# **APPENDIX 3**

# MEMORANDUM OF AGREEMENT

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| 1        | MEMORANDUM OF AGREEMENT (MOA) AMONG  |
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| 2 3      |  |
|          | THE U.S. BUREAU OF LAND MANAGEMENT, THE U.S. FOREST SERVICE, THE CALIFORNIA STATE HISTORIC PRESERVATION OFFICER, AND ORNI 50 LLC (ORNI).   |
| 4<br>5   | A SUBSIDIARY OF ORMAT NEVADA INC.  |
| <i>5</i> | REGARDING THE ISSUANCE OF A RECORD OF DECISION UNDER THE   |
| 7        | GEOTHERMAL STEAM ACT OF 1970 FOR THE PROPOSED CASA DIABLO IV   |
| 8        | GEOTHERMAL STEAM ACT OF 1970 FOR THE TROPOSED CASA DIABLE TO GEOTHERMAL DEVELOPMENT PROJECT, MONO COUNTY, CALIFORNIA   |
| 9        | OLOTTILKWIAL DE VELOT MENT TROJECT, MONO COUNTT, CALITORIAN  |
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| 11       | WHEREAS, the Bureau of Land Management (BLM) has the delegated authority for leasing on  |
| 12       | more than 245 million acres of public lands with geothermal potential (including 104 million   |
| 13       | acres of National Forest System lands managed by the U.S. Forest Service) under the  |
| 14       | Geothermal Steam Act of 1970, as amended (30 USC 1001-1028); and   |
| 15       |  |
| 16       | WHEREAS, ORNI 50 LLC (ORNI), a subsidiary of Ormat Nevada Inc. (Applicant) proposes to   |
| 17       | build, operate and maintain, and decommission the Casa Diablo IV Geothermal Development  |
| 18       | Project (CD-IV Project) in the vicinity of the existing Casa Diablo geothermal complex near the  |
| 19       | Town of Mammoth Lakes in Mono County, California, as described in Appendix 1; and  |
| 20       |  |
| 21       | WHEREAS, the BLM Bishop Field Office intends to issue a Record of Decision (ROD)   |
| 22       | pursuant to the National Environmental Policy Act (NEPA), approving or denying the   |
| 23       | Applicant's proposal for the CD-IV Project on lands within the U.S. Department of Agriculture,   |
| 24       | Inyo National Forest (INF) (Undertaking); and  |
| 25       | WITEDEAC the DIM has accounted lead Federal account status for the growness of accomplaint   |
| 26<br>27 | WHEREAS, the BLM has accepted lead Federal agency status for the purpose of complying with the NERA and Section 106 of the Netional Historic Preservation Act (Section 106), and the |
|          | with the NEPA and Section 106 of the National Historic Preservation Act (Section 106), and the   |
| 28<br>29 | INF is a cooperating Federal agency for NEPA and Section 106 compliance; and   |
| 30       | WHEREAS, the INF plans to authorize the Applicant's use of National Forest System lands  |
| 31       | under a Special Use Permit that allows for use of existing roads, construction of new access   |
| 32       | roads, maintenance of all access roads (including winter plowing), and construction of a   |
| 33       | transmission line. The INF acknowledges the BLM as the lead Federal agency for the   |
| 34       | Undertaking under Section 106 in accordance with 36 CFR 800.2(a)(2); and   |
| 35       | Undertaking under Section 100 in accordance with 50 CFR 800.2(a)(2), and   |
| 36       | WHEREAS, the Applicant has participated in consultation per 36 CFR 800.2(a)(4) and will be   |
| 37       | the entity who has the responsibility for carrying out specific terms of this Memorandum of  |
| 38       | Agreement (MOA) under the oversight of the BLM, and therefore is an Invited Signatory; and   |
| 39       | rigicoment (1707) under the oversight of the BEIVI, and therefore is an invited signatory, and   |
| 40       | WHEREAS, the Great Basin Unified Air Pollution Control District (GBUAPCD) is the lead  |
| 41       | State agency for the purpose of complying with the California Environmental Quality Act  |
| 42       | (CEQA) and has certain responsibilities under State law and regulation to take into account and  |
| 43       | mitigate any significant impacts that this Undertaking may have on properties listed in or eligible  |
| 44       | for listing in the California Register of Historical Resources (CRHR); and   |
| 45       |  |
| 46       | WHEREAS, the GBUAPCD is coordinating its CEQA compliance efforts with Federal agency   |

