Form 3160 -3 (March 2012)				FORM OMB I Expires	APPROVED No. 1004-0137 October 31, 2014	
UNITED STATES Department of the Bureau of Land Man	5. Lease Serial No. NMNM03677					
APPLICATION FOR PERMIT TO	6. If Indian, Allotee	or Tribe Name				
la. Type of work: DRILL REENTH	ER	· · · · · · · · · · · · · · · · · · ·		7. If Unit or CA Agr	eement, Name and No.	
lb. Type of Well: 🔲 Oil Well 🔽 Gas Well 🛄 Other	✓ Si	ngle Zone 🔲 Multip	ole Zone	8. Lease Name and CUEVA DE ORO	Well No. 289	3]) 320731
2. Name of Operator MATADOR PRODUCTION COMPANY	,	228937		9. API Well No. 30-0	15-44770	
3a. Address 5400 LBJ Freeway, Suite 1500 Dallas TX 7524	3b. Phone No (972)371-5). (include area code) 5200		10. Field and Pool, or GETTY; BONE SF	Exploratory PRING / BONE SPRI	N
 Location of Well (Report location clearly and in accordance with an At surface NWNE / 101 FNL / 1859 FEL / LAT 32.56530 At proposed prod. zone SWSE / 240 FSL / 1870 FEL / LAT 	ny State requiren 39 / LONG 32.552346	nents.*) -104.0775304 / LONG -104.07753	305	11. Sec., T. R. M. or F SEC 21 / T20S / R	Blk. and Survey or Area	
 Distance in miles and direction from nearest town or post office* 12 miles 				12. County or Parish EDDY	13. State NM	
15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)	16. No. of a 2150.97	acres in lease	17. Spacir 320	ng Unit dedicated to this		
 Distance from proposed location* to nearest well, drilling, completed, 30 feet applied for, on this lease, ft. 	19. Propose 9465 feet	d Depth / 14210 feet	20. BLM/ FED: N	BIA Bond No. on file MB001079	_	
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 3276 feet	22 Approxi 05/01/201	mate date work will sta 17	rt*	23. Estimated duration 90 days	_	
	24. Atta	chments				
 Well plat certified by a registered surveyor. A Drilling Plan. A Surface Use Plan (if the location is on National Forest System SUPO must be filed with the appropriate Forest Service Office). 	Lands, the	 Grder No.1, must be a Bond to cover t Item 20 above). Operator certific Such other site BLM. 	ttached to tr he operation cation specific inf	is form: ons unless covered by ar ormation and/or plans a	n existing bond on file (s s may be required by the	ee
25. Signature (Electronic Submission)	Name Briar	(Printed/Typed) Wood / Ph: (505)4	66-8120		Date 03/31/2017	
Title President						
Approved by (Signature) (Electronic Submission)	Name Cody	(Printed/Typed) Layton / Ph: (575)2	234-5959		Date 02/08/2018	
Title Supervisor Multiple Resources	Office CAR	Office CARLSBAD				
Application approval does not warrant or certify that the applicant hole conduct operations thereon. Conditions of approval, if any, are attached.	ls legal or equ	itable title to those righ	its in the sul	bject lease which would	entitle the applicant to	_
Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a c States any false, fictitious or fraudulent statements or representations as	rime for any p to any matter v	person knowingly and within its jurisdiction.	willfully to 1	nake to any department	or agency of the United	
(Continued on page 2)				*(Ins	tructions on page 2	

APPROVED WITH CONDITIONS

RW 3-1-18

INSTRUCTIONS

GENERAL: This form is designed for submitting proposals to perform certain well operations, as indicated on Federal and Indian lands and leases for action by appropriate Federal agencies, pursuant to applicable Federal laws and regulations. Any necessary special instructions concerning the use of this form and the number of copies to be submitted, particularly with regard to local, area, or regional procedures and practices, either are shown below or will be issued by, or may be obtained from local Federal offices.

ITEM 1: If the proposal is to redrill to the same reservoir at a different subsurface location or to a new reservoir, use this form with appropriate notations. Consult applicable Federal regulations concerning subsequent work proposals or reports on the well.

ITEM 4: Locations on Federal or Indian land should be described in accordance with Federal requirements. Consult local Federal offices for specific instructions.

ITEM 14: Needed only when location of well cannot readily be found by road from the land or lease description. A plat, or plats, separate or on the reverse side, showing the roads to, and the surveyed location of, the well, and any other required information, should be furnished when required by Federal agency offices.

ITEMS 15 AND 18: If well is to be, or has been directionally drilled, give distances for subsurface location of hole in any present or objective productive zone.

ITEM 22: Consult applicable Federal regulations, or appropriate officials, concerning approval of the proposal before operations are started.

NOTICES

The Privacy Act of 1974 and regulation in 43 CFR 2.48(d) provide that you be furnished the following information in connection with information required by this application.

AUTHORITY: 30 U.S.C. 181 et seq., 25 U.S.C. 396; 43 CFR 3160

PRINCIPAL PURPOSES: The information will be used to: (1) process and evaluate your application for a permit to drill a new oil, gas, or service well or to reenter a plugged and abandoned well; and (2) document, for administrative use, information for the management, disposal and use of National Resource Lands and resources including (a) analyzing your proposal to discover and extract the Federal or Indian resources encountered; (b) reviewing procedures and equipment and the projected impact on the land involved; and (c) evaluating the effects of the proposed operation on the surface and subsurface water and other environmental impacts. ROUTINE USE: Information from the record and/or the record will be transferred to appropriate Federal, State, and local or foreign agencies, when relevant to civil, criminal or regulatory investigations or prosecution, in connection with congressional inquiries and for regulatory responsibilities.

EFFECT OF NOT PROVIDING INFORMATION: Filing of this application and disclosure of the information is mandatory only if you elect to initiate a drilling or reentry operation on an oil and gas lease.

The Paperwork Reduction Act of 1995 requires us to inform you that:

The BLM collects this information to allow evaluation of the technical, safety, and environmental factors involved with drilling for oil and/or gas on Federal and Indian oil and gas leases. This information will be used to analyze and approve applications. Response to this request is mandatory only if the operator elects to initiate drilling or reentry operations on an oil and gas lease. The BLM would like you to know that you do not have to respond to this or any other Federal agency-sponsored information collection unless it displays a currently valid OMB control number.

BURDEN HOURS STATEMENT: Public reporting burden for this form is estimated to average 8 hours per response, including the time for reviewing instructions, gathering and maintaining data, and completing and reviewing the form. Direct comments regarding the burden estimate or any other aspect of this form to U.S. Department of the Interior, Bureau of Land Management (1004-0137), Bureau Information Collection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

(Continued on page 3)

(Form 3160-3, page 2)

Additional Operator Remarks

Location of Well

SHL: NWNE / 101 FNL / 1859 FEL / TWSP: 20S / RANGE: 29E / SECTION: 21 / LAT: 32.5653039 / LONG: -104.0775304 (TVD: 0 feet, MD: 0 feet)
 PPP: NWNE / 101 FNL / 1859 FEL / TWSP: 20S / RANGE: 29E / SECTION: 21 / LAT: 32.5653039 / LONG: -104.0775304 (TVD: 0 feet, MD: 0 feet)
 BHL: SWSE / 240 FSL / 1870 FEL / TWSP: 20S / RANGE: 29E / SECTION: 21 / LAT: 32.552346 / LONG: -104.0775305 (TVD: 9465 feet, MD: 14210 feet)

BLM Point of Contact

Name: Judith Yeager Title: Legal Instruments Examiner Phone: 5752345936 Email: jyeager@blm.gov

Review and Appeal Rights

A person contesting a decision shall request a State Director review. This request must be filed within 20 working days of receipt of the Notice with the appropriate State Director (see 43 CFR 3165.3). The State Director review decision may be appealed to the Interior Board of Land Appeals, 801 North Quincy Street, Suite 300, Arlington, VA 22203 (see 43 CFR 3165.4). Contact the above listed Bureau of Land Management office for further information.

NM OIL CONSERVATION

ARTESIA DISTRICT

1 EB 26 2016

PECOS DISTRICT DRILLING OPERATIONS CONDITIONS OF APPROVAL

RECEIVED

OPERATOR'S NAME:	Matador Production Company
LEASE NO.:	NMNM-03677
WELL NAME & NO.:	Cueva De Oro Federal 203H
SURFACE HOLE FOOTAGE:	0101' FNL & 1859' FEL
BOTTOM HOLE FOOTAGE	0240' FSL & 1870' FEL
LOCATION:	Section 21, T. 20 S., R 29 E., NMPM
COUNTY:	County, New Mexico

The BLM is to be notified in advance for a representative to witness:

- a. Spudding well (minimum of 24 hours)
- b. Setting and/or Cementing of all casing strings (minimum of 4 hours)
- c. BOPE tests (minimum of 4 hours)
 - Eddy County

Call the Carlsbad Field Office, 620 East Greene St., Carlsbad, NM 88220, (575) 361-2822

A. Hydrogen Sulfide

- 1. A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the Yates formation. As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.
- 2. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval. If the drilling rig is removed without approval an Incident of Non-Compliance will be written and will be a "Major" violation.
- 3. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works is located, this does not include the dog house or stairway area.

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4. The record of the drilling rate along with the GR/N well log run from TD to surface (horizontal well – vertical portion of hole) shall be submitted to the BLM office as well as all other logs run on the borehole 30 days from completion. If available, a digital copy of the logs is to be submitted in addition to the paper copies. The Rustler top and top and bottom of Salt are to be recorded on the Completion Report.

A. CASING

Changes to the approved APD casing program need prior approval if the items substituted are of lesser grade or different casing size or are Non-API. The Operator can exchange the components of the proposal with that of superior strength (i.e. changing from J-55 to N-80, or from 36# to 40#). Changes to the approved cement program need prior approval if the altered cement plan has less volume or strength or if the changes are substantial (i.e. Multistage tool, ECP, etc.). The initial wellhead installed on the well will remain on the well with spools used as needed.

Centralizers required on surface casing per Onshore Order 2.III.B.1.f.

Wait on cement (WOC) for Water Basin:

After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least <u>8 hours</u>. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements.

Provide compressive strengths including hours to reach required 500 pounds compressive strength prior to cementing each casing string. Have well specific cement details onsite prior to pumping the cement for each casing string.

No pea gravel permitted for remedial or fall back remedial without prior authorization from the BLM engineer.

High Cave/Karst Capitan Reef Possibility of water flows in the Artesia Group and Salado. Possibility of lost circulation in the Artesia Group, Rustler, Capitan Reef, and Delaware. Abnormal pressure may be encountered upon penetrating the 3rd Bone Spring Sandstone and all subsequent formations.

