

DEPARTMENT OF THE INTERIOR
MINERALS MANAGEMENT SERVICE MANUAL

TRANSMITTAL SHEET

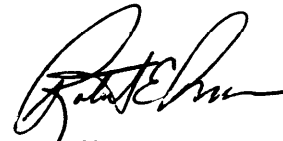
Release No. 239

May 21, 1996

SUBJECT: Program Series
Part 620 Environmental Assessment
Chapter 1 Archaeological Resource Protection

EXPLANATION OF MATERIAL TRANSMITTED:

This chapter and handbook describe the Minerals Management Service (MMS) policy and responsibilities for the protection of archaeological resources associated with all MMS Outer Continental Shelf activities. It is revised to incorporate changes in laws, regulations and standards and to add procedures for evaluating potential effects of sand, gravel and shell activities on archaeological resources.


ACME Director

FILING INSTRUCTIONS:

REMOVE:

<u>Part</u>	<u>Chapter</u>	<u>Pages</u>	<u>Release</u>
620	1	1-3	60

<u>Handbook</u>	<u>Pages</u>	<u>Release</u>
620.1-H	All	60 106

INSERT:

<u>Part</u>	<u>Chapter</u>	<u>Pages</u>	<u>Release</u>
620	1	1-3	239

<u>Handbook</u>	<u>Pages</u>	<u>Release</u>
620.1-H	20	239

OPR: Environmental Policy and Programs Division
Offshore Minerals Management

DEPARTMENT OF THE INTERIOR
MINERALS MANAGEMENT SERVICE MANUAL

Program Series Part 620 Environmental Assessment

Chapter 1 Archaeological Resource Protection 620.1.1

1. Purpose. This chapter establishes Minerals Management Service (MMS) policy and responsibilities for the protection of archaeological resources associated with all Outer Continental Shelf (OCS) actions under MMS jurisdiction.

2. Objectives. The objectives of this chapter and the accompanying handbook are to establish procedures and provide guidelines for the regional implementation of the archaeological resource protection program.

3. Authority.

A. The OCS Lands Act, as amended (43 U.S.C. 1331 et seq. (1986)),

B. National Historic Preservation Act (NHPA), as amended (16 U.S.C. 470 et seq. (1992)),

C. National Environmental Policy Act (42 U.S.C. 4332 et seq.),

D. Executive Order 11593,

E. 30 CFR Parts 250, 256, 280, and 281, and

F. Department of the Interior, Solicitor's Opinion M36928, November 24, 1980.

4. Definition. Archaeological resource means any material remains of human life or activities that are at least 50 years of age and that are of archaeological interest. Material remains means physical evidence of human habitation, occupation, use or activity, including the site, location, or context in which such evidence is situated. Of archaeological interest means capable of providing scientific or humanistic understanding of past human behavior, cultural adaptation, and related topics through the application of scientific or scholarly techniques, such as controlled observation, contextual measurement, controlled collection, analysis, interpretation, and explanation.

OPR: Environmental Policy and Programs Division
Offshore Minerals Management

Supersedes Release No. 60
Date: May 21, 1996 (Release No. 239)

Page 1

DEPARTMENT OF THE INTERIOR
MINERALS MANAGEMENT SERVICE MANUAL

Program Series Part 620 Environmental Assessment

Chapter 1 Archaeological Resource Protection 620.1.5A

5. Policy. It is the policy of the MMS to:

A. Consider the impacts on archaeological resources in all aspects of planning, leasing, permitting, and regulatory decisions.

B. Ensure that archaeological resources are not damaged or destroyed by operations on the OCS.

C. Achieve and maintain a consistent application of archaeological resource stipulations, regulations, and other related requirements.

6. Responsibilities. The authority and responsibilities for the MMS activities under section 110(c) of the NHPA are delegated to the officials listed below.

A. Associate Director/Offshore Minerals Management (AD/OMM).

(1) Ensures that all OCS actions, under MMS jurisdiction, are conducted in accordance with appropriate legislation.

(2) Establishes policy and guidelines to ensure MMS compliance with appropriate legislation.

B. Preservation Officer.

(1) Coordinates MMS activities under the NHPA.

(2) Assists AD/OMM in ensuring that all OCS actions, under MMS jurisdiction, are conducted in accordance with appropriate legislation.

(3) Recommends policy and guidelines to ensure MMS compliance with appropriate legislation.

C. Regional Directors. Ensure that all regional OCS actions, under MMS jurisdiction, are conducted in accordance with MMS policy and guidelines. This responsibility may be carried out by Regional Supervisors.

DEPARTMENT OF THE INTERIOR
MINERALS MANAGEMENT SERVICE MANUAL

Program Series Part 620 Environmental Assessment

Chapter 1 Archaeological Resource Protection 620.1.7A

7. Program Steps. The archaeological resource program consists of six related steps:

A. Assessment of archaeological resource potential within the area to be affected by a proposed action;

B. Notification to the appropriate operator, applicant, or permittee of any report and/or survey requirements necessary prior to approval of the action;

C. Review of archaeological report and/or survey data, and identification of archaeological resources or potential resources within the area of the proposed action;

D. Assessment of impacts of the proposed action on archaeological resources;

E. Development of appropriate mitigating measures for the proposed action; and

F. Application of appropriate mitigating measures.

8. Procedures. The specific procedures for implementing the archaeological resource policy are contained in the Handbook for Archaeological Resource Protection (MMSM 620.1-H).

9. Requirements on Operators/Applicants/Permittees for Archaeological Resource Reports/Surveys. If an action is proposed in an area of archaeological concern, the MMS will require the appropriate operator, applicant, or permittee to (a) prepare and submit an archaeological resource report or (b) conduct a site-specific survey and then prepare and submit an archaeological resource report prior to approval of any proposed action. Additionally, MMS may require the operator, applicant, or permittee to modify or move the proposed action or to conduct further archaeological studies.

10. Reporting Requirements. Both a prehistoric resource analysis and a shipwreck update analysis will be included in the draft environmental impact statement. Guidance for the preparation of these analyses is included in the handbook.

**UNITED STATES
DEPARTMENT OF THE INTERIOR**

Minerals Management Service

**HANDBOOK
FOR
ARCHAEOLOGICAL
RESOURCE PROTECTION
(620.1-H)**



FOREWARD

This Handbook describes the procedures for implementing the Minerals Management Service (MMS) policy for the protection of archaeological resources on the Outer Continental Shelf, which is set forth in the MMS Manual, Archaeological Resource Protection, MMSM 620.1. It gives step-by-step procedures and describes where to acquire necessary information.

By following these procedures, we can ensure that decisions regarding archaeological resources will be credible and based on sound scientific principles. If a Region deviates from these procedures, it must demonstrate that its methods are justified and that archaeological resources will not be adversely impacted.

