, or ingest small plastic debris, which can cause permanent injuries and death. Operators are prohibited from deliberately discharging debris as mandated by MARPOL-Annex V and the Marine Plastic Pollution Research and Control Act, and regulations imposed by various agencies including the United States Coast Guard (USCG) and the Environmental Protection Agency (EPA). Nexen will operate in accordance with the regulations and also avoid accidental loss of solid waste items by maintaining waste management plans, manifesting trash sent to shore, and using special precautions such as covering outside trash bins to prevent accidental loss of solid waste. Special caution will be exercised when handling and disposing of small items and packaging materials, particularly those made of non-biodegradable, environmentally persistent materials such as plastic or glass. Informational placards will be posted on all vessels and facilities having sleeping or food preparation capabilities. All offshore personnel, including contractors and other support services-related personnel (e.g. helicopter pilots, vessel captains and boat crews) will be indoctrinated on waste procedures, and will view the video (or Microsoft PowerPoint presentation), "All Washed Up: The Beach Litter Problem". Thereafter, all personnel will view the marine trash and debris training video annually. Debris, if any, from these proposed activities will seldom interact with marine and pelagic birds; therefore, the effects will be negligible.

There are no other IPFs (including effluents, physical disturbances to the seafloor, or wastes sent to shore for treatment or disposal) from the proposed activities which could impact marine and pelagic birds.

3. Public Health and Safety Due to Accidents.

There are no IPFs (emissions, effluents, physical disturbances to the seafloor, wastes sent to shore for treatment or disposal or accidents, including an accidental H2S releases) from the proposed activities which could cause impacts to public health and safety. In accordance with NTL No. 2003 G-17, sufficient information is included in **Appendix C** to justify our request that our proposed activities be classified by MMS as H_2S absent.

Coastal and Onshore

1. Beaches

IPFs from the proposed activities that could cause impacts to beaches include accidents (oil spills) and discarded trash and debris.

Accidents: Oil spills contacting beaches would have impacts on the use of recreational beaches and associated resources. Due to the distance from shore (109 miles) and the response capabilities that would be implemented, no significant adverse impacts are expected. The activities proposed in this plan will be covered by Nexen's Regional OSRP (refer to information submitted in **Appendix F**).

Discarded trash and debris: Trash on the beach is recognized as a major threat to the enjoyment and use of beaches. There will only be a limited amount of marine debris, if any, resulting from the proposed activities. Operators are prohibited from deliberately discharging debris as mandated by MARPOL-Annex V and the Marine Plastic Pollution Research and Control Act, and regulations imposed by various agencies including the United States Coast Guard (USCG) and the Environmental Protection Agency (EPA). Nexen will operate in accordance with the regulations and also avoid accidental loss of solid waste items by maintaining waste management plans, manifesting trash sent to shore, and using special precautions such as covering outside trash bins to prevent accidental loss of solid waste. Special caution will be exercised when handling and disposing of small items and packaging materials, particularly those made of non-biodegradable, environmentally persistent materials such as plastic or glass.

Informational placards will be posted on all vessels and facilities having sleeping or food preparation capabilities. All offshore personnel, including contractors and other support services-related personnel (e.g. helicopter pilots, vessel captains and boat crews) will be indoctrinated on waste procedures, and will view the video (or Microsoft PowerPoint presentation), "All Washed Up: The Beach Litter Problem". Thereafter, all personnel will view the marine trash and debris training video annually.

There are no other IPFs (emissions, effluents, physical disturbances to the seafloor, or wastes sent to shore for treatment or disposal) from the proposed activities which could impact beaches.

2. Wetlands

Accidents: Oil spills could cause impacts to wetlands, however, it is unlikely that an oil spill would occur from the proposed activities (refer to **Item 5**, Water Quality). Due to the distance from shore (109 miles) and the response capabilities that would be implemented, no impacts are expected. The activities proposed in this plan will be covered by Nexen's Regional OSRP (refer to information submitted in **Appendix F**).