A MINIMUM OF TWO CASING STRINGS CEMENTED TO SURFACE IS REQUIRED IN HIGH CAVE/KARST AREAS. THE CEMENT MUST BE IN A SOLID SHEATH. THEREFORE, ONE INCH OPERATIONS ARE NOT SUFFICIENT TO PROTECT CAVE KARST RESOURCES. A CASING DESIGN THAT HAS A ONE INCH JOB PERFORMED DOES NOT COUNT AS A SOLID SHEATH. IF THE PRIMARY CEMENT JOB ON THE SURFACE CASING DOES NOT CIRCULATE, THEN THE NEXT TWO CASING STRINGS MUST BE CEMENTED TO SURFACE.

- 1. The 20 inch surface casing shall be set at approximately 400 feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface. If salt is encountered, set casing at least 25 feet above the salt.
 - a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after completing the cement job.
 - b. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry.
 - c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
 - d. If cement falls back, remedial cementing will be done prior to drilling out that string.
- 2. The minimum required fill of cement behind the **13-3/8** inch 1st intermediate casing is:
 - □ Cement to surface. If cement does not circulate see B.1.a, c-d above. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to cave/karst.
- 3. The minimum required fill of cement behind the 9-5/8 inch 2^{nd} intermediate casing is:

☐ Cement to surface. If cement does not circulate see B.1.a, c-d above. Wait on cement (WOC) time for a primary cement job is to include the lead cement slurry due to Capitan Reef.

- 4. The minimum required fill of cement behind the **7-5/8 X 7** inch 3rd intermediate casing is:
 - ☐ Cement should tie-back at least **50 feet above the Capitan Reef** (Top of Capitan Reef estimated at 1610'). Operator shall provide method of verification.

Formation below the 7" shoe to be tested according to Onshore Order 2.III.B.1.i. Test to be done as a mud equivalency test using the mud weight necessary for the pore pressure of the formation below the shoe (not the mud weight required to prevent dissolving the salt formation) and the mud weight for the bottom of the hole. Report results to BLM office.

Centralizers required through the curve and a minimum of one every other joint.

- 5. The minimum required fill of cement behind the **5-1/2 X 4-1/2** inch production casing is:
 - ☐ Cement as proposed by operator. Operator shall provide method of verification. Excess calculates to negative 45% Additional cement will be required.
- 6. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.

B. **PRESSURE CONTROL**

- 1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API 53.
- 2. Variance approved to use flex line from BOP to choke manifold. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor. If the BLM inspector questions the straightness of the hose, a BLM engineer will be contacted and will review in the field or via picture supplied by inspector to determine if changes are required (operator shall expect delays if this occurs).
- 3. A variance is granted for the use of a diverter on the 20" surface casing.

- 4. In the case where the only BOP installed is an annular preventer, it shall be tested to a minimum of 2000 psi (which may require upgrading to 3M or 5M annular).
- 5. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **13-3/8** 1st intermediate casing shoe shall be psi.
- 6. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **9-5/8** intermediate casing shoe shall be psi.
- 7. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the **7-5/8 X** 7 intermediate casing shoe shall be psi.

5M system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

- 8. The appropriate BLM office shall be notified a minimum of hours in advance for a representative to witness the tests.
 - a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).
 - a. The tests shall be done by an independent service company utilizing a test plug **not a cup or J-packer**.
 - b. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE. If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.
 - c. The results of the test shall be reported to the appropriate BLM office.
 - d. All tests are required to be recorded on a calibrated test chart. A copy of the

BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

- e. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.
- f. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the **Wolfcamp** formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

Mud system monitoring equipment, with derrick floor indicators and visual and audio alarms, shall be operating before drilling into the **Wolfcamp** formation, and shall be used until production casing is run and cemented.

D. **DRILL STEM TEST**

If drill stem tests are performed, Onshore Order 2.III.D shall be followed.

E. WASTE MATERIAL AND FLUIDS

All waste (i.e. drilling fluids, trash, salts, chemicals, sewage, gray water, etc.) created as a result of drilling operations and completion operations shall be safely contained and disposed of properly at a waste disposal facility. No waste material or fluid shall be disposed of on the well location or surrounding area.

Porto-johns and trash containers will be on-location during fracturing operations or any other crew-intensive operations.

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FEB 26 20%

PECOS DISTRICT SURFACE USE CONDITIONS OF APPROVAL

RECEIVED

OPERATOR'S NAME:	Matador Production Company
LEASE NO.:	NMNM03677
WELL NAME & NO.:	203H-Cueva De Oro Federal
SURFACE HOLE FOOTAGE:	101'/N & 1859'/W
BOTTOM HOLE FOOTAGE	240'/S & 1870'/W
LOCATION:	Section 21, T.20 S., R.29 E., NMPM
COUNTY:	Eddy County, New Mexico

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Standard Conditions of Approval (COA) apply to this APD. If any deviations to these standards exist or special COAs are required, the section with the deviation or requirement will be checked below.

General Provisions
Permit Expiration
Archaeology, Paleontology, and Historical Sites
Noxious Weeds
🔀 Special Requirements
Cave/Karst
Watershed
Range
Construction
Notification
Topsoil
Closed Loop System
Federal Mineral Material Pits
Well Pads
Roads
Road Section Diagram
Production (Post Drilling)
Well Structures & Facilities
Interim Reclamation
Final Abandonment & Reclamation

I. GENERAL PROVISIONS

The approval of the Application For Permit To Drill (APD) is in compliance with all applicable laws and regulations: 43 Code of Federal Regulations 3160, the lease terms, Onshore Oil and Gas Orders, Notices To Lessees, New Mexico Oil Conservation Division (NMOCD) Rules, National Historical Preservation Act As Amended, and instructions and orders of the Authorized Officer. Any request for a variance shall be submitted to the Authorized Officer on Form 3160-5, Sundry Notices and Report on Wells.

II. PERMIT EXPIRATION

If the permit terminates prior to drilling and drilling cannot be commenced within 60 days after expiration, an operator is required to submit Form 3160-5, Sundry Notices and Reports on Wells, requesting surface reclamation requirements for any surface disturbance. However, if the operator will be able to initiate drilling within 60 days after the expiration of the permit, the operator must have set the conductor pipe in order to allow for an extension of 60 days beyond the expiration date of the APD. (Filing of a Sundry Notice is required for this 60 day extension.)

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

Any cultural and/or paleontological resource discovered by the operator or by any person working on the operator's behalf shall immediately report such findings to the Authorized Officer. The operator is fully accountable for the actions of their contractors and subcontractors. The operator shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery shall be made by the Authorized Officer to determine the appropriate actions that shall be required to prevent the loss of significant cultural or scientific values of the discovery. The operator shall be held responsible for the cost of the proper mitigation measures that the Authorized Officer assesses after consultation with the operator on the evaluation and decisions of the discovery. Any unauthorized collection or disturbance of cultural or paleontological resources may result in a shutdown order by the Authorized Officer.

IV. NOXIOUS WEEDS

The operator shall be held responsible if noxious weeds become established within the areas of operations. Weed control shall be required on the disturbed land where noxious weeds exist, which includes the roads, pads, associated pipeline corridor, and adjacent land affected by the establishment of weeds due to this action. The operator shall consult with the Authorized Officer for acceptable weed control methods, which include following EPA and BLM requirements and policies.

V. SPECIAL REQUIREMENT(S)

Cave and Karst

** Depending on location, additional Drilling, Casing, and Cementing procedures may be required by engineering to protect critical karst groundwater recharge areas.

Cave/Karst Surface Mitigation

The following stipulations will be applied to minimize impacts during construction, drilling and production.

Construction:

In the advent that any underground voids are opened up during construction activities, construction activities will be halted and the BLM will be notified immediately.

No Blasting:

No blasting will be utilized for pad construction. The pad will be constructed and leveled by adding the necessary fill and caliche.

Pad Berming:

The entire perimeter of the well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad.

- The compacted berm shall be constructed at a minimum of 12 inches high with impermeable mineral material (e.g. caliche).
- No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad.
- The topsoil stockpile shall be located outside the bermed well pad.
- Topsoil, either from the well pad or surrounding area, shall not be used to construct the berm.
- No storm drains, tubing or openings shall be placed in the berm.
- If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.
- The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed.
- Any access road entering the well pad shall be constructed so that the integrity of the berm height surrounding the well pad is not compromised. (Any access road crossing the berm cannot be lower than the berm height.)

Tank Battery Liners and Berms:

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Tank battery locations and all facilities will be lined and bermed. A 20 mil permanent liner will be installed with a 4 oz. felt backing to prevent tears or punctures. Tank battery berms must be large enough to contain $1\frac{1}{2}$ times the content of the largest tank.

Leak Detection System:

A method of detecting leaks is required. The method could incorporate gauges to measure loss, situating values and lines so they can be visually inspected, or installing electronic sensors to alarm when a leak is present. Leak detection plan will be submitted to BLM for approval.

Automatic Shut-off Systems:

Automatic shut off, check values, or similar systems will be installed for pipelines and tanks to minimize the effects of catastrophic line failures used in production or drilling.

Cave/Karst Subsurface Mitigation

The following stipulations will be applied to protect cave/karst and ground water concerns:

Rotary Drilling with Fresh Water:

Fresh water will be used as a circulating medium in zones where caves or karst features are expected. SEE ALSO: Drilling COAs for this well.

Directional Drilling:

Kick off for directional drilling will occur at least 100 feet below the bottom of the cave occurrence zone. SEE ALSO: Drilling COAs for this well.

Lost Circulation:

ALL lost circulation zones from the surface to the base of the cave occurrence zone will be logged and reported in the drilling report.

Regardless of the type of drilling machinery used, if a void of four feet or more and circulation losses greater than 70 percent occur simultaneously while drilling in any cavebearing zone, the BLM will be notified immediately by the operator. The BLM will assess the situation and work with the operator on corrective actions to resolve the problem.

Abandonment Cementing:

Upon well abandonment in high cave karst areas additional plugging conditions of approval may be required. The BLM will assess the situation and work with the operator to ensure proper plugging of the wellbore.

Pressure Testing:

Annual pressure monitoring will be performed by the operator on all casing annuli and reported in a sundry notice. If the test results indicated a casing failure has occurred, remedial action will be undertaken to correct the problem to the BLM's approval.

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Watershed

- The entire well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad. Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad. The berm shall be maintained through the life of the well and after interim reclamation has been completed.
- Any water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion.

<u>Range</u>

A water well, windmill, and livestock water tank are located approximately 0.10 miles northwest of the proposed Cueva de Oro Federal Slot 2 well pad and would not be impacted by the construction of the well pad.

Any damage to fences, cattle guards, and pipelines or structures that provide water to livestock during construction and throughout the life of the project as caused by its operation, must be immediately corrected by the Applicant. The Applicant must notify the grazing allottee or the private surface landowner and the BLM-CFO (575-234-5972) if any damage occurs to pipelines or structures that provide water to livestock.