Date: May 21, 1996



Associate Director
Offshore Minerals Management

TABLE OF CONTENTS

	<u>Page</u>
CHAPTER 1. INTRODUCTION	
1. General.....	1-1
2. Responsibilities.....	1-1
3. Definitions.....	1-1
4. Abbreviations and Acronyms.....	1-1
5. Standards for Archaeological Resource Reports.....	1-1
<u>Appendices</u>	
Appendix 1 Glossary.....	1-2
Appendix 2 Abbreviations and Acronyms.....	1-5
Appendix 3 Standards for Archaeological Resource Reports ..	1-6
CHAPTER 2. OCS OIL AND GAS--PRELEASE PROCEDURES	
1. Prehistoric Resource Analysis.....	2-1
2. Shipwreck Update Analysis.....	2-3
3. State Historic Preservation Officer Consultation.....	2-4
CHAPTER 3. OCS OIL AND GAS--POSTLEASE PROCEDURES	
1. Prehistoric and/or Historic Resource Report.....	3-1
A. Notification of Archaeological Resource Report Requirement.....	3-1
B. Review of Archaeological Resource Report.....	3-1
2. State Historic Preservation Officer Consultation.....	3-2
A. Notification Required.....	3-2
B. No Resource--Copy of Report Required.....	3-2
C. Possible Resource Avoided--Copy of Report Required.....	3-2
D. Resource Identified--Consultations Required.....	3-2
(1) Determination of Eligibility.....	3-3
(2) Determination of Effect.....	3-3
(3) Mitigation Measures.....	3-3
CHAPTER 4. OCS OIL AND GAS--DISCOVERY OF ARCHAEOLOGICAL RESOURCES DURING OPERATIONS	
1. General.....	4-1
2. Notification of Discovery.....	4-1
3. Notification of Measures to Protect Resource.....	4-1
CHAPTER 5. OCS OIL AND GAS--PIPELINE PROCEDURES	
1. General.....	5-1
2. Prehistoric and/or Historic Resource Report.....	5-1
3. Review of Archaeological Resource Report.....	5-1
4. State Historic Preservation Officer Consultation.....	5-2

Supersedes Release No. 106

Date: May 21, 1996 (Release No. 239)

A. Notification Required.....	5-2
B. No Resource--Copy of Report Required.....	5-2
C. Possible Resource Avoided--Copy of Report Required.....	5-2
D. Resource Identified--Consultations Required.....	5-3
(1) Determination of Eligibility.....	5-3
(2) Determination of Effect.....	5-3
(3) Mitigation Measures.....	5-3

CHAPTER 6. OCS OIL AND GAS PIPELINE--DISCOVERY OF ARCHAEOLOGICAL RESOURCES DURING CONSTRUCTION

1. General.....	6-1
2. Notification of Discovery.....	6-1
3. Notification of Measures to Protect Resource.....	6-1

CHAPTER 7. EVALUATING POTENTIAL EFFECTS OF GEOLOGICAL AND GEOPHYSICAL ACTIVITIES ON ARCHAEOLOGICAL RESOURCES

1. General.....	7-1
2. Review for Archaeological Resources.....	7-1
3. Review of Archaeological Resource Report.....	7-1
4. State Historic Preservation Officer Consultation.....	7-2
A. Notification Required.....	7-3
B. No Resource--Copy of Report Required.....	7-3
C. Possible Resource Avoided--Copy of Report Required.....	7-3
D. Resource Identified--Consultations Required.....	7-3
(1) Determination of Eligibility.....	7-3
(2) Determination of Effect.....	7-3
(3) Mitigation Measures.....	7-3

CHAPTER 8. DISCOVERY OF ARCHAEOLOGICAL RESOURCES DURING GEOLOGICAL AND GEOPHYSICAL ACTIVITIES

1. General.....	8-1
2. Notification of Discovery.....	8-1
3. Notification of Measures to Protect Resources.....	8-1

CHAPTER 9. EVALUATING POTENTIAL EFFECTS OF SAND, GRAVEL, AND SHELL ACTIVITIES ON ARCHAEOLOGICAL RESOURCES

1. General.....	9-1
2. Review for Archaeological Resources.....	9-1
3. Review of Archaeological Resource Report.....	9-2
4. State Historic Preservation Officer Consultation.....	9-3
A. Notification Required.....	9-3
B. No Resource--Copy of Report Required.....	9-3
C. Possible Resource Avoided--Copy of Report Required.....	9-3
D. Resource Identified--Consultations Required.....	9-3

Supersedes Release No. 106
Date: May 21, 1996 (Release No. 239)

Archaeological Resource Protection

MMSM 620.1-H

- (1) Determination of Eligibility..... 9-3
- (2) Determination of Effect..... 9-3
- (3) Mitigation Measures..... 9-3

CHAPTER 10. DISCOVERY OF ARCHAEOLOGICAL RESOURCES
DURING SAND, GRAVEL, OR SHELL ACTIVITIES

- 1. General..... 10-1
- 2. Notification of Discovery..... 10-1
- 3. Notification of Measures to Protect Resources..... 10-1

Supersedes Release No. 106
Date: May 21, 1996 (Release No. 239)

CHAPTER 1. INTRODUCTION

1. General.

A. Program Policy.

(1) Consider the impacts on archaeological resources in all aspects of planning, leasing, permitting, and regulatory decisions;

(2) Ensure that archaeological resources are not damaged or destroyed by operations on the OCS; and

(3) Achieve and maintain a consistent application of archaeological resource stipulations, regulations, and other related requirements.

B. Program Steps. The archaeological resource program consists of six related steps:

(1) Assessment of archaeological resource potential within the area to be affected by a proposed action;

(2) Notification of the lessee/applicant/permittee of any report and/or survey requirements necessary prior to approval of the action;

(3) Review of archaeological report and/or survey data, and identification of archaeological resources or potential resources within the area of the proposed action;

(4) Assessment of impacts of the proposed action on archaeological resources;

(5) Development of appropriate mitigating measures for the proposed action; and

(6) Application of appropriate mitigating measures.

2. Responsibilities. The responsibilities for the MMS archaeological resource program are described in MMSM 620.1, Archaeological Resource Protection.

3. Definitions. See Glossary in Appendix 1 to this chapter.

4. Abbreviations and Acronyms. See the list of abbreviations and acronyms in Appendix 2 to this chapter.

5. Standards for Archeological Resource Reports. See Report Standards in Appendix 3 to this chapter.

GLOSSARY

Advisory Council on Historic Preservation (ACHP) is a council established pursuant to Title II of the National Historic Preservation Act (NHPA). Under the provisions of Section 106 of NHPA, the ACHP must be afforded an opportunity to comment on Federal, Federally assisted, or Federally licensed undertakings which may affect properties listed in or eligible for listing in the National Register of Historic Places. The ACHP has issued regulations detailing consultation requirements at 36 CFR 800.

Applicant is the individual, partnership, firm, or corporation having submitted an application to MMS for an OCS pipeline right-of-way (ROW).

Archaeological resource means any material remains of human life or activities that are at least 50 years of age and that are of archaeological interest.

Material remains means physical evidence of human habitation, occupation, use or activity, including the site, location, or context in which such evidence is situated.

Of archaeological interest means capable of providing scientific or humanistic understanding of past human behavior, cultural adaptation, and related topics through the application of scientific or scholarly techniques, such as controlled observation, contextual measurement, controlled collection, analysis, interpretation, and explanation.

Archaeological resource report is a document prepared by an operator, applicant, or permittee and submitted to MMS. The report is an analysis of geophysical survey data for indications of potential archaeological resources. The report is for prehistoric and/or historic resources, as determined by the MMS, and covers the area of operations. Report standards are included as Appendix 3 to this chapter.