Party to this MOA per 36 CFR 800.6(c)(3); and

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responsibilities to comply with Section 106, and therefore has been invited to be a Concurring

WHEREAS, pursuant to 36 CFR 800.2(c)(2) and Executive Order 13175, the BLM and the INF are responsible for government-to-government consultation with Federally recognized Indian tribes. The BLM is the lead Federal agency for all tribal consultation and coordination, and the BLM has consulted with the following Federally recognized tribes: Bishop Paiute Tribe; Utu Utu Gwaitu Paiute Tribe (Benton); Big Pine Band of Paiute-Shoshone; and the non-Federally recognized tribe Mono Lake Kutzadika'a Paiute Indian Community, (Tribes; see Appendix 2);

**WHEREAS,** both the Bishop Paiute Tribe and the Big Pine Band of Paiute-Shoshone have actively participated in consultation for this Undertaking and were both invited to be Concurring Parties to this MOA per 36 CFR 800.6(c)(3); and

**WHEREAS**, the Big Pine Band of Paiute-Shoshone has deferred participation to the Bishop Paiute Tribe, while the Bishop Paiute Tribe has agreed to sign the MOA as a Concurring Party; and

WHEREAS, the BLM and the INF have defined the Undertaking's Area of Potential Effect (APE), as illustrated in Appendix 3, to include an area sufficient to accommodate all of the proposed project facilities under consideration as of the date of the execution of this MOA; studies conducted within the APE are included as Appendices 4 and 5; and

WHEREAS, the BLM and INF (Cooperating Agencies) and the California State Historic Preservation Officer (SHPO) concur that the western Long Valley caldera in Mono County, California, which includes the resurgent volcanic dome area, hot springs, and Mammoth embayment contains a National Register of Historic Places (NRHP) eligible archaeological district called the Casa Diablo Archaeological District (District) that represents pre-contact Native American use of the volcanic field; and

**WHEREAS**, for the purpose of this undertaking, the Cooperating Agencies and the SHPO concur that all Native American archaeological sites within the APE are considered NRHP eligible contributing properties to the District; and

**WHEREAS**, the BLM, in consultation with the SHPO has determined that the APE for the CD-IV Project contains potentially NRHP eligible historic properties and non-eligible historic archaeological sites; and

WHEREAS, the Applicant has agreed to avoid any and all potential adverse effects to historic properties through project redesign and the implementation of the enclosed Historic Properties Avoidance Plan (Appendix 6) pursuant to 36 CFR 800.6, which consists of plans to avoid and preserve in place all historic properties as per the Stipulations below; and

**WHEREAS**, the BLM, in consultation with the INF and the SHPO has determined that the Undertaking as designed will have *No Adverse Effect* on historic properties; and

WHEREAS, because the SHPO has concurred with a determination of *No Adverse Effect*, and because this project is designed to avoid all adverse effects to historic properties it does not meet

the threshold for Advisory Council on Historic Preservation (Council) ACHP involvement per 36
 CFR 800.5; and

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WHEREAS, the BLM has consulted with the SHPO pursuant to 36 CFR 800; and

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WHEREAS, the BLM and the INF in consultation with the SHPO, have complied with Section 106 of the National Historic Preservation Act of 1966 (NHPA) for the Undertaking through execution and implementation of this MOA;

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**NOW, THEREFORE**, the BLM, INF, SHPO, and Applicant (collectively, referred to as Signatories) shall ensure that the Undertaking is implemented in accordance with the following stipulations in order to avoid adverse effects of the Undertaking on historic properties.

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#### **STIPULATIONS**

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The BLM and INF shall incorporate the provisions of this MOA and the implementation of measures described in the attached Historic Properties Avoidance Plan (Appendix 6) as conditions of the BLM ROD and the INF ROD for the CD-IV Project, and will ensure that the following measures are carried out in full.