VI. CONSTRUCTION

A. NOTIFICATION

The BLM shall administer compliance and monitor construction of the access road and well pad. Notify the Carlsbad Field Office at (575) 234-5909 at least 3 working days prior to commencing construction of the access road and/or well pad.

When construction operations are being conducted on this well, the operator shall have the approved APD and Conditions of Approval (COA) on the well site and they shall be made available upon request by the Authorized Officer.

B. TOPSOIL

The operator shall strip the top portion of the soil (root zone) from the entire well pad area and stockpile the topsoil along the edge of the well pad as depicted in the APD. The root zone is typically six (6) inches in depth. All the stockpiled topsoil will be redistributed over the interim reclamation areas. Topsoil shall not be used for berming the pad or facilities. For final reclamation, the topsoil shall be spread over the entire pad area for seeding preparation.

Other subsoil (below six inches) stockpiles must be completely segregated from the topsoil stockpile. Large rocks or subsoil clods (not evident in the surrounding terrain) must be buried within the approved area for interim and final reclamation.

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

The operator shall properly dispose of drilling contents at an authorized disposal site.

D. FEDERAL MINERAL MATERIALS PIT

Payment shall be made to the BLM prior to removal of any federal mineral materials. Call the Carlsbad Field Office at (575) 234-5972.

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

If the operator elects to surface the well pad, the surfacing material may be required to be removed at the time of reclamation. The well pad shall be constructed in a manner which creates the smallest possible surface disturbance, consistent with safety and operational needs.

F. EXCLOSURE FENCING (CELLARS & PITS)

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Exclosure Fencing

The operator will install and maintain exclosure fencing for all open well cellars to prevent access to public, livestock, and large forms of wildlife before and after drilling operations until the pit is free of fluids and the operator initiates backfilling. (For examples of exclosure fencing design, refer to BLM's Oil and Gas Gold Book, Exclosure Fence Illustrations, Figure 1, Page 18.)

G. ON LEASE ACCESS ROADS

Road Width

The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty-five (25) feet.

Surfacing

Surfacing material is not required on the new access road driving surface. If the operator elects to surface the new access road or pad, the surfacing material may be required to be removed at the time of reclamation.

Where possible, no improvements should be made on the unsurfaced access road other than to remove vegetation as necessary, road irregularities, safety issues, or to fill low areas that may sustain standing water.

The Authorized Officer reserves the right to require surfacing of any portion of the access road at any time deemed necessary. Surfacing may be required in the event the road deteriorates, erodes, road traffic increases, or it is determined to be beneficial for future field development. The surfacing depth and type of material will be determined at the time of notification.

Crowning

Crowning shall be done on the access road driving surface. The road crown shall have a grade of approximately 2% (i.e., a 1" crown on a 14' wide road). The road shall conform to Figure 1; cross section and plans for typical road construction.

Ditching

Ditching shall be required on both sides of the road.

Turnouts

Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage

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Drainage control systems shall be constructed on the entire length of road (e.g. ditches, sidehill outsloping and insloping, lead-off ditches, culvert installation, and low water crossings).

A typical lead-off ditch has a minimum depth of 1 foot below and a berm of 6 inches above natural ground level. The berm shall be on the down-slope side of the lead-off ditch.

Cross Section of a Typical Lead-off Ditch



All lead-off ditches shall be graded to drain water with a 1 percent minimum to 3 percent maximum ditch slope. The spacing interval are variable for lead-off ditches and shall be determined according to the formula for spacing intervals of lead-off ditches, but may be amended depending upon existing soil types and centerline road slope (in %);

Formula for Spacing Interval of Lead-off Ditches

Example - On a 4% road slope that is 400 feet long, the water flow shall drain water into a lead-off ditch. Spacing interval shall be determined by the following formula:

400 foot road with 4% road slope: 400' + 100' = 200' lead-off ditch interval 4%

Cattle guards

An appropriately sized cattle guard sufficient to carry out the project shall be installed and maintained at fence/road crossings. Any existing cattle guards on the access road route shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. The operator shall be responsible for the condition of the existing cattle guards that are in place and are utilized during lease operations.

Fence Requirement

Where entry is granted across a fence line, the fence shall be braced and tied off on both sides of the passageway prior to cutting. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

Public Access

Public access on this road shall not be restricted by the operator without specific written approval granted by the Authorized Officer.

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Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

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VII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

Placement of Production Facilities

Production facilities should be placed on the well pad to allow for maximum interim recontouring and revegetation of the well location.

Exclosure Netting (Open-top Tanks)

Immediately following active drilling or completion operations, the operator will take actions necessary to prevent wildlife and livestock access, including avian wildlife, to all open-topped tanks that contain or have the potential to contain salinity sufficient to cause harm to wildlife or livestock, hydrocarbons, or Resource Conservation and Recovery Act of 1976-exempt hazardous substances. At a minimum, the operator will net, screen, or cover open-topped tanks to exclude wildlife and livestock and prevent mortality. If the operator uses netting, the operator will cover and secure the open portion of the tank to prevent wildlife entry. The operator will net, screen, or cover the tanks until the operator removes the tanks from the location or the tanks no longer contain substances that could be harmful to wildlife or livestock. Use a maximum netting mesh size of 1 ½ inches. The netting must not be in contact with fluids and must not have holes or gaps.

Chemical and Fuel Secondary Containment and Exclosure Screening

The operator will prevent all hazardous, poisonous, flammable, and toxic substances from coming into contact with soil and water. At a minimum, the operator will install and maintain an impervious secondary containment system for any tank or barrel containing hazardous, poisonous, flammable, or toxic substances sufficient to contain the contents of the tank or barrel and any drips, leaks, and anticipated precipitation. The operator will dispose of fluids within the containment system that do not meet applicable state or U. S. Environmental Protection Agency livestock water standards in accordance with state law; the operator must not drain the fluids to the soil or ground. The operator will design, construct, and maintain all secondary containment systems to prevent wildlife and livestock exposure to harmful substances. At a minimum, the operator will install effective wildlife and livestock exclosure systems such as fencing, netting, expanded metal mesh, lids, and grate covers. Use a maximum netting mesh size of 1 ½ inches.

Open-Vent Exhaust Stack Exclosures

The operator will construct, modify, equip, and maintain all open-vent exhaust stacks on production equipment to prevent birds and bats from entering, and to discourage perching, roosting, and nesting. (*Recommended exclosure structures on open-vent exhaust stacks are in the shape of a cone.*) Production equipment includes, but may not be limited to, tanks, heater-treaters, separators, dehydrators, flare stacks, in-line units, and compressor mufflers.

Containment Structures

Page 10 of 13

Proposed production facilities such as storage tanks and other vessels will have a secondary containment structure that is constructed to hold the capacity of 1.5 times the largest tank, plus freeboard to account for precipitation, unless more stringent protective requirements are deemed necessary.

Painting Requirement

All above-ground structures including meter housing that are not subject to safety requirements shall be painted a flat non-reflective paint color, <u>Shale Green</u> from the BLM Standard Environmental Color Chart (CC-001: June 2008).

VIII. INTERIM RECLAMATION

During the life of the development, all disturbed areas not needed for active support of production operations should undergo interim reclamation in order to minimize the environmental impacts of development on other resources and uses.

Within six (6) months of well completion, operators should work with BLM surface management specialists (Jim Amos: 575-234-5909) to devise the best strategies to reduce the size of the location. Interim reclamation should allow for remedial well operations, as well as safe and efficient removal of oil and gas.

During reclamation, the removal of caliche is important to increasing the success of revegetating the site. Removed caliche that is free of contaminants may be used for road repairs, fire walls or for building other roads and locations. In order to operate the well or complete workover operations, it may be necessary to drive, park and operate on restored interim vegetation within the previously disturbed area. Disturbing revegetated areas for production or workover operations will be allowed. If there is significant disturbance and loss of vegetation, the area will need to be revegetated. Communicate with the appropriate BLM office for any exceptions/exemptions if needed.

All disturbed areas after they have been satisfactorily prepared need to be reseeded with the seed mixture provided below.

Upon completion of interim reclamation, the operator shall submit a Sundry Notices and Reports on Wells, Subsequent Report of Reclamation (Form 3160-5).

IX. FINAL ABANDONMENT & RECLAMATION

At final abandonment, well locations, production facilities, and access roads must undergo "final" reclamation so that the character and productivity of the land are restored.

Earthwork for final reclamation must be completed within six (6) months of well plugging. All pads, pits, facility locations and roads must be reclaimed to a satisfactory revegetated, safe, and stable condition, unless an agreement is made with the landowner or BLM to keep the road and/or pad intact.

Page 11 of 13

After all disturbed areas have been satisfactorily prepared, these areas need to be revegetated with the seed mixture provided below. Seeding should be accomplished by drilling on the contour whenever practical or by other approved methods. Seeding may need to be repeated until revegetation is successful, as determined by the BLM.

Operators shall contact a BLM surface protection specialist prior to surface abandonment operations for site specific objectives (Jim Amos: 575-234-5909).

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(Insert Seed Mixture Here) EXHIBIT Date BLM Serial No.: Company Reference:

Mixture 4, for Gypsum Sites

The holder shall seed all the disturbed areas with the seed mixture listed below. The seed mixture shall be planted in the amounts specified in pounds of pure live seed (PLS)* per acre. There shall be <u>no</u> primary or secondary noxious weeds in the seed mixture. Seed will be tested and the viability testing of seed will be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed will be either certified or registered seed. The seed container will be tagged in accordance with State law(s) and available for inspection by the authorized officer.

Seed will be planted using a drill equipped with a depth regulator to ensure proper depth of planting where drilling is possible. The seed mixture will be evenly and uniformly planted over the disturbed area (smaller/heavier seeds have a tendency to drop the bottom of the drill and are planted first). The holder shall take appropriate measures to ensure this does not occur. Where drilling is not possible, seed will be broadcast and the area shall be raked or chained to cover the seed. When broadcasting the seed, the pounds per acre are to be doubled. The seeding will be repeated until a satisfactory stand is established as determined by the authorized officer. Evaluation of growth will not be made before completion of at least one full growing season after seeding.

Species to be planted in pounds of pure live seed* per acre:

Species	<u>lb/acre</u>
Alkli Sacaton (Sporobolus airoides)	1.5
DWS~ Four-wing saltbush (Atriplex canescens)	8.0

~DWS: DeWinged Seed

*Pounds of pure live seed:

Pounds of seed x percent purity x percent germination = pounds pure live seed

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Operator Certification

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U.S.C. 1001 for the filing of false statements.