Area of operations is the geographical area within which direct and indirect effects generated by an operation could cause physical disturbance and/or long-term magnetic disturbances. The area of operations will include the drilling unit and lay barge anchor patterns.

Detectable is the potential for state-of-the-art technology to locate the resource. Factors pertinent to detection include: the

size and composition of the resource; the water depth and/or depth of burial of the resource; and the survey linespacing, instrument type, and instrument sensitivity necessary to locate the resource.

Historic archaeological resource pertains to the period of time for which written history exists.

Historic resource report. See "Archaeological resource report."

Operations means any drilling, mining, or construction or placement of any structure for exploration, development, or production.

Operator is the individual, partnership, firm, or corporation having control or management of operations on a leased area, or a portion thereof. The operator may be a lessee, designated agent of the lessee, or holder of rights under an approved operating agreement.

Permittee is the individual partnership, firm, or corporation having obtained a ROW permit, or a potential lessee conducting exploration activities for sand, gravel or shell.

Pipeline right-of-way includes the site on which the pipeline and associated structures are situated which shall not exceed 200 feet in width for pipelines, unless safety and environmental factors during construction and operations require a greater width, and shall be limited to the area reasonably necessary for pumping stations or other accessory structures.

Prehistoric archaeological resource pertains to that period of time before written history. In North America, "prehistoric" usually refers to the period before European contact.

Prehistoric resource analysis is documentation prepared by MMS that evaluates the potential for prehistoric archaeological resources to have occurred, have survived, be detectable and recoverable within a proposed lease or permit area.

Prehistoric resource report. See "Archaeological resource report."

Recoverable is the ability to collect archaeological resource information using current technology based on the depth of burial and/or the depth of water of the potential resources.

Regional baseline study is a document(s) prepared under contract to the MMS which assesses the potential occurrence of archaeological resources on the OCS. These studies contain predictive models dealing with the location and preservation of both prehistoric and historic resources. Regional baseline studies are static documents that are updated as new data become available.

Relict Pleistocene or Holocene landforms are those geomorphic features, which are recognizable on the OCS, that could have been occupied by prehistoric human populations and survived the destructive physical processes of a transgressive sea. Examples of such landforms are: drowned stream valleys, ancient estuaries/lagoons, sediment-filled bays, islands, and natural levees.

Shipwreck update analysis is documentation prepared by MMS that evaluates the potential for historic archaeological resources to have occurred, have survived, be detectable and recoverable within a proposed lease or permit area. A shipwreck is a vessel or wreck of the sea, its cargo, and other contents.

Solicitor's Opinion refers to the "Clarification of Authorities and Responsibilities for Identifying and Protecting Cultural Resources on the Outer Continental Shelf", U.S. Department of the Interior, Office of the Solicitor, (M36928) November 24, 1980.

State Historic Preservation Officer (SHPO) is the official within each State, authorized by the State at the request of the Secretary of the Interior, to act as a liaison for purposes of implementing the NHPA.

ABBREVIATIONS AND ACRONYMS

ACHP	- Advisory Council on Historic Preservation
AHPA	- Archeological and Historical Preservation Act
DCA	- Departmental Consulting Archaeologist
EIS	- Environmental Impact Statement
INTERMAR	- Office of International Activities and Marine Minerals
MMS	- Minerals Management Service
NHPA	- National Historic Preservation Act
NOS	- National Ocean Service
NTL	- Notice to Lessees and Operators
OCS	- Outer Continental Shelf
OPM	- Office of Personnel Management
PD	- Program Director, INTERMAR
RD	- Regional Director
ROW	- Pipeline Right-Of-Way
RS-FO	- Regional Supervisor, Field Operations
RS-LE	- Regional Supervisor, Leasing and Environment (for Pacific Region read: RS-OEE)
RS-RE	- Regional Supervisor, Resource Evaluation
SHPO	- State Historic Preservation Officer
USCG	- United States Coast Guard
USGS	- United States Geological Survey

STANDARDS FOR ARCHAEOLOGICAL RESOURCE REPORTS

1. Prior to commencing any operations, the operator/applicant/permittee shall prepare and submit to the Minerals Management Service (MMS) a report to determine the potential existence of any archaeological resource that may be affected by operations. The report shall be based on an assessment of the data from remote-sensing surveys in accordance with the specifications of the various regional archaeological resource Notices to Lessees and Operators (NTLs) and Letters to Lessees and other pertinent cultural and environmental information. The archaeological resource report shall be prepared and signed by an archaeologist and a geophysicist. Professional personnel in these fields shall have credentials and/or experience sufficient to ensure that they are able to adequately perform the necessary work. One qualified individual may fulfill both requirements. As needed, specialists in other pertinent fields may participate in data analysis and report preparation. In lieu of requiring that the operator/applicant/permittee prepare an archaeological resource report, the MMS may choose to prepare the archaeological resource report in-house using qualified personnel. Data required for shallow hazards surveys and platform foundation analyses will generally be sufficient for prehistoric resource reports. The report shall include the following information:

A. A description of the area surveyed including lease number(s), block number(s), OCS lease area(s), and water depths.

B. A list of personnel and duties for individuals involved in survey planning, survey conduct, and report preparation.

C. A discussion of the archaeological survey including the following:

(1) A brief description of the navigation system with a statement of its estimated accuracy for the area surveyed.

(2) A brief description of the survey instrumentation including record scales, sensitivity settings, sampling rate per second, and tow depths where required.

(3) A description of the survey vessel including vessel size, sensor configuration, navigation antenna locations, and cable lengths.

(4) Vessel speed and course changes.

(5) Sea state and weather conditions.

(6) A copy of the daily survey operations log.

(7) A description of survey procedures including a statement of survey and record quality, a comparison of survey line crossings, and a discussion of any problems which may affect the ability of the report preparation personnel to determine the potential for archaeological resources in the survey area.

D. A navigation postplot map of the survey area at a scale of 1:12,000 showing survey lines, shot points at 152 meter (500 foot) intervals, line direction, latitude-longitude reference points, and Universal Transverse Mercator coordinates or X and Y coordinates from an appropriate regional system. This map, or separate maps at the same scale which also show survey lines, shot points, and line direction, shall be oriented to true north and shall delineate the following, as appropriate:

(1) The horizontal and vertical extent of all relict geomorphic features having potential for associated prehistoric sites. Such areas include, but are not limited to, tidal estuaries, embayments, barrier islands, beach ridge sequences, spits, alluvial terraces, and stream channels. When relict fluvial systems are recorded, the map shall:

(a) differentiate between generations of channeling when more than one generation is present;

(b) show any internal channel features such as point bar deposits and terraces;

(c) delineate any channel margin features such as natural levee ridges; and

(d) indicate all depths of channel banks and channel axes.

Note: An isopach map of channel fill sediments is often the most efficient means of conveying the above information, but this method alone will not allow differentiation between more than one generation of channeling.

(2) Bathymetry.

(3) All magnetic anomalies and side-scan sonar contacts of unknown source. The duration of all magnetic anomalies shall be plotted on the survey map.

(4) Sites of proposed operations (e.g., proposed well locations, platform sites, dredge sites, and/or pipelines), when available at the time of report preparation.

(5) Sites of former mineral extraction activities (e.g. abandoned well locations, platform sites, dredge sites, and/or pipelines).