There are no other IPFs (emissions, effluents, physical disturbances to the seafloor, or wastes sent to shore for treatment or disposal) from the proposed activities which could impact wetlands.

3. Shore Birds and Coastal Nesting Birds

Accidents: Oil spills could cause impacts to shore birds and coastal nesting birds. However, it is unlikely that an oil spill would occur from the proposed activities (refer to **Item 5**, Water Quality). Given the distance from shore (109 miles) and the response capabilities that would be implemented, no impacts are expected. The activities proposed in this plan will be covered by Nexen's Regional OSRP (refer to information submitted in **Appendix F**).

Discarded trash and debris: Coastal and marine birds are highly susceptible to entanglement in floating, submerged, and beached marine debris: specifically plastics. Operators are prohibited from deliberately discharging debris as mandated by MARPOL-Annex V and the Marine Plastic Pollution Research and Control Act, and regulations imposed by various agencies including the United States Coast Guard (USCG) and the Environmental Protection Agency (EPA). Nexen will operate in accordance with the regulations and also avoid accidental loss of solid waste items by maintaining waste management plans, manifesting trash sent to shore, and using special precautions such as covering outside trash bins to prevent accidental loss of solid waste. Special caution will be exercised when handling and disposing of small items and packaging materials, particularly those made of non-biodegradable, environmentally persistent materials such as plastic or glass.

Informational placards will be posted on vessels and every facility that has sleeping or food preparation capabilities. All offshore personnel, including contractors and other support services-related personnel (e.g. helicopter pilots, vessel captains and boat crews) will be indoctrinated on waste procedures, and will view the video (or Microsoft PowerPoint presentation), "All Washed Up: The Beach Litter Problem". Thereafter, all personnel will view the marine trash and debris training video annually.

There are no other IPFs (emissions, effluents, physical disturbances to the seafloor, or wastes sent to shore for treatment or disposal) from the proposed activities that could cause impacts to shore birds and coastal nesting birds.

4. Coastal Wildlife Refuges

Accidents: An accidental oil spill from the proposed activities could cause impacts to coastal wildlife refuges. However, it is unlikely that an oil spill would occur from the proposed activities (refer to Item 5, Water Quality). Due to the distance from shore (109 miles) and the response capabilities that would be implemented, no impacts are expected. The activities proposed in this plan will be covered by Nexen's Regional OSRP (refer to information submitted in **Appendix F**).

There are no other IPFs (emissions, effluents, physical disturbances to the seafloor, or wastes sent to shore for treatment or disposal) from the proposed activities that could cause impacts to coastal wildlife refuges.

5. Wilderness Areas

An accidental oil spill from the proposed activities could cause impacts to wilderness areas. However, it is unlikely that an oil spill would occur from the proposed activities (refer to **Item 5**, Water Quality). Due to the distance from the nearest designated Wilderness Area (160 miles) and the response capabilities that would be implemented, no significant adverse impacts are expected. The activities proposed in this plan will be covered by Nexen's Regional OSRP (refer to information submitted in **Appendix F).**

6. Other Environmental Resources Identified

None

(C) Impacts on your proposed activities.

The site–specific environmental conditions have been taken into account for the proposed activities. No impacts are expected on the proposed activities from site-specific environmental conditions.

(D) Alternatives

No alternatives to the proposed activities were considered to reduce environmental impacts.

(E) Mitigation Measures

No mitigation measures other than those required by regulation will be employed to avoid, diminish, or eliminate potential impacts on environmental resources.

(F) Consultation

No agencies or persons were consulted regarding potential impacts associated with the proposed activities. Therefore, a list of such entities has not been provided.