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# I. PROJECT DESCRIPTION, AREA OF POTENTIAL EFFECTS AND RECORDED SITES

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#### PROJECT DESCRIPTION

- The CD-IV Project Alternative 3 design of September 19, 2012, as depicted by the Direct APE
- 121 (Appendix 3) was developed to avoid historic properties. Engineering plans for the CD-IV
- Project Alternative 3 have not been finalized, and minor adjustments to the Alternative 3 design
- will be made should project facilities still cross or overlap with historic properties. There is
- considerable flexibility of location and design for most project facilities (well pads, pipelines,
- new access roads, transmission line), and the Indirect APE was established to provide flexibility
- during the planning process to make minor adjustments. Accordingly, a five acre area
- surrounding each well pad was subject to archaeological survey to accommodate additional
- design changes to avoid historic properties. Pipeline survey corridors included a 50 meter buffer
- to allow shifting of the pipeline to avoid historic properties, and a 50 meter area surrounding the
- Alternative 3 design footprint was included in the BLM expanded inventory area and indirect APE to accommodate changes in design to avoid historic properties.

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#### AREA OF POTENTIAL EFFECTS

- The BLM in consultation with the INF and the SHPO has established the Area of Potential Effect
- 135 (APE) for the Undertaking (Appendix 3). The APE includes an area sufficient to accommodate
- all of the alternatives considered in the NEPA planning process (termed for the purposes of this
- MOA the Indirect APE), and the footprint of all proposed project facilities in the Alternative 3
- project design as of the date of the execution of this MOA, which defines the areas subject to
- ground disturbing impacts (Direct APE). Accordingly, the APE encompasses all potential
- ground-disturbing activities and the limits of foreseeable effects to historic properties that may
- occur later in time, be farther removed in distance, or be cumulative.

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#### 143 APE CHANGES

The BLM may modify the APE, in consultation with the other Signatories to this MOA, without amending the MOA. If it is determined in the future that the undertaking may directly or indirectly affect historic properties located outside the currently defined APE, the BLM, in consultation with the other Signatories to this MOA, shall modify the APE using the following process:

i) Any Signatory to this MOA may propose that the APE established herein be modified. The BLM shall notify all Signatories of the proposal to modify the APE and consult for no more than 15 days to reach agreement on the proposal.

ii) If the BLM agrees to the proposal, then the BLM will prepare a description and a map of the modification to which the Signatories agree. The BLM will keep copies of the description and the map on file for its administrative record and distribute copies of each to the other parties to this MOA within 30 days.

iii) If the BLM agrees to a modification to the APE that adds a new geographic area, the BLM shall identify historic properties in the new APE area, assess the effects of the undertaking on any historic properties in the new APE, and provide for the resolution of adverse effects to such properties in consultation with the other Signatories.

iv) If the BLM or other Signatory cannot agree to a proposal for the modification of the APE, then they will resolve the dispute in accordance with Stipulation VI.C.

Cultural resources identified within the indirect and direct APE are both historic and prehistoric sites; many have both prehistoric and historic components. Following guidance provided by the Office of Historic Preservation, all prehistoric sites, as well as prehistoric components of the multi-component sites, can be considered potentially eligible for the National Register as contributing elements of the Casa Diablo Archaeological District (District) that represents precontact Native American use of the volcanic field. Prehistoric sites are thus considered to be historic properties. The BLM identified two (2) historic-period sites that are considered to be eligible for the National Register of Historic Places, and are thus considered to be historic properties. Several sites have both prehistoric and historic components. The Historic Properties Avoidance Plan (Appendix 6) details further site information.

## II. TREATMENT OF POTENTIAL EFFECTS

A. The Applicant has agreed to avoid and protect identified resources through preservation measures that include project redesign, fencing during and after construction, and monitoring by qualified archaeologists and tribal monitors. Details of the methods for site avoidance are described in detail in the Historic Properties Avoidance Plan (Appendix 6). "Qualified archaeologist" is defined as BLM or INF archaeologists, or archaeologists hired by the Applicant that meet Secretary of the Interior standards for archaeologist (VI.A.1.), and are approved by the BLM or INF.