E. If an analysis of the potential for prehistoric sites within the survey area is required, the report shall include:

(1) A review of existing literature on the late Pleistocene and Holocene geology, paleogeography and sea level change in the area, marine and coastal prehistory, and previous archaeological resource reports in the area, when available.

(2) A discussion of relict geomorphic features within the project area and their archaeological potential including:

(a) the type, age, and geomorphic association of the features mapped;

(b) the acoustic characteristics of the channels and their fill material;

(c) evidence for preservation or erosion of channel margins;

(d) evidence for more than one generation of fluvial downcutting; and

(e) the sea level curves used in the assessment.

(3) A discussion of the potential for identification and evaluation of buried prehistoric sites based on the capabilities of current sampling technologies in relation to the thickness and composition of sediments overlying the potential site area.

F. If an analysis of the potential for historic shipwrecks within the survey area is required, the report shall include the following:

(1) a review of existing records for reported shipwreck locations in the survey area and adjacent areas;

(2) a list of all magnetic anomalies with the survey line and shot point location (corrected for sensor offset), intensity in gammas, lateral extent (duration), whether the anomaly is characterized by a dipolar or monopolar signature, and magnetometer sensor tow depth at each location;

(3) a list of all side-scan sonar contacts with the survey line and shot point location (corrected for sensor offset), size, shape, and height of protrusion above the sea floor of each;

(4) a discussion of any magnetic anomalies and side-scan sonar contacts of unknown source in terms of their potential as historic shipwrecks;

(5) a discussion of any correlation between magnetic anomalies or side-scan sonar contacts and known or probable sources;

(6) a discussion of the potential for shipwreck preservation in terms of the effects of past and present marine processes and bottom sediment type; and

(7) A discussion of the potential for identification and evaluation of potential shipwrecks based on the capabilities of current technology in relation to the water depth, the probable thickness and composition of sediments overlying the potential shipwreck location, and the preservation potential.

G. Representative data samples, as appropriate, shall be submitted with the survey report for the following:

(1) Subbottom Profiler Data

(a) A representative sample of subbottom profiler data shall be included for each type of relict landform identified. When more than one generation of fluvial channeling is evident, a sample depicting each shall be submitted.

(b) The quality of the copies must be readable and must include survey line number, shot point numbers, line direction, and horizontal and vertical scales.

(c) Any interpretive highlighting or annotation of the sample data shall be on either a separate overlay or a copy of the representative sample data. In no instance should the original survey data be highlighted.

(2) Side-scan Sonar Data

(a) A copy of the side-scan sonar data shall be submitted where contacts representing unidentified objects are recorded.

(b) The copies must be readable and include the survey line number, shot point numbers, line direction, and scale.

(c) Any highlighting or annotation of the sample data shall be on either a separate overlay or a copy of the representative sample data. In no instance should the original survey data be highlighted.

(3) Magnetometer Data

(a) for lease surveys and site specific surveys, in order to check survey data quality, a clear copy of three complete lines of data shall be submitted with the survey report. Two of these lines shall be representative data samples of primary survey lines and the third survey line shall be a cross-tie line. The primary survey lines shall be adjacent lines run in opposite directions. Whenever possible these survey lines shall include unidentified magnetic anomalies.

(b) for pipelines that are three miles or longer in length, a clear copy of approximately one-quarter (25%) of the magnetometer data (analog strip chart) for the center line of the survey shall be submitted. The data submitted shall include representative samples of unidentified magnetic anomalies (if any) that were recorded on the center line.

(c) for pipeline surveys less than three miles in length, the magnetometer data for the entire center line shall be submitted.

(d) The survey data may be reduced in size for report preparation, but the quality must remain sufficient to clearly depict both the 1,000-gamma and the 100-gamma scale traces of the analog strip chart recorder and must include the

survey line number, shot point numbers, line direction, and scale.

H. A summary of conclusions and recommendations supported by the archaeological survey data and archaeological analysis including:

(1) a discussion of known or potential archaeological resources;

(2) recommendations for distance to avoid the potential archaeological resource, should avoidance be the chosen mitigation; and

(3) recommendations for strategies to further investigate and identify the potential archaeological resource based on water depth, bottom sediment type, and the suspected nature of the resource.

I. A discussion of the data and results from any additional investigations that may be required by MMS shall be appended to the archaeological resource report.

2. All original data used in the archaeological resource report shall be maintained by the lessee or permittee and be made available upon request to the MMS at any time prior to lease termination.

CHAPTER 2. OCS OIL AND GAS--PRELEASE PROCEDURES

1. Prehistoric Resource Analysis. The purpose of the prehistoric resource analysis is to provide an assessment of the potential for locating prehistoric resources in a proposed lease sale area. The analysis will summarize the potential for prehistoric archaeological resources to have occurred, have survived, be detectable and recoverable within a proposed lease sale area.

A. Beginning immediately after area identification, the Regional Supervisor-Leasing and Environment (RS-LE) will prepare a prehistoric resource analysis. The prehistoric resource analysis must be completed sufficiently prior to release of the draft EIS to allow for review and comment by the appropriate SHPO(s). The prehistoric resource analysis will be included in the draft environmental impact statement (EIS) for public review and comment. The analysis will be prepared by personnel with archaeological, geophysical, and other appropriate expertise. The preparers need not be classified as archaeologists or geophysicists but must meet the Office of Personnel Management (OPM) standards for these classifications.

B. The prehistoric resource analysis will contain available information useful for evaluating the prehistoric resource potential of a proposed lease sale area. A regional baseline study or equivalent data should be used in the preparation of this document. All new data which may serve to update the regional baseline study will also be incorporated. Sources of information may include but are not limited to the following:

(1) Regional baseline studies. These establish predictive models for prehistoric resources in OCS areas (e.g., South Atlantic, Beaufort Sea).

(2) Existing U. S. Geological Survey (USGS) geology reports and Open-File Reports. The geology reports summarize, for each proposed lease sale area, available information on relict Holocene and late Pleistocene landforms, the composition and thickness of Holocene sediments, and areas of rapid sedimentation or mass sediment movement. The reports are available from the appropriate Region or from the USGS.

(3) The MMS resource reports prepared for each proposed lease sale area may contain information dealing with Pleistocene landforms, sedimentation, and deposition. The reports are available from the appropriate Region or from headquarters.

(4) Existing shallow hazards survey reports. These contain site-specific geophysical information which augments the information in the geology or resource reports. They may also contain core and geotechnical reports.

(5) Existing foundation analysis (Platform Verification Program) report. These contain core and stratigraphic information.

(6) Other pertinent information. Other information should be obtained from local, State, and Federal environmental or archaeological reports, and archival or university research.

C. The prehistoric resource analysis shall integrate the geophysical/geological and archaeological information to determine the potential for prehistoric archaeological sites to occur and be preserved within the lease sale area. Preparation of the analysis shall be conducted in the following manner:

(1) Review relative sea-level data to determine the best estimate of relative sea level positions during the late Pleistocene and Holocene for the proposed lease sale area. Blocks which were not above sea level during times of potential human habitation will require no further prelease prehistoric resource analysis or postlease prehistoric resource reports.

(2) Examine the USGS geology report, existing shallow hazards survey data, etc., for indications of significant landforms. Only if sufficient data exist to make a determination, those blocks that do not contain significant relict Pleistocene or Holocene landforms will require no further prelease prehistoric resource analysis or postlease prehistoric resource report. Those blocks that have insufficient information to make a determination or that are not excluded from further consideration based on a review of existing data shall require a prehistoric resource report.