NAME: Brian Wood		Signed on: 03/31/201					
Title: President							
Street Address: 37 Ver	ano Loop						
City: Santa Fe	State: NM	Zip: 87508					
Phone: (505)466-8120							
Email address: afmss@] ⊉permitswest.com						
Field Repres	entative						
Representative Nam	e:						
Street Address:							
City:	State:	Zip:					
Phone:							

Email address:

U.S. Department of the Interior BUREAU OF LAND MANAGEMENT



APD ID: 10400012705

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: CUEVA DE ORO FEDERAL

Well Type: CONVENTIONAL GAS WELL

Submission Date: 03/31/2017

Well Number: 203H Well Work Type: Drill Highlighted data reflects the most recent changes

Show Final Text

Section 1 - General

APD ID:	10400012705	Tie to previous NOS?	Submission Date: 03/31/2017
BLM Offic	e: CARLSBAD	User: Brian Wood	Title: President
Federal/Indian APD: FED		Is the first lease penet	rated for production Federal or Indian? FED
Lease num	nber: NMNM03677	Lease Acres: 2150.97	
Surface ad	ccess agreement in place?	Allotted?	Reservation:
Agreemen	t in place? NO	Federal or Indian agre	ement:
Agreemen	t number:		
Agreemen	it name:		
Keep appl	ication confidential? NO		
Permitting	Agent? YES	APD Operator: MATAD	OOR PRODUCTION COMPANY
Operator I	etter of designation:		

Operator Info

Operator Organization Name: MATADOR PRODUCTION COMPANY									
Operator Address: 5400 LBJ Freewa	ay, Suite 1500	7: 75040							
Operator PO Box:		Zip: (5240							
Operator City: Dallas	State: TX								
Operator Phone: (972)371-5200									
Operator Internet Address: amonro	e@matadorresources.com								

Section 2 - Well Information

Well in Master Development Plan? NO	Mater Development Plan name:							
Well in Master SUPO? NO	Master SUPO name:							
Well in Master Drilling Plan? NO	Master Drilling Plan name:							
Well Name: CUEVA DE ORO FEDERAL	Well Number: 203H	Well API Number:						
Field/Pool or Exploratory? Field and Pool	Field Name: GETTY; BONE SPRING	Pool Name: BONE SPRING						
Is the proposed well in an area containing other mine	eral resources? USEABLE WAT	ER.NATURAL GAS.CO2						

Well Number: 203H

Describe other minerals:							
Is the proposed well in a Helium produ	uction area? N	Use Existing Well Pad?	NO	New surface disturbance?			
Type of Well Pad: MULTIPLE WELL		Multiple Well Pad Name	e:	Number: SLOT 3			
Well Class: HORIZONTAL		CUEVA DE ORO Number of Legs: 1					
Well Work Type: Drill							
Well Type: CONVENTIONAL GAS WEL	L						
Describe Well Type:							
Well sub-Type: INFILL							
Describe sub-type:							
Distance to town: 12 Miles Distance to n		arest well: 30 FT Dista		tance to lease line: 101 FT			
Reservoir well spacing assigned acres	s Measurement:	320 Acres					
Well plat: Cueva_203H_Plat_03-30-2	2017.pdf						
Well work start Date: 05/01/2017		Duration: 90 DAYS					

Section 3 - Well Location Table

Survey Type: F	RECTANGULAR
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Describe Survey Type:

Datum: NAD83

Vertical Datum: NAVD88

Survey number: 18329

	NS-Foot	NS Indicator	EW-Foot	EW Indicator	Twsp	Range	Section	Aliquot/Lot/Tract	Latitude	Longitude	County	State	Meridian	Lease Type	Lease Number	Elevation	MD	TVD
SHL	101	FNL	185	FEL	205	29E	21	Aliquot	32.56530	-	EDD	NEW	NEW	F	NMNM	327	0	0
Leg			9					NWNE	39	104.0775	Y	MEXI	MEXI		03677	6		
#1										304		со	co					
КОР	101	FNL	185	FEL	20S	29E	21	Aliquot	32.56530	-	EDD	NEW	NEW	F	NMNM	267	600	600
Leg			9					NWNE	39	104.0775	Y	MEXI	MEXI		03677	6		
#1										304		co	co					
PPP	101	FNL	185	FEL	20S	29E	21	Aliquot	32.56530	-	EDD	NEW	NEW	F	NMNM	327	0	0
Leg			9					NWNE	39	104.0775	Y	MEXI	MEXI		03677	6		
#1										304		co	co					

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LOCATION & ELEVATION VERIFICATION MAP

ALL BEARINGS, DISTANCES, AND COORDINATE VALUES CONTAINED HEREON ARE GRID BASED UPON THE NEW MEXICO STATE PLANE COORDINATE SYSTEM, EAST ZONE OF THE NORTH AMERICAN DATUM 1927, U.S. SURVEY FEET

D:USER DATAUSTOVALLIDESKTOPIPUBLISHICUEVA DE OROILO_CUEVA_DE_ORO_FED_203H_REV1.DWG 8/27/2016 3:44:16 PM jsiovali



D/USER DATAUSTOVALL/DESKTOP/PUBLISMCUEVA DE ORO/LO CUEVA DE ORO/ ED 203H REV1 DWG 8/27/2016 3/4/19 PM istovall

U.S. Department of the Interior BUREAU OF LAND MANAGEMENT



APD ID: 10400012705

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: CUEVA DE ORO FEDERAL

Well Type: CONVENTIONAL GAS WELL

Submission Date: 03/31/2017

Well Number: 203H

Well Work Type: Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation			True Vertical	Measured			Producing
ID	Formation Name	Elevation	Depth	Depth	Lithologies	Mineral Resources	Formation
1		3276	0	0	OTHER : Caliche	USEABLE WATER	No
2	SALADO	2832	440	440	SALT	NONE	No
3	YATES	2062	1210	1211	GYPSUM	NONE	No
4	SEVEN RIVERS	1747	1525	1526	DOLOMITE	NONE	No
5	CAPITAN REEF	1662	1610	1611	LIMESTONE	USEABLE WATER	No
6	CHERRY CANYON	192	3080	3082	SANDSTONE	NATURAL GAS,OIL	No
7	BRUSHY CANYON	-1048	4320	4321	SANDSTONE	NATURAL GAS,OIL	No
8	BONE SPRING LIME	-2638	5910	5911	LIMESTONE	NATURAL GAS,OIL	No
9	BONE SPRING 1ST	-3293	6565	6567	OTHER : Carbonate	NATURAL GAS,OIL	No
10	BONE SPRING 1ST	-3733	7005	7007	SANDSTONE	NATURAL GAS,OIL	No
11	BONE SPRING 2ND	-4009	7285	7287	OTHER : Carbonate	NATURAL GAS,OIL	No
12	BONE SPRING 2ND	-4469	7745	7747	SANDSTONE	NATURAL GAS,OIL	No
13	BONE SPRING 3RD	-4794	8070	8072	OTHER : Carbonate	NATURAL GAS,OIL	No
14	BONE SPRING 3RD	-5604	8880	8882	SANDSTONE	NATURAL GAS,OIL	No
15	WOLFCAMP	-5959	9235	9249	OTHER : Carbonate	NATURAL GAS,OIL	Yes

Section 2 - Blowout Prevention

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: CUEVA DE ORO FEDERAL

Well Number: 203H

Pressure Rating (PSI): 5M

Rating Depth: 10000

Equipment: After 20" surface casing, a 5M BOP stack consisting of 3 rams with 2 pipe rams, 1 blind ram, and 1 annular preventer will be installed. The BOP will be used below intermediate casing 1 to TD. See attached BOP and choke diagrams. An accumulator complying with Onshore Order 2 requirements for the BOP stack pressure rating will be present. Rotating head will be installed as needed.

Requesting Variance? YES

Variance request: Matador requests a variance for a 2000-psi annular to be installed after running 20" surface casing. Matador requests a variance to drill this well using a co-flex line between the BOP and choke manifold. Certification for proposed co-flex hose is attached. The hose is not required by the manufacturer to be anchored. If the specific hose is not available, then one of equal or higher rating will be used. Matador requests a variance to use a speed head. Speed head diameter range is 13.375" x 9.625" x 5.5" x 2.875".

Testing Procedure: Pressure tests will be conducted before drilling out from under all casing strings. BOP will be inspected and operated as required by Onshore Order 2. Kelly cock and sub equipped with a full opening valve sized to fit the drill pipe and collars will be available on the rig floor in the open position. A third party company will test the BOPs. Intermediate 1 casing pressure tests will be made to 250 psi low and 2000 psi high. Intermediate 2 casing pressure tests will be made to 250 psi low and 2000 psi high. Intermediate 2 casing pressure tests will be made to 250 psi low and 2000 psi low and 2500 psi high on the intermediate 1 casing and tested to 250 psi low and 2500 psi high on the intermediate 2 casing. In the case of running a speed head with landing mandrel for 9.625" casing, initial intermediate 1 casing test pressures will be 250 psi low and 3000 psi high, with wellhead seals tested to 5000 psi once the 9.625" casing has been landed and cemented.

Choke Diagram Attachment:

Cueva_203H_Choke_03-27-2017.pdf

BOP Diagram Attachment:

Cueva_203H_BOP_03-27-2017.pdf

		.																				
Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
1	SURFACE	26	20.0	NEW	API	N	0	400	0	400	3276	2876	400	K-55	94	OTHER - BTC	1.12 5	1.12 5	DRY	1.8	DRY	1.8
2	INTERMED IATE	17.5	13.375	NEW	API	N	0	1200	0	1197	3276	2079	1200	J-55	54.5	OTHER - BTC	1.12 5	1.12 5	DRY	1.8	DRY	1.8
3	INTERMED IATE	8.75	7.625	NEW	API	Y	0	3000	0	2998	3276	278	3000	P- 110	29.7	OTHER - BTC	1.12 5	1.12 5	DRY	1.8	DRY	1.8
. 4	INTERMED IATE	12.2 5	9.625	NEW	API	N	0	3100	0	3098	3276	178	3100	J-55	40	OTHER - BTC	1.12 5	1.12 5	DRY	1.8	DRY	1.8
5	PRODUCTI ON	6.12 5	5.5	NEW	API	Y	0	8738	0	8737	3276	-5461	8738	Р- 110	20	OTHER - TENARIS XP	1.12 5	1.12 5	DRY	1.8	DRY	1.8
6	INTERMED IATE	8.75	7.625	NEW	API	Y	3000	8838	2998	8837	278	-5561	5838	P- 110	29.7	OTHER - HYDRILL 513	1.12 5	1.12 5	DRY	1.8	DRY	1.8

Section 3 - Casing

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: CUEVA DE ORO FEDERAL

Well Number: 203H

Casing ID	String Type	Hole Size	Csg Size	Condition	Standard	Tapered String	Top Set MD	Bottom Set MD	Top Set TVD	Bottom Set TVD	Top Set MSL	Bottom Set MSL	Calculated casing length MD	Grade	Weight	Joint Type	Collapse SF ·	Burst SF	Joint SF Type	Joint SF	Body SF Type	Body SF
7	INTERMED	8.75	7.0	NEW	API	Y	8838	9688	8837	9450	-5561	-6174	850	P- 110	29	OTHER - btc	1.12 5	1. 1 2 5	DRY	1.8	DRY	1.8
8	PRODUCTI ON	6.12 5	4.5	NEW	API	Y	8738	14210	8737	9465	-5461	-6189	5472	P- 110	13.5	OTHER - TENARIS XP	1.12 5	1.12 5	DRY	1.8	DRY	1.8