B. A report describing the steps taken to carry out the terms and intent of this MOA and the requirements described within the Historic Properties Avoidance Plan (Appendix 6), and

associated monitoring log will be completed by qualified archaeologists with contributions from Tribal monitors as appropriate.

## III. REPORTING REQUIREMENTS

A. The BLM shall ensure that all final reports resulting from actions pursuant to this MOA are provided to the INF, the SHPO, and other requesting MOA signatories. The BLM shall ensure that all reports are responsive to contemporary professional standards and follow the Secretary of the Interior's *Standards and Guidelines for Archaeological Documentation* (as amended and annotated).

B. Reporting shall be completed within twelve (12) months following completion of the project.

C. Within the twelve month period, a draft technical report will be prepared and submitted to the SHPO detailing the implementation of the MOA and Historic Properties Avoidance Plan. The SHPO will have 30 days from receipt of the draft technical report to submit written comments. At the end of the 30 day comment period, the BLM will take into account comments received and issue the final technical report.

#### IV. TREATMENT OF HUMAN REMAINS OF NATIVE AMERICAN ORIGIN

A. In the event of an inadvertent discovery of human remains of Native American origin, all work within 50 feet of the discovery shall immediately cease. The BLM and INF will immediately be notified.

B. The BLM or INF shall notify the county coroner/medical examiner, as applicable, and consult with the appropriate tribe(s) regarding treatment of the remains in accordance with applicable Federal and State of California laws, following the protocols described in the Historic Properties Avoidance Plan (Appendix 6).

C. If the identified human remains could be adversely affected by the proposed project, the BLM will coordinate with construction personnel to re-design the proposed project to avoid any adverse effect on the discovery.

D. For inadvertent discoveries of human remains on federal lands, Signatories to this MOA agree that Native American burials and related items are subject to the provisions of the Native American Graves Protection and Repatriation Act of 1990 (NAGPRA), 43 CFR 10, as applicable, as detailed in the Historic Properties Avoidance Plan (Appendix 6). Should these discoveries be made on private lands, the discovery will be treated in accordance with the requirements of 7050.5(b) of the California Health and Safety Code and any other applicable laws and regulations.

#### V. DISCOVERIES AND UNANTICIPATED EFFECTS

A. If the BLM, INF or SHPO determine that implementation of the Undertaking will affect a previously unidentified property that may be eligible for the National Register, or affect a known historic property in an unanticipated manner, the BLM or INF will address the

discovery, or unanticipated effect, in accordance with the procedures outlined in 36 CFR 800.13 and the attached Historic Properties Avoidance Plan (Appendix 6). The BLM, INF, and SHPO at their discretion may hereunder assume any discovered prehistoric property to be eligible for inclusion in the National Register, and will evaluate any historic period resource; and that compliance with this stipulation shall satisfy the requirements of 36 CFR 800.13(a)(2). Pursuant to 36 CFR 800.13, the BLM will notify the SHPO and Native American consulting groups within forty-eight (48) hours of the discovery. The notification shall describe the actions proposed by the BLM to resolve the adverse effects. The SHPO shall respond within forty-eight (48) hours of the notification. The BLM will ask the Signatories to also respond within forty-eight (48) hours of the notification pursuant to 36 CFR 800.13. The BLM shall take into account their recommendations, and then carry out the appropriate actions. The Signatories agree that only cultural resources determined or assumed to be eligible for the National Register will be subject to further consideration under terms of the MOA. A detailed Inadvertent Discovery Plan is included in the Historic Properties Avoidance Plan (Appendix 6) and incorporated herein.