(3) Examine geophysical and geological data for information regarding natural geologic processes that might have destroyed prehistoric resources within the lease sale area or rendered them unrecoverable. Examples of such forces and processes include, but are not limited to:

- (a) glacial scouring;
- (b) sea ice gouging;
- (c) shoreface erosion; and
- (d) excessive sedimentation.

An area will require no further prelease prehistoric resource analysis or a postlease prehistoric resource report if existing data indicate that natural geologic processes have occurred to an extent and depth that prehistoric resources would not have survived and/or are not recoverable.

2. Shipwreck Update Analysis. The purpose of the shipwreck update analysis is to provide an assessment of the potential for locating historic resources in a proposed lease sale area.

A. Beginning immediately after area identification, the RS-LE will prepare a shipwreck update analysis. The shipwreck update analysis must be completed sufficiently prior to the release of the draft EIS to allow for review and comment by the appropriate SHPO(s). The shipwreck update analysis will be included in the draft EIS for public review and comment. The analysis will be prepared by personnel with archaeological, geophysical, and other appropriate expertise. The preparers need not be classified as archaeologists or geophysicists but must meet the OPM standards for these classifications.

B. A regional baseline study or equivalent data should be used in the preparation of this document. All new data which may serve to update the regional baseline study will also be incorporated. Sources of information may include, but are not limited to, the following:

- (1) Regional baseline study.
- (2) National Ocean Service (NOS). The data prepared by NOS in the form of computer printouts and maps have a bias for more recent shipwrecks (post-1900).
- (3) Maritime history volumes.
- (4) Existing shallow hazards survey reports. These contain site-specific geophysical information which may show anomalies indicative of shipwrecks.
- (5) U.S. Coast Guard (USCG) and U.S. Navy records.
- (6) Other pertinent information. Other information should be obtained from local, State, and Federal environmental or archaeological reports, and archival or university research.

C. Examine the available shipwreck data, and, where possible, ascertain the size, type, and construction of known shipwrecks in the proposed lease sale area.

D. Determine the type of survey instruments, instrument sensitivity, and survey grid necessary to detect each known shipwreck in the proposed lease sale area.

E. Examine geophysical/geological and physical oceanographic literature for information regarding natural processes or other physical factors that would influence preservation or destruction of a shipwreck. Examples of such natural processes and physical factors are:

- (1) strength and direction of storm waves and currents;
- (2) sea ice gouging;
- (3) water temperature;
- (4) oxygen content of the water;
- (5) water depth;
- (6) bottom sediment type; and
- (7) amount of sedimentation.

F. The shipwreck update analysis will identify areas with potential for historic resources and will identify specific lease blocks that require a historic resource report.

3. State Historic Preservation Officer Consultation. Based on the Solicitor's Opinion and the MMS policy implementing it, prelease consultation with the SHPO is required.

A. The following information should be reviewed by the RS-LE in preparing for prelease consultation with the SHPO(s):

- (1) appropriate portions of the regional baseline study, when available;
- (2) prehistoric resource analysis;
- (3) shipwreck update analysis;
- (4) National Register of Historic Places (National Register) which is available in the Federal Register; and
- (5) Information from individuals or organizations with archaeological expertise.

B. The following information should be provided by the RS-LE to the SHPO(s) for consultation:

- (1) bibliography of sources used in preparing analyses;
- (2) lists of individuals and/or groups which supplied information used in the analyses;
- (3) relevant portions of the regional baseline study, when available;
- (4) copy of the prehistoric resource analysis;
- (5) copy of the shipwreck update analysis;
- (6) list of sites identified in the National Register that occur within the proposed lease sale area; and
- (7) description of the proposed action.

The MMS time frame for commencing the preliminary consultation with the SHPO is somewhat flexible but should begin early enough to allow for the information received from the SHPO to be incorporated into the draft EIS. The SHPO has a 30-day comment period, and those comments should also be included in the draft EIS. Based on the findings of the prehistoric resource and shipwreck update analyses, and the consultation with the SHPO, recommendations will be formulated regarding which blocks within the proposed lease sale area will require an archaeological resource report.

CHAPTER 3. OCS OIL AND GAS--POSTLEASE PROCEDURES

1. Prehistoric and/or Historic Resource Report. The prehistoric and/or historic resource report requirement will be invoked for the proposed area of operations only if there is potential for an archaeological resource (a) occurring on a lease area, (b) surviving marine transgression and other physical processes, and (c) being able to be detected by state-of-the-art geophysical technology.

A. Notification of Archaeological Resource Report Requirement. After a lease is issued, the Regional Director (RD) will:

(1) Notify the operator in writing if the decision is made to invoke the archaeological resource report requirement.

(2) Identify to the operator the type of report (prehistoric and/or historic) and the standards that will be required for compliance.

B. Review of Archaeological Resource Report.

(1) The Regional Supervisor-Field Operations (RS-FO) in coordination with and based on the recommendations of the RS-LE will determine whether the report meets the requirements contained in the notification to the operator, the regional archaeological Notice to Lessees and Operators (NTL), and the Standards for Archaeological Resource Reports contained in Chapter 1 of this Handbook. The review should be conducted by personnel with archaeological, geophysical, and other appropriate expertise. The reviewers will determine if the survey was performed properly and will evaluate the geophysical interpretations and archaeological conclusions.

(2) If the report is not adequate or complete, the RS-FO will notify the operator in writing of the problems and identify what data or information are necessary to correct or complete the report.

(3) Notification of Operator. Based on the MMS review of the report findings, the RS-FO will notify the operator in writing of any mitigating measures or operational restrictions which may be required as follows:

(a) If no potential archaeological resources are identified within the proposed area of operations, the operator may proceed; or,

(b) If potential archaeological resources are identified within the proposed area of operations, two alternatives are available;

(i) If the operator can avoid the potential archaeological resource by moving or modifying the proposed operations so there is no impact, the operator may proceed; or,

(ii) The operator can conduct further investigations, developed in consultation with the RS-LE and appropriate SHPO(s), to verify the presence or absence of an archaeological resource in the area of operations.

(a) If the report of these further investigations indicates that no archaeological resource is present, the operator may proceed; or,

(b) If the report of these further investigations identifies an archaeological resource within the area of operations, and it cannot be avoided, additional consultations are required as per 36 CFR 800.4. The operator may not proceed.

2. State Historic Preservation Officer Consultation. Based on the Solicitor's Opinion and the MMS policy implementing it, postlease consultation with the SHPO(s) is required. Postlease consultations between the MMS and the SHPO(s) are necessary for those lease blocks requiring an archaeological resource report. The RS-LE in coordination with the RS-FO should follow the appropriate procedure (see below) in consulting with the SHPO.

A. Notification Required. In instances when there has been a prelease recommendation to require an archaeological resource report but it is decided later that it is not needed, notify the SHPO of the reasons for not requiring the report.

B. No Resource--Copy of Report Required. If the archaeological resource report indicates that no archaeological resource or potential resource is located within the area of operations, send the SHPO(s) a copy of the report.