Casing Attachments

Casing ID: 1

String Type: SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

BLM_Casing_Design_Assumptions_Cueva203H_Surface_03-31-2017.docx

Casing ID: 2 String Type: INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

BLM_Casing_Design_Assumptions_Cueva203H_Intermediate_03-31-2017.docx

Well Number: 203H

Casing Attachments

Casing ID: 3 String Type: INTERMEDIATE **Inspection Document: Spec Document: Tapered String Spec:** BLM_Casing_Design_Assumptions_Cueva203H_Intermediate_03-31-2017.docx Casing Design Assumptions and Worksheet(s): BLM_Casing_Design_Assumptions_Cueva203H_Intermediate_03-31-2017.docx Casing ID: 4 String Type: INTERMEDIATE **Inspection Document: Spec Document: Tapered String Spec:** Casing Design Assumptions and Worksheet(s): BLM_Casing_Design_Assumptions_Cueva203H_Intermediate_03-31-2017.docx String Type: PRODUCTION Casing ID: 5 **Inspection Document: Spec Document: Tapered String Spec:** BLM_Casing_Design_Assumptions_Cueva203H_Production_03-31-2017.docx Casing Design Assumptions and Worksheet(s):

BLM_Casing_Design_Assumptions_Cueva203H_Production_03-31-2017.docx

Well Name: CUEVA DE ORO FEDERAL

Well Number: 203H

Casing Attachments

Casing ID: 6 String Type: INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

BLM_Casing_Design_Assumptions_Cueva203H_Intermediate_03-31-2017.docx

Casing Design Assumptions and Worksheet(s):

BLM_Casing_Design_Assumptions_Cueva203H_Intermediate_03-31-2017.docx

Casing ID: 7 String Type: INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

BLM_Casing_Design_Assumptions_Cueva203H_Intermediate_03-31-2017.docx

Casing Design Assumptions and Worksheet(s):

BLM_Casing_Design_Assumptions_Cueva203H_Intermediate_03-31-2017.docx

Casing ID: 8 String Type: PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

BLM_Casing_Design_Assumptions_Cueva203H_Production_03-31-2017.docx

Casing Design Assumptions and Worksheet(s):

BLM_Casing_Design_Assumptions_Cueva203H_Production_03-31-2017.docx

Section 4 - Cement

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: CUEVA DE ORO FEDERAL

Well Number: 203H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	400	873	1.38	14.8	1204	100	Class C	5% NaCl + LCM

INTERMEDIATE	Lead	0	1200	528	2.09	12.6	1103	100	Class C	Bentonite + 1% CaCl2 + 8% NaCl + LCM
INTERMEDIATE	Tail	0	1200	322	1.38	14.8	444	100	Class C	5% NaCl + LCM
INTERMEDIATE	Lead	0	3100	499	2.48	11.9	1237	100	Class C	Bentonite + 2% CaCl2 + 3% NaCl + LCM
INTERMEDIATE	Tail	0	3100	308	1.26	14.4	388	100	Class C	5% NaCl + LCM
INTERMEDIATE	Lead	2100	3100	641	2.36	11.5	1512	35	ТХІ	Fluid Loss + Dispersant + Retarder + LCM
INTERMEDIATE	Tail	2100	3100	248	1.38	13.2	342	35	ТХІ	Fluid Loss + Dispersant + Retarder + LCM
PRODUCTION	Lead	0	8738	414	1.38	15.8	1.38	10	Class H	Fluid loss + Dispersant + Retarder +LCM

INTERMEDIATE	Lead	3100	8838	641	2.36	11.5	1512	35	ТХІ	Fluid Loss + Dispersant + Retarder + LCM
INTERMEDIATE	Tail	3100	8838	248	1.38	13.2	342	35	ТХІ	Fluid Loss + Dispersant + Retarder + LCM
INTERMEDIATE	Lead	8838	9688	641	2.36	11.5	1512	35	ТХІ	Fluid Loss + Dispersant + Retarder + LCM
INTERMEDIATE	Tail	0	9688	248	1.38	13.2	342	35	ТХІ	Fluid Loss + Dispersant + Retarder + LCM
PRODUCTION	Lead	8738	1421 0	414	1.38	15.8	571	10	Class H	Fluid loss + Dispersant + Retarder +LCM

Well Number: 203H

Section 5 - Circulating Medium

Mud System Type: Closed

Will an air or gas system be Used? NO

Description of the equipment for the circulating system in accordance with Onshore Order #2:

Diagram of the equipment for the circulating system in accordance with Onshore Order #2:

Describe what will be on location to control well or mitigate other conditions: Barite, Bentonite, LCM

Describe the mud monitoring system utilized: An electronic Pason mud monitoring system complying with Onshore Order 1 will be used. All necessary mud products for weight addition and fluid loss control will be on location at all times. Mud program is subject to change due to hole conditions. A closed loop system will be used.

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (Ibs/gal)	Max Weight (Ibs/gal)	Density (lbs/cu ft)	Gel Strength (Ibs/100 sqft)	НА	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
8738	1421 0	OIL-BASED MUD	12.5	12.5							
1220	3100	WATER-BASED MUD	8.4	8.6							
3100	8738	OTHER : Fresh water & cut brine	9	9							
400	1220	SALT SATURATED	10	10							
0	400	SPUD MUD	8.4	8.4							

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: CUEVA DE ORO FEDERAL

Well Number: 203H

Section 6 - Test, Logging, Coring

List of production tests including testing procedures, equipment and safety measures:

A 2-person mud-logging program will be used from 1220' to TD.

No electric logs are planned at this time. GR will be collected through the MWD tools from intermediate 2 casing to TD. CBL with CCL will be run as far as gravity will let it fall to TOC.

List of open and cased hole logs run in the well:

CBL,GR,MUDLOG

Coring operation description for the well:

No core or drill stem test planned.

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 7099

Anticipated Surface Pressure: 5016.7

Anticipated Bottom Hole Temperature(F): 135

Anticipated abnormal pressures, temperatures, or potential geologic hazards? NO

Describe:

Contingency Plans geoharzards description:

Contingency Plans geohazards attachment:

Hydrogen Sulfide drilling operations plan required? YES

Hydrogen sulfide drilling operations plan:

Cueva_203H_H2S_Plan_03-27-2017.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Cueva_203H_Horizontal_Drilling_Plan_03-27-2017.pdf

Other proposed operations facets description:

Wellhead casing;

Please note that in using a clone to generate this APD, when the Elevation (MSL) was changed in the 1st geological formation the subsequent calculated fields did not change accordingly (i.e. elevation changed to 3276, 3276-440=2836 - AFMSS field = 2832, and there is no way to change this field; Note: See General Drilling Plan - Pg 4 for correct cement quantities for Intermediate 3 Casings due to limitations of AFMSS.

Other proposed operations facets attachment:

Cueva_203H_Wellhead_Casing_Spec_03-27-2017.pdf

Cueva_203H_General_Drilling_Plan_03-27-2017.pdf

Other Variance attachment:
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SPOOL HEIGHTS CAN BE ADJUSTED AS NEEDED*

UTI Control
Made by Cameron (Shaffer Spherical) Clone Annular



PATT	ERSON-UTI # PS2-628	
STYLI	E: New Shaffer Spherical	<u> </u>
BORE	<u>13 5/8" pressure 5,000</u>	-
HEIGH	т: <u>48 ½"</u> weight: <u>13,800 lb</u>	s

PATTERSON-UTI # PC	2-128
STYLE: New Cameron	Type U
BORE 13 5/8" PRESSURE	10,000
RAMS: TOP 5" Pipe STM	Blinds
неіднт: <u>66 5/8" we</u> ight: <u>24</u>	4,000 lbs

Length	40" Outlets	4" 10M
DSA	4" 10M x 2'	' 10M

PATTER	SON-UTI #_	PC2-228		
STYLE:_	New Can	neron Type U		
BORE 1	<u>3 5/8"</u> pre	ssure <u>10,000</u>		
RAMS: 5" Pipe				
HEIGHT: 41 5/8" WEIGHT: 13,000 lbs				





2804 March 10, 2015



Internal Hydrostatic Test Graph

Customer: Patterson B&F

Pick Ticket #: 296283

Hose Spo	cificati <u>ons</u>	Veri	fication
<mark>Ilose Type</mark>	Length	Type of Fitting	<u>Coupling Method</u>
Mud	50'	2"1502	Swege
н. р.	0.D.	Die Size	Final O.D.
	3.4/~	97MIV	4.03
Working Pressur <u>e</u>	Burst. Pressure	Hose Serial #	<u>Hose Assembly Serial #</u>
10000 PSI	Jertary acts April 201	13839	296283



Comments: Hose assembly pressure tested with water at ambient temperature

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Tested By: Richard Davis

Approved By: Ryan Adams

Midwest Hose					
& Specialty, Inc.					
Internal Hydrostatic Test Certificate					
General Information Hose Specifications					
Customer	PATTERSON B&E	Hose Assembly Type	Choke & Kill		
MWH Sales Representative	AMY WHITE	Certification	API 7K/FSL Level 2		
Date Assembled	3/10/2015	Hose Grade	MUD		
Location Assembled	ОКС	Hose Working Pressure	10000		
Sales Order #	245805	Hose Lot # and Date Code	11839-11/14		
Customer Purchase Order #	270590	Hose I.D. (Inches)	2"		
Assembly Serial # (Pick Ticket #)	296283	Hose O.D. (Incres)	3.99"		
Hose Assembly Length	50'	Armor (yes/no)	YES		
Fittings					
End A End B					
Stem (Part and Revision #7	R2.0X32M1502	Ster or ond	RF2.0 32F1502		
Stem (Heat #)	14104546	Ster: _ = a(#)	A144853		
Ferrule (Part and Revision #)	RF2.0 10K	Ferrule (Part and Revision #)	RF2.0 10K		
Ferrule (Heat #)	41044	Ferrule (Heat #)	41044		
Connection . Flange Hummer Union Po	ort.	Concern	 control complexity control control of the control control. 		
Connection (Heat #)		Corress 1 / Heat	 I = 2 VIII (1) (00 10.00 decrement or consideration of the constant of the consta		
Nut (Part #)	2" 1502 H2S	Nut (Part#)			
Nut (Heat#)		Mut (Heat#)			
Dies Used	178 M.S.	Oles Used	97MM		
Hydrostatic Tess equirements					
Test Pressure (psi)	15,000	Hose assembly was test	ed with ambient water		
Test Pressure Hold Time (minutes	17 3/4	temper	ature.		
Date Tested	Teste	ol By	Approved By		
3/10/2015 (in the Alame					

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24 L 1				
N St	Vidwest Hose			
Certific	ate of Conformity			
Customer: PATTERSON B&E Customer P.O.# 270590				
Sales Order # 245805	Date Assembled: 3/10/2015			
S	pecifications			
Hose Assembly Type: Choke & Kill				
Assembly Serial # 296283	Hose Lot # and Date Code 11839-11/14			
Hose Working Pressure (psi) 10000	Test Pressure (psi) 15000			
	blied for the referenced purchase order to be true according			
Ve hereby certify that the above material supp o the requirements of the purchase order and o upplier: Aidwest Hose & Specialty, Inc. 312 S I-35 Service Rd Iklahoma City, OK 73129 omments:	current industry standards.			
Ve hereby certify that the above material supp o the requirements of the purchase order and o upplier: Aidwest Hose & Specialty, Inc. 312 S I-35 Service Rd Oklahoma City, OK 73129 Tomments:	current industry standards.			