#### VI. ADMINISTRATIVE STIPULATIONS

#### A. STANDARDS

- 1. *Professional Qualifications*. All activities prescribed by Stipulations II, III, IV, and V of this MOA shall be carried out under the authority of the BLM by or under the direct supervision of a person or persons meeting at a minimum the Secretary of the Interior's *Professional Qualifications Standards(PQS)* (48 Fed Reg. 44,738-44,739) (PQS) in the appropriate disciplines. Nothing in this stipulation may be interpreted to preclude the BLM or any agent or contractor thereof, from using the services of persons who do not meet the PQS who are supervised by persons who meet the PQS.
- 2. *Historic Preservation Standards*. All activities prescribed by Stipulations II, III, IV, and V of this MOA shall reasonably conform to applicable standards and guidelines established by the *Secretary of the Interior's Standards and Guidelines for Archaeology and Historic Preservation* (48 Fed Reg. 44,716-44,740) and SHPO guidelines.
- 3. Curation and Curation Standards. The BLM, in coordination with the INF, shall ensure that, to the extent permitted by applicable federal law, the materials and records resulting from the activities prescribed by Stipulations II, III, IV, and V of this MOA are curated in accordance with 36 CFR 79.

#### **B. CONFIDENTIALITY**

Signatories to this MOA acknowledge that historic properties covered by this MOA are subject to the provisions of Section 304 of the National Historic Preservation Act of 1966 relating to the disclosure of archaeological site information and having so acknowledged, will ensure that all actions and documentation prescribed by this MOA are consistent with Section 304 of the National Historic Preservation Act of 1966.

#### C. RESOLVING OBJECTIONS

- 1. Should the SHPO object to the manner in which the terms of this MOA are implemented, the BLM and INF will consult with the SHPO to resolve the objection. If the BLM determines that the objection cannot be resolved, the BLM shall forward all documentation relevant to the dispute, including the BLM's proposed resolution to the Council for their assistance in resolving the dispute. In the event the Council provides timely advice or comments, the BLM, prior to reaching a final decision on the dispute, shall prepare a written response that takes into account the recommendation or comment provided by the Council pertaining to the subject of the dispute, and provide them a copy of this written response.
- 2. The BLM's responsibility to carry out all actions under this MOA that are not the subject of a dispute will remain unchanged.
- 3. The BLM may authorize any action subject to objection under this stipulation to proceed after the objection has been resolved in accordance with the terms of this stipulation.
- 4. At any time during implementation of the measures stipulated in this MOA, should an objection pertaining to such implementation be raised by a member of the public, the BLM shall notify the parties to the MOA in writing of the objection and take the objection into consideration. The BLM shall consult with the objecting party and, if the objecting party so requests shall also consult with the SHPO, for no more than 15 days. Within ten (10) days following closure of this consultation period, the BLM will render a decision regarding the objection and notify all Signatories of its decision in writing. In reaching its decision, the BLM will take into account any comments from the Signatories regarding the objection, including the objecting party. The BLM decision regarding the resolution of the objection will be final.

## D. AMENDMENTS

Any Signatory may propose that this MOA be amended, whereupon the Signatories will consult for no more than 30 days to consider such amendment. The amendment process shall comply with 36 CFR 800.6(c)(l) and 800.6(c)(7). This MOA may be amended only upon the written agreement of the Signatories. If it is not amended, this MOA may be terminated by any Signatory in accordance with Stipulation VI.E.

#### E. TERMINATION

1. If this MOA is not amended as provided for in Stipulation VI.D., or if any Signatory proposes termination of this MOA for other reasons, the Signatory proposing termination shall, in writing, notify the other Signatories, explain the reasons for proposing termination, and consult with the other Signatories for at least 30 days to seek alternatives to termination. Such consultation shall not be required if the BLM proposes termination because the Undertaking no longer meets the definition set forth in 36 CFR 800.16(y).

2. Should such consultation result in an agreement on an alternative to termination, then the Signatories shall proceed in accordance with the terms of that agreement.
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 3. Should such consultation fail, the Signatory proposing termination may terminate this

shall render this MOA without further force or effect.

4. If this MOA is terminated hereunder, and if the BLM determines that the Undertaking will nonetheless proceed, then the BLM shall either consult in accordance with 36 CFR 800.6 to develop a new MOA or request the comments of the Council pursuant to 36 CFR 800. Beginning with the date of termination, the BLM shall ensure that until and unless a new MOA is executed for the CD-IV Project, individual undertakings shall be reviewed in accordance with 36 CFR 800.4 through 800.6.