(G) References

Authors:

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Balazs, G.H. 1985. Impact of ocean debris on marine turtles: entanglement and ingestion. In: Shomura, R.S. and H.O. Yoshida, eds. Proceedings, Workshop on the Fate and Impact of Marine Debris, 26-29 November 1984, Honolulu, HI. U.S. Dept. of Commerce. NOAA Tech. Memo. NOAA-TM-NMFS-SWFC-54. Pp 387-429.

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Laist, D.W. 1997. Impacts of marine debris: entanglement of marine life in marine debris including a comprehensive list of species with entanglement and ingestion records. In: Coe, J.M. and D.B. Rogers, eds. Marine debris: sources, impacts, and solutions. New York, NY: Springer-Verlag. Pp. 99-139

Majors, A.P. and A.C. Myrick, Jr. 1990. Effects of noise on animals: implications for dolphins exposed to seal bombs in the eastern tropical Pacific purse-seine fishery–an annotated bibliography. NOAA Administrative Report LJ-90-06.

Marine Mammal Commission. 1999. Annual report to Congress – 1998

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Vermeer, K. and R. Vermeer, 1975 Oil threat to birds on the Canadian west coast. The Canadian Field-Naturalist. 89:278-298.

Although not cited, the following were utilized in preparing this EIA:

- Hazard Surveys
- MMS EIS's:
  - GOM Deepwater Operations and Activities. Environmental Assessment. MMS 2000-001
  - GOM Central and Western Planning Areas Sales 166 and 168 Final Environmental Impact Statement. MMS 96-0058

APPENDIX I

COASTAL ZONE MANAGEMENT CONSISTENCY INFORMATION

Relevant enforceable policies were considered in certifying consistency for Louisiana. A certificate of Coastal Zone Management Consistency for the state of Louisiana is enclosed as ***Attachment I-1***.

COASTAL ZONE MANAGEMENT CONSISTENCY CERTIFICATION

INITIAL EXPLORATION PLAN

GREEN CANYON BLOCK 511

OCS-G 22971

The proposed activities described in detail in this OCS Plan comply with Louisiana's approved Coastal Management Program(s) and will be conducted in a manner consistent with such Program(s)

Nexen Petroleum U.S.A. Inc.
Lessee or Operator

Certifying Official

July 6, 2005
Date

U.S. Department of the Interior
Minerals Management Service

OMB Control Number: 1010-0049
OMB Approval Expires: August 31, 2006

OCS PLAN INFORMATION FORM

GENERAL INFORMATION

Type of OCS Plan:	X	Exploration Plan (EP)		Development Operations Coordination Document (DOCD)	
Company Name:	Nexen Petroleum U.S.A. Inc.			MMS Operator Number:	00687
Address:	12790 Merit Drive Suite 800 Dallas, Texas 75251-1270		Contact Person:	Cheryl Murphy/Carol Garcia	
			Phone Number:	281-578-3388	
			Email Address:	Cheryl.murphy@jccteam.com	
Lease: OCS-G 22971	Area: GC		Block: 511	Project Name (If Applicable):Knotty Head	
Objective(s): ☒Oil ☒Gas ☐Sulphur ☐Salt			Onshore Base: Fourchon, Louisiana	Distance to Closest Land (Miles): 109	

Description of Proposed Activities (Mark all that apply)

☒ Exploration drilling	☐ Development drilling
☐ Well completion	☐ Installation of production platform
☐ Well test flaring (for more than 48 hours)	☐ Installation of production facilities
☐ Installation of caisson or platform as well protection structure	☐ Installation of satellite structure
☐ Installation of subsea wellheads and/or manifolds	☐ Commence Production
☐ Installation of lease term pipelines	☐ Other (Specify and describe)

Have you submitted or do you plan to submit a Conservation Information Document to accompany this plan?		Yes	X	No
Do you propose to use new or unusual technology to conduct your activities?		Yes	X	No
Do you propose any facility that will serve as a host facility for deepwater subsea development?		Yes	X	No
Do you propose any activities that may disturb an MMS-designated high-probability archaeological area?		Yes	X	No
Have all of the surface locations of your proposed activities been previously reviewed and approved my MMS?		Yes	X	No