Inte General Infor Customer MWH Sales Representative Date Assembled Location Assembled Sales Order # Customer Purchase Order # Assembly Serial # (Pick (icket #)	Ernal Hydroste mation PATTERSON B&E AMY WHITE 12/23/2014 OKC 237566	alty, Inc. atic Test Certificate Hose Speci Hose Assembly Type Certification Hose Grade	fications Choke & Kill API 7K/FSL Level 2		
Inte General Infor Customer MWH Sales Representative Date Assembled Location Assembled Sales Order # Customer Purchase Order # Assembly Serial # (Pick (icket #)	PATTERSON B&E AMY WHITE 12/23/2014 OKC 237566	Atic Test Certificate Hose Spect Hose Assembly Type Certification Hose Grade	fications Choke & Kill API 7K/FSL Level 2		
General Inform Customer MWH Sales Representative Date Assembled Location Assembled Sales Order # Customer Purchase Order # Assembly Serial # (Pick Licket #)	Mation PATTERSON B&E AMY WHITE 12/23/2014 OKC 237566	Hose Speci Hose Assembly Type Certification Hose Grade	fications Choke & Kill API 7K/FSL Level 2		
Customer MWH Sales Representative Date Assembled Location Assembled Sales Order # Customer Purchase Order # Assembly Serial # (Pick Licket #)	PATTERSON B&E AMY WHITE 12/23/2014 OKC 237566	Hose Assembly Type Certification Hose Grade	Choke & Kill API 7K/FSL Level 2		
MWH Sales Representative Date Assembled Location Assembled Sales Order # Customer Purchase Order # Assembly Serial # (Pick Licket #)	AMY WHITE 12/23/2014 OKC 237566	Certification Hose Grade	API 7K/FSL Level 2		
Date Assembled Location Assembled Sales Order # Customer Purchase Order # Assembly Serial # (Pick Licket #)	12/23/2014 OKC 237566	Hose Grade			
Location Assembled Sales Order # Customer Purchase Order # Assembly Serial # (Pick Licket #)	OKC 237566		MUD		
Sales Order # Customer Purchase Order # Assembly Serial # (Pick Licket #)	237566	Hose Working Pressure	10000		
Customer Purchase Order # Assembly Serial # (Pick Licket #)		Hose Lot # and Date Code	11784-10/14		
Assembly Serial # (Pick licket #)	261581	Hose I.D. (inches)	2"		
	286159	Hose O.D. (Inches) 4.00"			
Hose Assembly Length 50' Armor (yes/no) YES					
Fittings					
End A End B					
Stem (Part and Revision #) R2.0X32M1502 Stem (Part and Revision #) R2.0X32M1502					
Stem (Heat #)	M14104546	Stem (Heat #)	M14101226		
Ferrule (Part and Revision #)	RF2.0 10K	Ferrule (Port and Revision #)	RF2.0 10K		
Ferrule (Heat #)	41044	Ferrule (Heat #)	41044		
Connection . Flange Hammer University	2"1502	Connettic			
Connection (Heat #)	2866	Connection - (14)			
Nut (Part #)		Nut (Part#)			
Nut (Heat #)		Nut (Heat #)			
Dies Used	97MM	Dies Used	97MM		
Hydrostatic Test Requirements					
Test Pressure (psi)	15,000	Hose assembly was teste	d with ambient water		
Test Pressure Hold Time (minutes)	15 1/4	tempera	iture.		

Midwest Hose & Specialty, Inc.				
Certificate of Conformity				
Customer: PATTERSON B&E	Customer P.O.# 261581			
Sales Order # 237566	Date Assembled: 12/23/2014			
Sp	ecifications			
Hose Assembly Type: Choke & Kill				
Assembly Serial # 286159	Hose Lot # and Date Code 11784-10/14			
Hose Working Pressure (psi) 10000	Test Pressure (psi) 15000			
Ve hereby certify that the above material supplie o the requirements of the purchase order and cu upplier: Aidwest Hose & Specialty, Inc.	ed for the referenced purchase order to be true according prrent industry standards.			
Oklahoma City, OK 73129				
comments:				



MHSI-008 Rev. 0.0 Proprietary

Intermediate #1 Casing

Collapse: DF_c=1.125

• Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.52 psi/ft). The effects of axial load on collapse will be considered.

• Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft).

Burst: DF_b=1.125

- Pressure Test: Casing test per Onshore Oil and Gas Order No. 2 with an external force equal to the mud gradient in which the casing will be run (0.52 psi/ft), which is a more conservative backup force than pore pressure.
- Gas Kick Profile: Internal burst force at the shoe will be Fracture Pressure at that depth. Surface burst pressure will be fracture gradient at setting depth less a gas gradient to equivalent height of 50 bbl kick with Drill Pipe inside casing and mud gradient with which the next hole section will be run above that (0.47 psi/ft). External force will be equal to the mud gradient in which the casing will be run (0.52 psi/ft), which is a more conservative backup force than pore pressure.
- Fracture at Shoe with 1/3 BHP at Surface: Internal burst force at the shoe will be Fracture Pressure at setting depth. Internal burst force at surface will be 1/3 of pore pressure at setting depth. External force will be equal to the mud gradient in which the casing will be run (0.52 psi/ft) which is a more conservative backup force than pore pressure.

Tensile: DFt=1.8

• Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (10.0 ppg).

Intermediate #2 Casing

Collapse: DF_c=1.125

• Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.52 psi/ft). The effects of axial load on collapse will be considered.

• Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft).

Burst: DF_b=1.125

- Pressure Test: Casing test per Onshore Oil and Gas Order No. 2 with an external force equal to the mud gradient in which the casing will be run (0.52 psi/ft), which is a more conservative backup force than pore pressure.
- Gas Kick Profile: Internal burst force at the shoe will be Fracture Pressure at that depth. Surface
 burst pressure will be fracture gradient at setting depth less a gas gradient to equivalent height of
 50 bbl kick with Drill Pipe inside casing and mud gradient with which the next hole section will be
 run above that (0.47 psi/ft). External force will be equal to the mud gradient in which the casing
 will be run (0.52 psi/ft), which is a more conservative backup force than pore pressure.
- Fracture at Shoe with 1/3 BHP at Surface: Internal burst force at the shoe will be Fracture Pressure at setting depth. Internal burst force at surface will be 1/3 of pore pressure at setting depth. External force will be equal to the mud gradient in which the casing will be run (0.52 psi/ft) which is a more conservative backup force than pore pressure.

Intermediate #3 Casing

Collapse: DF_c=1.125

- Partial Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.47 psi/ft). The effects of axial load on collapse will be considered. Internal force equal to gas gradient over half of setting depth and mud gradient with which the next hole section will be run below that (0.65 psi/ft).
- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and mud gradient in which the casing will be run above that (0.47 psi/ft) and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft).

Burst: DF_b=1.125

- Pressure Test: Casing test per Onshore Oil and Gas Order No. 2 with an external force equal to the mud gradient in which the casing will be run (0.47 psi/ft), which is a more conservative backup force than pore pressure.
- Gas Kick Profile: Internal burst force at the shoe will be Fracture Pressure at that depth. Surface burst pressure will be fracture gradient at setting depth less a gas gradient to equivalent height of 100 bbl kick with Drill Pipe inside casing and mud gradient with which the next hole section will be run above that (0.65 psi/ft). External force will be equal to the mud gradient in which the casing will be run (0.47 psi/ft), which is a more conservative backup force than pore pressure.
- Fracture at Shoe with 1/3 BHP at Surface: Internal burst force at the shoe will be Fracture Pressure at setting depth. Internal burst force at surface will be 1/3 of pore pressure at setting depth. External force will be equal to the mud gradient in which the casing will be run (0.47 psi/ft) which is a more conservative backup force than pore pressure.

Tensile: DFt=1.8

• Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (9.0 ppg).

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Intermediate #1 Casing

Collapse: DF_c=1.125

• Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.52 psi/ft). The effects of axial load on collapse will be considered.

• Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft).

Burst: DF_b=1.125

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Tensile: DFt=1.8

• Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (10.0 ppg).

Intermediate #2 Casing

Collapse: DF_c=1.125

• Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.52 psi/ft). The effects of axial load on collapse will be considered.

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Burst: DF_b=1.125

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Intermediate #3 Casing

Collapse: DF_c=1.125

• Partial Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.47 psi/ft). The effects of axial load on collapse will be considered. Internal force equal to gas gradient over half of setting depth and mud gradient with which the next hole section will be run below that (0.65 psi/ft).

• Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and mud gradient in which the casing will be run above that (0.47 psi/ft) and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft).

Burst: DF_b=1.125

- Pressure Test: Casing test per Onshore Oil and Gas Order No. 2 with an external force equal to the mud gradient in which the casing will be run (0.47 psi/ft), which is a more conservative backup force than pore pressure.
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Tensile: DFt=1.8

• Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (10.0 ppg).

Intermediate #2 Casing

Collapse: DF_c=1.125

- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.52 psi/ft). The effects of axial load on collapse will be considered.
- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft).

Burst: DF_b=1.125

- Pressure Test: Casing test per Onshore Oil and Gas Order No. 2 with an external force equal to the mud gradient in which the casing will be run (0.52 psi/ft), which is a more conservative backup force than pore pressure.
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- Fracture at Shoe with 1/3 BHP at Surface: Internal burst force at the shoe will be Fracture Pressure at setting depth. Internal burst force at surface will be 1/3 of pore pressure at setting depth. External force will be equal to the mud gradient in which the casing will be run (0.52 psi/ft) which is a more conservative backup force than pore pressure.

Tensile: DFt=1.8

Intermediate #3 Casing

Collapse: DF_c=1.125

• Partial Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.47 psi/ft). The effects of axial load on collapse will be considered. Internal force equal to gas gradient over half of setting depth and mud gradient with which the next hole section will be run below that (0.65 psi/ft).

• Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and mud gradient in which the casing will be run above that (0.47 psi/ft) and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft).

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 will be run (0.47 psi/ft), which is a more conservative backup force than pore pressure.
- Fracture at Shoe with 1/3 BHP at Surface: Internal burst force at the shoe will be Fracture Pressure at setting depth. Internal burst force at surface will be 1/3 of pore pressure at setting depth. External force will be equal to the mud gradient in which the casing will be run (0.47 psi/ft) which is a more conservative backup force than pore pressure.

Tensile: DFt=1.8

Production Casing

Collapse: DF_c=1.125

• Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.65 psi/ft). The effects of axial load on collapse will be considered.

• Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and mud gradient in which the casing will be run above that (0.65 psi/ft) and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft).

Burst: DF_b=1.125

- Pressure Test: 8000 psi casing test with an external force equal to the mud gradient in which the casing will be run (0.65 psi/ft), which is a more conservative backup force than pore pressure.
- Injection Down Casing: 9500 psi surface injection pressure plus an internal pressure gradient of 0.65 psi/ft with an external force equal to the mud gradient in which the casing will be run (0.65 psi/ft), which is a more conservative backup force than pore pressure.

Tensile: DF_t=1.8

Production Casing

Collapse: DF_c=1.125

• Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.65 psi/ft). The effects of axial load on collapse will be considered.

• Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and mud gradient in which the casing will be run above that (0.65 psi/ft) and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft).

Burst: DF_b=1.125

- Pressure Test: 8000 psi casing test with an external force equal to the mud gradient in which the casing will be run (0.65 psi/ft), which is a more conservative backup force than pore pressure.
- Injection Down Casing: 9500 psi surface injection pressure plus an internal pressure gradient of 0.65 psi/ft with an external force equal to the mud gradient in which the casing will be run (0.65 psi/ft), which is a more conservative backup force than pore pressure.

Tensile: DF₁=1.8

Surface Casing

Collapse: DF_c=1.125

• Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.43 psi/ft). The effects of axial load on collapse will be considered.

• Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and an internal force equal to mud gradient of displacement fluid (0.52 psi/ft).

Burst: DF_b=1.125

• Pressure Test: Casing test per Onshore Oil and Gas Order No. 2 with an external force equal to the mud gradient in which the casing will be run (0.43 psi/ft), which is a more conservative backup force than pore pressure.

Tensile: DF_t=1.8

Intermediate #1 Casing

Collapse: DF_c=1.125

• Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.52 psi/ft). The effects of axial load on collapse will be considered.

• Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft).

Burst: DF_b=1.125

- Pressure Test: Casing test per Onshore Oil and Gas Order No. 2 with an external force equal to the mud gradient in which the casing will be run (0.52 psi/ft), which is a more conservative backup force than pore pressure.
- Gas Kick Profile: Internal burst force at the shoe will be Fracture Pressure at that depth. Surface burst pressure will be fracture gradient at setting depth less a gas gradient to equivalent height of 50 bbl kick with Drill Pipe inside casing and mud gradient with which the next hole section will be run above that (0.47 psi/ft). External force will be equal to the mud gradient in which the casing will be run (0.52 psi/ft), which is a more conservative backup force than pore pressure.
- Fracture at Shoe with 1/3 BHP at Surface: Internal burst force at the shoe will be Fracture Pressure at setting depth. Internal burst force at surface will be 1/3 of pore pressure at setting depth. External force will be equal to the mud gradient in which the casing will be run (0.52 psi/ft) which is a more conservative backup force than pore pressure.

Tensile: DFt=1.8

• Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (10.0 ppg).

Intermediate #2 Casing

Collapse: DF_c=1.125

- Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.52 psi/ft). The effects of axial load on collapse will be considered.
- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft).

Burst: DF_b=1.125

- Pressure Test: Casing test per Onshore Oil and Gas Order No. 2 with an external force equal to the mud gradient in which the casing will be run (0.52 psi/ft), which is a more conservative backup force than pore pressure.
- Gas Kick Profile: Internal burst force at the shoe will be Fracture Pressure at that depth. Surface burst pressure will be fracture gradient at setting depth less a gas gradient to equivalent height of 50 bbl kick with Drill Pipe inside casing and mud gradient with which the next hole section will be run above that (0.47 psi/ft). External force will be equal to the mud gradient in which the casing will be run (0.52 psi/ft), which is a more conservative backup force than pore pressure.
- Fracture at Shoe with 1/3 BHP at Surface: Internal burst force at the shoe will be Fracture Pressure at setting depth. Internal burst force at surface will be 1/3 of pore pressure at setting depth. External force will be equal to the mud gradient in which the casing will be run (0.52 psi/ft) which is a more conservative backup force than pore pressure.

Intermediate #3 Casing

Collapse: DF_c=1.125

- Partial Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.47 psi/ft). The effects of axial load on collapse will be considered. Internal force equal to gas gradient over half of setting depth and mud gradient with which the next hole section will be run below that (0.65 psi/ft).
- Cementing: Collapse force equal to the gradient of planned cement slurries to planned depths and mud gradient in which the casing will be run above that (0.47 psi/ft) and an internal force equal to mud gradient of displacement fluid (0.43 psi/ft).

Burst: DF_b=1.125

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- Gas Kick Profile: Internal burst force at the shoe will be Fracture Pressure at that depth. Surface burst pressure will be fracture gradient at setting depth less a gas gradient to equivalent height of 100 bbl kick with Drill Pipe inside casing and mud gradient with which the next hole section will be run above that (0.65 psi/ft). External force will be equal to the mud gradient in which the casing will be run (0.47 psi/ft), which is a more conservative backup force than pore pressure.
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Tensile: DFt=1.8

Intermediate #1 Casing

Collapse: DF_c=1.125

• Full Internal Evacuation: Collapse force equal to the mud gradient in which the casing will be run (0.52 psi/ft). The effects of axial load on collapse will be considered.

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Tensile: DFt=1.8

• Overpull: A downward force of 100,000 lbs is applied at the shoe along with the weight of the casing string utilizing the effects of buoyancy (10.0 ppg).

Intermediate #2 Casing

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Burst: DF_b=1.125

- Pressure Test: 8000 psi casing test with an external force equal to the mud gradient in which the casing will be run (0.65 psi/ft), which is a more conservative backup force than pore pressure.
- Injection Down Casing: 9500 psi surface injection pressure plus an internal pressure gradient of 0.65 psi/ft with an external force equal to the mud gradient in which the casing will be run (0.65 psi/ft), which is a more conservative backup force than pore pressure.

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Hydrogen Sulfide Drilling

Operations Plan

Matador Resources

1 H2S safety instructions to the following:

- Characteristics of H2S
- Physical effects and hazards
- Principal and operation of H2S detectors, warning system, and briefing areas
- Evacuation procedures, routes, and first aid
- Proper use of safety equipment & life support systems
- Essential personnel meeting medical evaluation criteria will receive additional training on the proper use of 30-minute pressure demand air packs.

2 H2S Detection and Alarm Systems:

- H2S sensor/detectors to be located on the drilling rig floor, in the base of the sub structure / cellar area, on the mud pits in the shale shaker area. Additional H2S detectors may be placed as deemed necessary.
- An audio alarm system will be installed on the derrick floor and in the doghouse.

3 Windsocks and / Wind Streamers:

- Windsocks at mud pit area should be high enough to be visible.
- Windsock on the rig floor and / top of doghouse should be high enough to be visible.

4 Condition Flags and Signs:

- Warning sign on access road to location
- Flags to be displayed on sign at entrance to location
 - Green Flag Normal Safe Operation Condition
 - Yellow Flag Potential Pressure and Danger
 - Red Flag Danger (H2S present in dangerous concentrations) Only H2S trained personnel admitted on location

5 Well Control Equipment:

• See APD

6 Communications:

- While working under masks, chalkboards will be used for communications.
- Hand signals will be used where chalkboard is inappropriate.
- Two-way radio will be used to communicate off location in case emergency help is required. In most cases, cellular telephones will be available at most drilling foreman's trailer or living quarters.



7 Drilling Stem Testing:

• No DSTs or cores are planned at this time

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8 Drilling contractor supervisor will be familiar with the effects H2S has on tubulars good and other mechanical equipment.

9 If H2S is encountered, mud system will be altered if necessary to maintain control of formation. A mud gas separator will be brought into service along with H2S scavengers if necessary.

11 Emergency Contacts

• See next page

H2S Contingency Plan Emergency Contacts Matador Production Company Cueva de Oro Fed wells Sec. 21, T20S, R29E, Eddy County, NM

Company Office			
Matador Production Company	(972)-371-5200	· · · · · · · · · · · · · · · · · · ·	
Key Personnel			
Name	Title	Office	Mobile
Billy Goodwin	Vice President Drilling	972-371-5210	817-522-2928
Gary Martin	Drilling Superintendent		601-669-1774
Dee Smith	Drilling Superintendent	972-371-5447	972-822-1010
Aaron Byrd	Drilling Engineer	972-371-5267	214-507-2333
Larry Seegers	Construction Superintendent		318-840-4364
Jimmy Benefield	Construction Superintendent		318-548-6659
Artesia			
Ambulance		911	
State Police		575-746-2703	
City Police		575-746-2703	
Sheriff's Office		575-746-9888	
Fire Department		575-746-2701	
Local Emergency Planning Committee		575-746-2122	
New Mexico Oil Conservation Division		575-748-1283	
Carlsbad			
Ambulance		911	
State Police		575-885-3137	
City Police		575-885-2111	
Sheriff's Office		575-887-7551	
Fire Department		575-887-3798	
Local Emergency Planning Committee		575-885-3581	
<u>Santa Fe</u>			
New Mexico Emergency Response Commission (Santa Fe)		505-476-9600	
New Mexico Emergency Response Commission (Santa Fe) 24 hrs		505-827-9126	
New Mexico State Emergency Operations Center		505-476-9635	
National			
Carlsbad BLM		575-234-5972	
National Emergency Response Center (Washington, D.C.)	800-424-8802	
Medical			
Flight for Life- 4000 24th St.; Lubbock, TX		806-743-9911	
Aerocare- R3, Box 49F; Lubbock, TX		806-747-8923	
Med Flight Air Ambulance- 2301 Yale Blvd S.E., D3; Albuquerque, NM		505-842-4433	
SB Air Med Service- 2505 Clark Carr Loc	pp S.E.; Albuquerque, NM	505-842-4949	
<u>Other</u>			
Boots & Coots IWC		800-256-9688	or 281-931-8884
Cudd Pressure Control		432-699-0139	or 432-563 - 3356
Haliburton		575-746-2757	
B.J. Services		575-746-3569	