MOA by promptly notifying the other Signatories in writing. Termination hereunder

#### F. DURATION OF THE MOA

- 1. Unless terminated pursuant to Stipulation VI.E., or unless it is superseded by an amended MOA, this MOA will be in effect following execution by the Signatories until the BLM, in consultation with the INF and the SHPO, determines that all of its stipulations have been satisfactorily fulfilled. This MOA will terminate and have no further force or effect on the day that the BLM notifies the INF and the SHPO in writing of its determination that all stipulations of this MOA have been satisfactorily fulfilled.
- 2. The terms of this MOA shall be satisfactorily fulfilled within five (5) years following the date of execution by the SHPO. Near the end of the five (5) year period, the MOA will be reviewed, modified as necessary, and extended at the parties' discretion. If the BLM determines that this requirement cannot be met, the Signatories to this MOA will consult to reconsider its terms. Reconsideration may include continuation of the MOA as originally executed, amendment or termination. In the event of termination, the BLM will comply with Stipulation VI.E.4 if it determines that the Project will proceed notwithstanding termination of this MOA.
- 3. If the Project has not been implemented within five (5) years following execution of this MOA by the SHPO, and if the MOA has not been terminated, then the signatories shall initiate consultation no less than six (6) months prior to the expiration of this MOA to reconsider its terms. Reconsideration may include a continuation (extension) of the MOA as originally executed, amendment, or termination.

#### G. EFFECTIVE DATE

This MOA shall take effect on the date that it has been executed by the SHPO.

| 378   | SIGNATORIES:   |                    |
|-------|--|--------------------|
| 379   |  |                    |
| 380   | U.S. BUREAU OF LAND MANAGEMENT   |                    |
| 381   | 04 101   | Date: 08/08/2013   |
| 382   | By: _ Ster L. New  | Date: 08/08/2013   |
| 383   | Steven L. Nelson   | 3585               |
| 384   | Bishop Field Manager   |                    |
| 385   |  |                    |
| 386   | INYO NATIONAL FOREST   | 1                  |
| 387   | C DC DA  | 5/5/12             |
| 388   | By:  | Date: 8/8/13       |
| 389   | Edward E. Armenta  |                    |
| 390   | Forest Supervisor  |                    |
| 391   | Section College Section → Production of Production (Section College)   |                    |
| 392   | CALIFORNIA OFFICE OF HISTORIC PRESERVATION   |                    |
| 393   |  | <del>-</del> 1 -1. |
| 394,  | By:  | Date: 89115        |
| 395 0 |  |                    |
| 396   | State Historic Preservation Officer  |                    |
| 397   |  |                    |
| 398   |  |                    |
| 399   | INVITED SIGNATORIES:   |                    |
| 400   |  |                    |
| 401   | ORNI 50 LLC  |                    |
| 402   |  | 1 (                |
| 403   | By: Connie Hechman   | Date: 8/8/13       |
| 404   | Connie Stechman  |                    |
| 405   | Assistant Secretary, Ormat Nevada Inc., Managing Member  | ORNI 50 LLC        |
| 406   | , , , , ,  |                    |
| 407   |  |                    |
| 408   | CONCURRING PARTIES:  |                    |
| 409   |  |                    |
| 410   | GREAT BASIN UNIFIED AIR POLLUTION CONTROL I  | DISTRICT           |
| 411   | 000  |                    |
| 412   | By: 0 8 . X P &  | Date: 8 Lyg Zol 3  |
| 413   | Theodore D. Shade  | 3                  |
| 414   | Air Pollution Control Officer  |                    |
| 415   |  |                    |
| 416   | BISHOP PAIUTE TRIBE  | , 1                |
| 417   |  | //                 |
| 418   | By: /  | Date: $8/4/3$      |
| 419   | Dale "Chad" Delgado  |                    |
| 420   | Chairman, Bishop Paiute Tribe  |                    |
|       | 20 (1994) - 20 (19 |                    |