C. Possible Resource Avoided--Copy of Report Required. If the archaeological resource report indicates that an archaeological resource may be present within the area of operations, but the site of the proposed operations is moved or modified to avoid it, send the SHPO(s) a copy of the report.

D. Resource Identified--Consultations Required. If an archaeological resource is identified within the area of

operations and it cannot be avoided, additional consultations are required as per 36 CFR 800.4.

(1) Determination of Eligibility (36 CFR 800.4(c)). The RS-LE will consult with SHPO(s) to determine if the archaeological resource meets the National Register criteria of significance (36 CFR 60.4).

(2) Determination of Effect (36 CFR 800.5). If the archaeological resource is determined to meet the National Register criteria, the RS-LE in coordination with the RS-FO and the SHPO(s) must determine whether the operation will have an effect on the archaeological resource.

(3) Mitigation Measures. The RS-FO in coordination with and based on the recommendations of the RS-LE will inform the operator of any mitigating measures needed to alleviate or minimize the potential effects on significant archaeological resources. Mitigation can be accomplished in a variety of ways, but the methods employed must be determined on a case-by-case basis in consultation with the SHPO and the ACHP.

(a) Avoidance. This may involve the partial redesign or relocation of a project to minimize the possibility of adverse effects to a significant archaeological resource, or it can involve protection arrangements which preserve the resource in situ.

(b) Data Recovery. The adverse effect(s) of oil and gas operations on an archaeological resource may be negated by the recovery of valuable data contained in the resource. However, protection of known or potentially significant archaeological resources by avoidance will be given priority over data recovery.

CHAPTER 4. OCS OIL AND GAS--DISCOVERY OF
ARCHAEOLOGICAL RESOURCES DURING OPERATIONS

1. General. The steps to be followed when archaeological resources are discovered during exploratory or development activities are outlined at 30 CFR 250.26(b):

If the lessee discovers any archaeological resource while conducting operations in the lease area, the lessee shall immediately halt operations within the area of the discovery and report the discovery to the RD. If investigations determine that the resource is significant, the RD will inform the lessee how to protect it.

2. Notification of Discovery. The RD shall notify the Department of the Interior Departmental Consulting Archaeologist (DCA), the SHPO, and the MMS Preservation Officer immediately of the discovery. The DCA will provide assistance within 2 working days under section 4(a) of the Archeological and Historical Preservation Act (AHPA).

3. Notification of Measures to Protect Resource. The RD, in consultation with the DCA, appropriate SHPO(s), and the MMS Preservation Officer, will determine the measures necessary to evaluate, and, if necessary, protect the discovered archaeological resource(s). The RS-FO will notify the lessee of any measures necessary to protect the archaeological resource.

CHAPTER 5. OCS OIL AND GAS--PIPELINE PROCEDURES

1. General. The prehistoric resource analysis and the shipwreck update analysis will provide the basis for decisions on archaeological resource report requirements for a proposed ROW.

2. Prehistoric and/or Historic Resource Report.

A. A prehistoric and/or historic resource report will be required only if there is potential for an archaeological resource:

- (1) occurring along a proposed ROW;
- (2) surviving marine transgression and other physical processes; and
- (3) being able to be detected by state-of-the-art geophysical technology.

B. It is the responsibility of the applicant to inquire as to the archaeological resource report requirements for a proposed ROW. The RS-FO will then, in coordination with and based on the recommendations of the RS-LE:

- (1) Notify the applicant if the decision is made to require an archaeological resource report.
- (2) Identify to the applicant the type of report (prehistoric and/or historic) and standards that will be required for compliance.

3. Review of Archaeological Resource Report.

A. The RS-FO in coordination with and based on the recommendations of the RS-LE will determine whether the report meets the requirements contained in the regional archaeological NTL and the Standards for Archaeological Resource Reports contained in Chapter 1, Appendix 3, of this Handbook. The review should be conducted by personnel with archaeological, geophysical, and other appropriate expertise. The reviewers will determine if the survey was performed properly and will evaluate the geophysical interpretations and archaeological conclusions.

B. If the report is not adequate or complete, the RS-FO will notify the applicant of the problems and will identify what data or information are necessary to correct or complete the report.

C. Notification of Applicant. Based on the MMS review of the report findings, the RS-FO will notify the applicant of any mitigating measures or operational restrictions which may be required as follows:

(1) If no potential archaeological resources are identified within the proposed ROW, the permittee may proceed; or,

(2) If potential archaeological resources are identified within the proposed ROW, two alternatives are available:

(a) If the permittee can avoid the potential archaeological resource by moving or modifying the proposed pipeline so there is no impact, the permittee may proceed; or,

(b) The permittee can conduct further investigations, developed in consultation with the RS-LE and appropriate SHPO(s), to verify the presence or absence of an archaeological resource in the proposed ROW.

(i) If the report of these further investigations indicates that no archaeological resource is present, the permittee may proceed; or,

(ii) If the report of these further investigations identifies an archaeological resource within the proposed ROW and it cannot be avoided, additional consultations are required as per 36 CFR 800.4. The permittee may not proceed.

4. State Historic Preservation Officer Consultation. Based on the Solicitor's Opinion and the MMS policy implementing it, consultation with the SHPO is required. The RS-LE in coordination with the RS-FO should follow the appropriate procedure (see below) in consulting with the SHPO.

A. Notification Required. In instances when there has been a recommendation to require an archaeological resource report along a proposed ROW but it is decided later that it is not needed, notify the SHPO of the reasons for not requiring the report.

B. No Resource--Copy of Report Required. If the archaeological resource report indicates that no archaeological resource or potential resource is located along the proposed ROW, send the SHPO(s) a copy of the report.

C. Possible Resource Avoided--Copy of Report Required. If the archaeological resource report indicates that an

archaeological resource may be present along the proposed ROW, but the site of the proposed pipeline is moved or modified to avoid it, send the SHPO(s) a copy of the report.

D. Resource Identified--Consultations Required. If an archaeological resource is identified and it cannot be avoided, additional consultations are required as per 36 CFR 800.4.

(1) Determination of Eligibility (36 CFR 800.4(c)). The RS-LE will consult with SHPO(s) to determine if the archaeological resource meets the National Register criteria of significance (36 CFR 60.4).

(2) Determination of Effect (36 CFR 800.5). If the archaeological resource is determined to meet the National Register criteria, the RS-LE in coordination with the RS-FO and the SHPO(s) must determine whether the proposed ROW will have an effect on the archaeological resource.

(3) Mitigation Measures. The RS-FO in coordination with and based on the recommendations of the RS-LE will inform the applicant of any mitigating measures needed to alleviate or minimize the potential effects on significant archaeological resources. Mitigation can be accomplished in a variety of ways, but the methods employed must be determined on a case-by-case basis in consultation with the SHPO and the ACHP.

(a) Avoidance. This may involve the partial redesign or relocation of a project to minimize the possibility of adverse effects to a significant archaeological resource, or it can involve protection arrangements which preserve the resource in situ.

(b) Data Recovery. The adverse effect(s) of pipeline construction on an archaeological resource may be negated by the recovery of valuable data contained in the resource. However, protection of known or potentially significant archaeological resources by avoidance will be given priority over data recovery.