Tentative Schedule of Proposed Activities

Proposed Activity	Start Date	End Date	No. of Days
Drill, evaluate, and temporarily abandon Well No. A	December 1, 2005	April 1, 2006	121
Drill, evaluate, and temporarily abandon Well No. B	July 1, 2006	November 1, 2006	123
Drill, evaluate, and temporarily abandon Well No. C	January 1, 2007	May 1, 2007	120

Description of Drilling Rig

☐ Jackup	☐ Drillship
☐ Gorilla Jackup	☐ Platform rig
☒ Semisubmersible	☐ Submersible
☐ DP Semisubmersible	☐ Other (Describe)
☐ Drilling Rig Name (If Known):	

Description of Production Platform

☐ Caisson	☐ Tension leg platform
☐ Well protector	☐ Compliant tower
☐ Fixed platform	☐ Guyed tower
☐ Subsea manifold	☐ Floating production system
☐ Spar	☐ Other (Attach description)

Description of Lease Term Pipelines

From (Facility/Area/Block)	To (Facility/Area/Block)	Diameter (inches)	Length (Feet)	Product

OCS PLAN INFORMATION FORM (CONTINUED)

Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location			
Well or Structure Name/Number (If renaming well or structure, reference previous name):A			Subsea Completion ☒ Yes ☐ No
Anchor Radius (if applicable) in feet:			
	Surface Location	**Bottom-Hole Location (For Wells)**	
Lease No.	OCS-G 22971		
Area Name	Green Canyon		
Block No.	511		
Blockline Departures (in feet)	N/S Departure: 7528' FNL	N/S Departure:	
	E/W Departure: 1411' FEL	E/W Departure:	
Lambert X-Y coordinates	X: 2,422,109.00'	X:	
	Y: 9,971,672.00	Y:	
Latitude/ Longitude	Latitude:27° 27' 30.884" N	Latitude:	
	Longitude:90° 35' 20.937"W	Longitude :	
	TVD (Feet):	MD (Feet):	Water Depth (Feet):

Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)

Anchor Name or No.	Area	Block	X Coordinate	Y Coordinate	Length of Anchor Chain on Seafloor
1	GC	467	X = 2418614.41	Y = 9981188.79	2834
2	GC	468	X = 2423777.53	Y= 9981647.61	2910
3	GC	512	X = 2431643.32	Y= 9975047.43	2910
4	GC	512	X = 2432088.04	Y = 9969883.08	2910
5	GC	556	X = 2425603.59	Y = 9962155.21	3323
6	GC	555	X = 2420440.47	Y = 9961696.39	3306
7	GC	511	X = 2410854.70	Y = 9968104.67	2952
8	GC	511	X = 2410466.62	Y = 9973754.21	2952

Paperwork Reduction Act of 1995 Statement: The Paperwork Reduction Act of 1995 (44 U.S.C. Chapter 35) requires us to inform you that MMS collects this information as part of an applicant's Exploration Plan or Development Operations Coordination Document submitted for MMS approval. We use the information to facilitate our review and data entry for OCS plans. We will protect proprietary data according to the Freedom of Information Act and 30 CFR 250.196. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid Office of Management and Budget Control Number. The use of this form is voluntary. The public reporting burden for this form is included in the burden for preparing Exploration Plans and Development Operations Coordination Documents. We estimate that burden to average 580 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to the Information Collection Clearance Officer, Mail Stop 4230, Minerals Management Service, 1849 C Street, N.W., Washington, DC 20240.