CHAPTER 6. OCS OIL AND GAS PIPELINE--DISCOVERY OF
ARCHAEOLOGICAL RESOURCES DURING CONSTRUCTION

1. General. The steps to be followed when archaeological resources are discovered during pipeline construction activities are outlined at 30 CFR 250.159(c) (4):

If the right-of-way holder discovers any archaeological resource while conducting operations within the right-of-way, the right-of-way holder shall immediately halt operations within the area of the discovery and report the discovery to the Regional Director. If investigations determine that the resource is significant, the Regional Director will inform the lessee how to protect it.

2. Notification of Discovery. The RD shall notify the DCA, the SHPO, and the MMS Preservation Officer immediately of the discovery. The DCA will provide assistance within 2 working days under section 4(a) of the AHPA.

3. Notification of Measures to Protect Resource. The RD, in consultation with the DCA, appropriate SHPO(s), and the MMS Preservation Officer will determine the measures necessary to evaluate, and, if necessary, protect the discovered archaeological resource(s). The RS-FO will notify the permittee of any measures necessary to protect the archaeological resource.

CHAPTER 7. EVALUATING POTENTIAL EFFECTS OF GEOLOGICAL AND GEOPHYSICAL ACTIVITIES ON ARCHAEOLOGICAL RESOURCES

1. General. This chapter describes procedures for evaluating effects of geological and geophysical (G&G) activities for mineral resources and for scientific research as described at 30 CFR Part 251, CFR Part 280, and in 516 DM 6, Appendix 10. The basis for decisions on archaeological resource report requirements for proposed G&G activities will be based on the prehistoric resource analysis and shipwreck update analysis as described in Chapter 2 of this Handbook.

2. Review for Archaeological Resources. Upon receipt of an application to conduct G&G activities, the Regional Supervisor-Resource Evaluation (RS-RE) (for applications for deep stratigraphic tests, read RS-FO) notifies the RS-LE if the activity may potentially affect an archaeological resource.

A. If the proposed G&G activity has no potential for affecting an archaeological resource (i.e., if there is no bottom-disturbing component to the activity), proceed with the application evaluation process.

B. If there is potential for affecting an archaeological resource, the RS-LE will prepare a prehistoric resource analysis and a shipwreck update analysis. These analyses will determine if there is potential for an archaeological resource to occur in a proposed permit area, if the resource might have survived marine transgression and other physical processes, and if the resource is able to be detected by state-of-the-art geophysical technology.

(a) If the analyses indicate that the entire proposed permit area has low potential for archaeological resources, proceed with the application evaluation process.

(b) If the analyses indicate that portions of the proposed permit area have potential for archaeological resources to occur, notify the applicant of the decision to require an archaeological resource report and provide the applicant with MMS Standards for Archaeological Resource Reports (see Chapter 1, Appendix 3).

(c) Identify to the applicant the type of report (prehistoric and/or historic) that will be required for compliance.

3. Review of Archaeological Resource Report.

A. The RS-RE in coordination with and based on the

recommendations of the RS-LE will determine whether the report meets the Standards for Archaeological Resource Reports contained in Chapter 1, Appendix 3, of this Handbook. The review should be conducted by personnel with archaeological, geophysical, and other appropriate expertise. The reviewers will determine if the survey was performed properly and evaluate the geophysical interpretations and archaeological conclusions.

B. If the report is not adequate or complete, the RS-RE notifies the applicant of the inadequacies and identifies what data or information are necessary to correct or complete the report.

C. Based on the MMS review of the report findings, the RS-RE notifies the applicant of any mitigating measures or operational restrictions which may be required as follows:

(1) If no potential archaeological resources are identified within the proposed permit area, the permitting process may proceed; or

(2) If potential archaeological resources are identified within the proposed permit area, two alternatives are available:

(a) If the applicant agrees to avoid the potential archaeological resource by moving or modifying the proposed G&G activity so there is no effect, the permitting process may proceed; or

(b) The applicant may conduct further investigations, developed in consultation with the RS-LE and appropriate SHPO(s), to verify the presence or absence of an archaeological resource in the proposed permit area.

(i) If the report of these further investigations indicates that no archaeological resource is present, the permitting process may proceed; or

(ii) If the report of these further investigations identifies an archaeological resource within the proposed permit area, and it cannot be avoided, additional consultations are required (36 CFR 800.4).

4. State Historic Preservation Officer Consultation. Based on the Solicitor's Opinion and the MMS policy implementing it, consultation with the SHPO(s) is required. The RS-LE in coordination with the RS-RE should follow the appropriate procedure (see below) in consulting with the SHPO(s).

A. Notification Required. In instances when there has been a recommendation to require an archaeological resource report in a proposed permit area, but it is decided later that it is not needed, the RS-LE notifies the SHPO(s) of the reasons for not requiring the report.

B. No Resource--Copy of Report Required. If the archaeological resource report indicates that no archaeological resource or potential resource is located in the proposed permit area, the RS-LE sends the SHPO(s) a copy of the report.

C. Possible Resource Avoided--Copy of Report Required. If the archaeological resource report indicates that an archaeological resource may be present in the proposed permit area, but the site of the proposed G&G activity is moved or modified to avoid it, the RS-LE sends the SHPO(s) a copy of the report.

D. Resource Identified--Consultations Required. If an archaeological resource is identified within the proposed permit area and it cannot be avoided, additional consultations are required (36 CFR 800.4).

(1) Determination of Eligibility (36 CFR 800.4(c)). The RS-LE will consult with the SHPO(s) to determine if the archaeological resource meets the National Register criteria of significance (36 CFR 60.4).

(2) Determination of Effect (36 CFR 800.5). If the archaeological resource is determined to meet the National Register criteria, the RS-LE, in coordination with the RS-RE and the SHPO(s), determines whether the proposed G&G activity will have an effect on the archaeological resource.

(3) Mitigation Measures. The RS-RE, in coordination with and based on the recommendations of the RS-LE, will inform the applicant of any mitigation needed to alleviate or minimize the effects on significant archaeological resources. Mitigation can be accomplished in a variety of ways, but the methods employed must be determined on a case-by-case basis in consultation with the SHPO(s) and the ACHP.

(a) Avoidance. This may involve the partial redesign or relocation of a project to minimize the possibility of adverse effects to a significant archaeological resource, or it can involve protection arrangements which preserve the resource in situ.

(b) Data Recovery. The adverse effect of G&G activities on an archaeological resource may be negated by the

recovery of valuable data contained in the resource. However, protection of known or potentially significant archaeological resources by avoidance will be given priority over data recovery.

CHAPTER 8. DISCOVERY OF ARCHAEOLOGICAL RESOURCES
DURING GEOLOGICAL AND GEOPHYSICAL ACTIVITIES

1. General. The steps to be followed when an archaeological resource is discovered during G&G activities shall be outlined in the permit, worded as follows:

If the permittee discovers any archaeological resource while conducting G&G activities within the permit area, the permittee shall immediately halt operations within the area of the discovery and report the discovery to the RD. If investigations determine that the resource is significant, the RD will inform the permittee how to protect it.

2. Notification of Discovery. The RD shall notify the DCA, the SHPO(s), and the MMS Preservation Officer immediately of the discovery. The DCA will provide assistance within 2 working days under section 4(a) of the AHPA.

3. Notification of Measures to Protect Resource. The RD, in consultation with the DCA, appropriate SHPO(s), and the MMS Preservation Officer, will determine the measures necessary to evaluate, and, if necessary, to protect the discovered archaeological resource. The RS-RE will notify the permittee of any measures necessary to protect the archaeological resource.

CHAPTER 9. EVALUATING POTENTIAL EFFECTS OF SAND, GRAVEL, AND SHELL ACTIVITIES ON ARCHAEOLOGICAL RESOURCES

1. General. This chapter describes procedures for evaluating effects on archaeological resources from sand, gravel, and shell exploration, development, and production activities. Decisions on archaeological resource report requirements for proposed sand, gravel, and shell project areas will be based on the prehistoric resource analysis and shipwreck update analysis as described in Chapter 2 of this Handbook.

2. Review for Archaeological Resources. Upon receipt of an application to explore for or develop OCS sand, gravel, or shell resources, the Program Director, Office of International Activities and Marine Minerals (INTERMAR), will notify the MMS Preservation Officer. The Program Director, INTERMAR, will provide the MMS Preservation Officer with a description and map of the proposed project area and the time-frame for the proposed project.

A. Upon receipt of the above information, the MMS Preservation Officer will prepare a prehistoric resource analysis and shipwreck update analysis for the proposed project area. These analyses will be based on Regional archaeological baseline studies and other pertinent information and will determine if there is potential for an archaeological resource to occur within the proposed project area, if the resource might have survived marine transgression and other physical processes, and if the resource is able to be detected by state-of-the-art geophysical technology.

(1) If the analyses indicate that the entire proposed project area has low potential for archaeological resources, proceed with the project evaluation.

(2) If the analyses indicate that the proposed project area has potential for archaeological resources to occur, the MMS Preservation Officer shall notify the Program Director, INTERMAR, of the need for additional archaeological evaluation of the proposed project area and of the type of archaeological resource report (prehistoric and/or historic) that is required. The Archaeological Resource Report (see Chapter 1, Appendix 3) will be prepared for the proposed project area either by the permittee or by the MMS. The following information can be used in preparing this report:

(a) marine remote sensing data available for the proposed project area, including fathometer, magnetometer, side-scan sonar, and sub-bottom profiler data.

(b) geologic core descriptions from cores collected to evaluate the sand, gravel, or shell deposit.

(3) If the Archaeological Resource Report is to be prepared by the MMS, and there are insufficient remote sensing data or geologic core descriptions on which to base the analysis, the MMS Preservation Officer will notify the Program Director, INTERMAR, of the need to collect additional data.

3. Review of Archaeological Resource Report.

A. If the Archaeological Resource Report is prepared by the applicant, the Program Director, INTERMAR, in coordination with and based on the recommendations of the MMS Preservation Officer, will determine whether the report meets the Standards for Archaeological Resource Reports contained in Chapter 1, Appendix 3, of this Handbook. The review should be conducted by personnel with archaeological, geophysical, and other appropriate expertise.

B. If the report is not adequate or complete, the Program Director, INTERMAR, will notify the applicant of the inadequacies and identify what data or information are necessary to correct or complete the report.

C. Based on the MMS review of the report findings, the Program Director, INTERMAR, will notify the applicant of any mitigating measures or operational restrictions which may be required as follows:

(1) If no potential archaeological resources are identified within the proposed project area, the proposed project may proceed; or

(2) If potential archaeological resources are identified within the proposed project area, two alternatives are available:

(a) the applicant may avoid the potential archaeological resource by moving or modifying the project so there is no effect; or

(b) the applicant may conduct further investigations of the potential archaeological resource.

(i) If the further investigations indicate that no archaeological resource is present, the proposed project may proceed; or

(ii) If the further investigations identify an archaeological resource within the proposed project area and it cannot be avoided, additional consultations are required (36 CFR 800.4).

4. State Historic Preservation Officer Consultation. Based on the Solicitor's Opinion and the MMS policy implementing it, consultation with the SHPO(s) is required. The Program Director, INTERMAR, in coordination with the MMS Preservation Officer, should follow the appropriate procedure, as outlined below, in consulting with the SHPO(s).

A. Notification Required. In instances when there has been a recommendation to require an archaeological resource report for a proposed project area, but it is later decided that it is not needed, the Program Director, INTERMAR, will notify the SHPO(s) of the reasons for not requiring the report.

B. No Resource--Copy of Report Required. If the archaeological resource report indicates that no archaeological resource or potential resource is located in the proposed project area, the Program Director, INTERMAR, sends the SHPO(s) a copy of the report.

C. Possible Resource Avoided--Copy of Report Required. If the archaeological resource report indicates that an archaeological resource may be present in the proposed project area, but the site of the proposed project is moved or modified to avoid it, the Program Director, INTERMAR, sends the SHPO(s) a copy of the report.

D. Resource Identified--Consultations Required. If an archaeological resource is identified within the proposed project area and it cannot be avoided, additional consultations are required (36 CFR 800.4).

(1) Determination of Eligibility (36 CFR 800.4(c)). The Program Director, INTERMAR, will consult with the SHPO(s) to determine if the archaeological resource meets the National Register criteria of significance (36 CFR 60.4).

(2) Determination of Effect (36 CFR 800.5). If the archaeological resource is determined to meet the National Register criteria, the Program Director, INTERMAR, in coordination with the MMS Preservation Officer and the SHPO(s), determines whether the proposed project will have an effect on the archaeological resource.

(3) Mitigation Measures. The Program Director, INTERMAR, in coordination with and based on the recommendations

of the MMS Preservation Officer, will inform the applicant of any mitigation needed to alleviate or minimize the effects on significant archaeological resources. Mitigation can be accomplished in a variety of ways, but the methods employed must be determined on a case-by-case basis in consultation with the SHPO(s) and the ACHP.

(a) Avoidance. This may involve the partial redesign or relocation of a project to minimize the possibility of adverse effects to a significant archaeological resource, or it can involve protection arrangements which preserve the resource in situ.

(b) Data Recovery. The adverse effect of the proposed project on an archaeological resource may be negated by the recovery of valuable data contained in the resource. However, protection of known or potentially significant archaeological resources by avoidance will be given priority over data recovery.

CHAPTER 10. DISCOVERY OF ARCHAEOLOGICAL RESOURCES
DURING SAND, GRAVEL, AND SHELL ACTIVITIES

1. General. The steps to be followed when an archaeological resource is discovered during sand, gravel, and shell exploration, development, or production activities shall be outlined in the permit, worded as follows:

If the permittee/lessee discovers any archaeological resource while conducting sand, gravel, or shell exploration, development, or production activities within the project area, the permittee/lessee shall immediately halt activities within the area of the discovery and report the discovery to the Program Director, INTERMAR. If investigations determine that the resource is significant, the Program Director, INTERMAR, will inform the permittee/lessee how to protect it.

2. Notification of Discovery. The Program Director, INTERMAR, shall notify the DCA, the SHPO(s), and the MMS Preservation Officer immediately of the discovery. The DCA will provide assistance within 2 working days under section 4(a) of the AHPA.

3. Notification of Measures to Protect Resource. The Program Director, INTERMAR, in consultation with the DCA, appropriate SHPO(s), and the MMS Preservation Officer, will determine the measures necessary to evaluate, and, if necessary, to protect the discovered archaeological resource. The Program Director, INTERMAR, will notify the permittee/lessee of any measures necessary to protect the archaeological resource.