OCS PLAN INFORMATION FORM (CONTINUED)

Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location			
Well or Structure Name/Number (If renaming well or structure, reference previous name):B			Subsea Completion
Anchor Radius (if applicable) in feet:			☒ Yes ☐ No
	Surface Location		**Bottom-Hole Location (For Wells)**
Lease No.	OCS –G 22971		
Area Name	Green Canyon		
Block No.	511		
Blockline Departures (in feet)	N/S Departure: 3625' FNL		N/S Departure:
	E/W Departure: 1130' FEL		E/W Departure:
Lambert X-Y coordinates	X: 2,422,390.00'		X:
	Y: 9,975,575.00'		Y:
Latitude/ Longitude	Latitude: 27° 28' 09.461" N		Latitude:
	Longitude: 90° 35' 16.978" W		Longitude:
	TVD (Feet):	MD (Feet):	Water Depth (Feet):

Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)

Anchor Name or No.	Area	Block	X Coordinate	Y Coordinate	Length of Anchor Chain on Seafloor
1	GC	467	X = 2417295.93	Y = 9984340.38	2834
2	GC	467	X = 2422300.93	Y = 9985688.79	2969
3	GC	468	X = 2431362.56	Y = 9980249.49	2952
4	GC	512	X = 2432528.08	Y = 9975546.10	2935
5	GC	512	X = 2427484.07	Y = 9966809.62	3357
6	GC	511	X = 2422479.07	Y = 9965461.21	2834
7	GC	511	X = 2412123.95	Y = 9969750.72	2986
8	GC	511	X = 2412251.92	Y = 9975603.89	2969

Paperwork Reduction Act of 1995 Statement: The Paperwork Reduction Act of 1995 (44 U.S.C. Chapter 35) requires us to inform you that MMS collects this information as part of an applicant's Exploration Plan or Development Operations Coordination Document submitted for MMS approval. We use the information to facilitate our review and data entry for OCS plans. We will protect proprietary data according to the Freedom of Information Act and 30 CFR 250.196. An agency may not conduct or sponsor, and a person is not required to respond to, a collection of information unless it displays a currently valid Office of Management and Budget Control Number. The use of this form is voluntary. The public reporting burden for this form is included in the burden for preparing Exploration Plans and Development Operations Coordination Documents. We estimate that burden to average 580 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to the Information Collection Clearance Officer, Mail Stop 4230, Minerals Management Service, 1849 C Street, N.W., Washington, DC 20240.

OCS PLAN INFORMATION FORM (CONTINUED)

Include one copy of this page for each proposed well/structure

Proposed Well/Structure Location			
Well or Structure Name/Number (If renaming well or structure, reference previous name): C			Subsea Completion
Anchor Radius (if applicable) in feet:			☒ Yes ☐ No
	Surface Location	**Bottom-Hole Location (For Wells)**	
Lease No.	OCS-G 22971		
Area Name	Green Canyon		
Block No.	511		
Blockline Departures (in feet)	N/S Departure: 6523' FNL	N/S Departure:	
	E/W Departure: 4371' FEL	E/W Departure:	
Lambert X-Y coordinates	X: 2,419,149.00'	X:	
	Y: 9,972,677.00'	Y:	
Latitude/ Longitude	Latitude: 27° 27' 41.399" N	Latitude:	
	Longitude: 90° 35' 53.562" W	Longitude:	
	TVD (Feet):	MD (Feet):	Water Depth (Feet):

Anchor Locations for Drilling Rig or Construction Barge (If anchor radius supplied above, not necessary)

Anchor Name or No.	Area	Block	X Coordinate	Y Coordinate	Length of Anchor Chain on Seafloor
1	GC	467	X = 2414671.22	Y = 9981770.07	2817
2	GC	467	X = 2419059.94	Y = 9982790.80	2867
3	GC	512	X = 2429311.51	Y = 9978677.04	2935
4	GC	512	X = 2429287.08	Y = 9972648.09	2918
5	GC	512	X = 2424243.06	Y = 9963911.61	2834
6	GC	555	X = 2419587.05	Y = 9962569.29	2800
7	GC	511	X = 2410345.66	Y = 9967697.24	3458
8	GC	511	X = 2409010.92	Y = 9972705.90	2952

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