H2S Rig Diagram





Cueva De Oro Fed #203H H₅S Contingency Plan: 1 Mile Radius Map

Section 21, Township 20S, Range 29E Eddy County, New Mexico

Surface Hole Location









Survey Report



Company: Project: Site: Well: Wellbore: Design: Project	Matador Resour Eddy County, N Cueva De Oro F No. 203H OH Prelim Plan A Eddy Cour	rces M Fed (113-123-133- ty, NM	203)	Local Co TVD Refe MD Refe North Re Survey C Database	o-ordinate Refere erence: rence: sference: Calculation Meth e:	ence: lod:	Well No. 203H well @ 3304.50u well @ 3304.50u Grid Minimum Curvati WellPlanner1	sft sft ure		
Map System: Geo Datum: Map Zone:	US State Pla NAD 1927 (I New Mexico	ane 1927 (Exact s NADCON CONUS East 3001	olution) ;)	Systen	n Datum:		Mean Sea Level	l		
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From (usft) 0 400 1,220 3,100	To (usft) .00 400. .00 1,220. .00 3,100. .00 9,723.	Survey (Wellb 00 Prelim Plan A (00 Prelim Plan A (00 Prelim Plan A (00 Prelim Plan A (ore) (OH) (OH) (OH) (OH)		Tool Name MWD - OWSG MWD - OWSG MWD - OWSG MWD - OWSG	; ; ;	Description MWD - OWSG MWD - OWSG MWD - OWSG MWD - OWSG			
9,723	.00 14,209.	32 Prelim Plan A ((OH)		MWD - OWSG	5	MWD - OWSG	· · ·	-	
Measure Depth (usft)	d Inclination (°)	n Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	
0.	.00 0.	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
[Cuava# 100. 200.	#203H]FPP - [Cua .00 0. .00 0.	iva#203H]LPP 00 0.00 00 0.00	100.00 200.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	
300. 400.	.00 0. .00 0.	00 0.00 00 0.00	300.00 400.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	0.00 0.00	

404.00

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Survey Report



Company:	Matador Resources	Local Co-ordinate Reference:	Well No. 203H
Project:	Eddy County, NM	TVD Reference:	well @ 3304.50usft
Site:	Cueva De Oro Fed (113-123-133-203)	MD Reference:	well @ 3304 50usft
Well:	No. 203H	North Reference:	Grid
Wellbore:	ОН	Survey Calculation Method:	Minimum Curvature
Design:	Prelim Plan A	Database:	WellPlanner1

Planned Survey

Depth Instantian Azimuth Pepth *HX-S rtg/W Retur Rate Rate <th>Measured</th> <th></th> <th></th> <th>Vertical</th> <th></th> <th></th> <th>Vertical</th> <th>Dogleg</th> <th>Build</th> <th>Turn</th>	Measured			Vertical			Vertical	Dogleg	Build	Turn
27* 500.00 0.00 500.00 0.00 500.00 0.00	Depth (usft)	Inclination (°)	Azimuth (°)	Depth (usft)	+N/-S (usft)	+E/-W (usft)	Section (usft)	Rate (*/100usft)	Rate (°/100usft)	Rate (°/100usft)
50 00 0.00 500.00 0	20"									
BADOD DAG DAG <thdag< th=""> <thdag< td="" th<=""><td>500.00</td><td>0.00</td><td>0.00</td><td>600.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td></thdag<></thdag<>	500.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00 2.00 3.00 60.00 1.70 0.03 1.70 2.00 2.00 2.00 0.00 900.00 4.00 347.05 799.84 6.60 -1.56 -6.80 2.00 2.00 0.00 900.00 6.00 347.05 899.45 15.29 -1.53 2.00 2.00 0.00 900.00 7.00 347.05 998.76 22.75 -6.15 -26.76 0.00 0.00 0.00 1.000.00 5.41 347.05 1098.14 37.56 -8.64 -37.58 2.00 -2.00 0.00 1.200.00 3.41 347.05 1.297.74 46.15 -11.31 -40.18 2.00 -2.00 0.00 1.300.00 1.41 347.05 1.297.74 46.15 -11.31 -40.18 2.00 -2.00 0.00 1.300.00 0.00 1.397.73 50.00 -11.50 -50.03 0.00 0.00 0.00 0.00 0.00 0.00 <t< td=""><td>00.000</td><td>0.00</td><td>0.00</td><td>500.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td><td>0.00</td></t<>	00.000	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
B00.00 4.00 347.05 799.84 6.80 -1.56 -8.80 2.00 2.00 0.00 990.00 7.00 347.05 899.45 15.29 -3.52 -15.30 2.00 2.00 0.00 1.000.00 7.00 347.05 949.13 2.081 -4.79 -20.82 2.00 2.00 0.00 1.000.00 7.00 347.05 949.75 2.67 -6.71 -29.21 0.00 0.00 0.00 1.200.00 3.41 347.05 1.197.83 45.05 -10.36 -45.08 2.00 -2.00 0.00 1.200.00 3.41 347.05 1.297.74 49.15 -11.31 -49.18 2.00 -2.00 0.00 1.300.00 1.41 347.05 1.297.74 49.15 -11.31 -49.18 2.00 -2.00 0.00 1.300.00 0.00 1.497.73 50.00 -11.50 -50.03 0.00 0.00 1.00 1.60 1.60 .60.3<	700.00	2.00	347.05	600.00	1.70	0.00	1.70	0.00	0.00	0.00
B00.00 6.00 347.05 198.64 6.00 1.58 4.500 2.00 2.00 0.00 900.00 6.00 347.05 896.45 15.29 -3.52 -15.30 2.00 2.00 0.00 1,000.00 7.00 347.05 998.76 26.75 -6.15 -26.76 0.00 0.00 0.00 1,000.00 5.41 347.05 1.098.14 37.56 -8.64 -37.58 2.00 -2.00 0.00 1,200.00 3.41 347.05 1.197.83 45.05 -10.69 -46.48 2.00 -2.00 0.00 1,282.02 2.89 0.00 1.388 2.00 -2.00 0.00 1,370.55 0.00 0.00 1.389.74 49.15 -11.31 -49.18 2.00 -2.00 0.00 1,400.00 0.00 0.00 1.397.73 50.00 -11.50 -50.03 0.00 0.00 0.00 1.00 1.00 1.00 0.00 0.00	200.00	2.00	347.05	700.84	1.70	-0.39	-1.70	2.00	2.00	0.00
900.00 6.00 347.05 899.45 15.29 -1.5.2 -1.6.20 2.00 2.00 0.00 1,000.00 7.00 347.05 998.76 26.75 -6.15 -26.76 0.00 0.00 0.00 1,000.00 5.41 347.05 1,019.16 291 -6.71 -26.76 0.00 0.00 0.00 1,200.00 3.41 347.05 1,197.83 45.05 -10.36 -45.08 2.00 -2.00 0.00 1,200.00 3.41 347.05 1,274.00 46.46 -10.69 -46.48 2.00 -2.00 0.00 1,300.00 1.41 347.05 1.274.40 45.15 -11.31 -46.18 2.00 -2.00 0.00 1,400.00 0.00 0.00 1.387.73 50.00 -11.50 -50.03 0.00 0.00 0.00 1.00 0.00 0.00 1.00 0.00 0.00 0.00 1.00 0.00 0.00 0.00 0.00 0.00 <td>800.00</td> <td>4.00</td> <td>347.05</td> <td>/ 99.04</td> <td>0.60</td> <td>-1.00</td> <td>-0.60</td> <td>2.00</td> <td>2.00</td> <td>0.00</td>	800.00	4.00	347.05	/ 99.04	0.60	-1.00	-0.60	2.00	2.00	0.00
95.00 7.00 347.05 949.13 20.81 -4.79 -20.82 2.00 2.00 0.00	900.00	6.00	347.05	899.45	15.29	-3.52	-15.30	2.00	2.00	0.00
1,000.00 7,00 347.05 998.76 26.75 -4.15 -26.76 0.00 0.00 0.00 1,000.00 5.41 347.05 1.098.14 37.56 -8.64 -37.58 2.00 -2.00 0.00 1,200.00 3.41 347.05 1.197.83 45.05 -10.36 -45.08 2.00 -2.00 0.00 1,200.00 3.41 347.05 1.224.00 46.46 -10.36 -45.08 2.00 -2.00 0.00 1,300.00 1.41 347.05 1.297.74 49.15 -11.31 -49.18 2.00 -2.00 0.00 1,300.00 0.00 0.00 1.387.73 50.00 -11.50 -50.03 0.00 0.00 0.00 1,600.00 0.00 0.00 1.597.73 50.00 -11.50 -50.03 0.00 0.00 0.00 1.00 1.00 1.00 0.00 0.00 1.00 1.00 1.00 0.00 0.00 0.00 1.00 1.00	950.00	7.00	347.05	949.13	20.81	-4.79	-20.82	2.00	2.00	0.00
1.020.55 7.00 347.05 1.09.16 29.19 -6.71 -29.21 0.00 0.00 1.00 1.200.00 5.41 347.05 1.098.14 37.56 -8.64 -37.56 2.00 -2.00 0.00 1.200.00 3.41 347.05 1.197.83 45.05 -10.69 -46.48 2.00 -2.00 0.00 1.300.00 1.41 347.05 1.297.74 49.15 -11.31 -49.18 2.00 -2.00 0.00 1.300.00 0.00 0.00 1.397.73 50.00 -11.50 -50.03 0.00 0.00 0.00 1.00 1.600.00 0.00 0.00 1.697.73 50.00 -11.50 -50.03 0.00 0.00 0.00 1.00 1.00 0.00	1,000.00	7.00	347.05	998.76	26.75	-6.15	-26.76	0.00	0.00	0.00
1,100.00 5,41 347.05 1.998.14 37.56 -8.64 -37.58 2.00 -2.00 0.00 1,200.00 3,41 347.05 1.978.3 45.05 -10.36 45.08 2.00 -2.00 0.00 1,226.20 2.89 347.05 1.224.00 46.46 -10.69 -46.48 2.00 -2.00 0.00 13.300.00 1.41 347.05 1.297.74 49.15 -11.31 -49.18 2.00 -2.00 0.00 1.370.55 0.00 0.00 1.387.73 50.00 -11.50 -50.03 0.00 0.00 0.00 1.00 1.00 1.00 0.	1,020.55	7.00	347.05	1,019.16	29.19	-6.71	-29.21	0.00	0.00	0.00
1,200.00 3.41 347.05 1.197.83 45.05 -10.36 -46.08 2.00 -2.00 0.00 13.36" - - - - - - - 0.00 13.36" - - - - - - - - 0.00 13.37.55 0.00 0.00 1.362.29 50.00 -11.50 -50.03 0.00 <t< td=""><td>1,100.00</td><td>5.41</td><td>347.05</td><td>1,098.14</td><td>37.56</td><td>-8.64</td><td>-37.58</td><td>2.00</td><td>-2.00</td><td>0.00</td></t<>	1,100.00	5.41	347.05	1,098.14	37.56	-8.64	-37.58	2.00	-2.00	0.00
1.226.20 2.89 347.05 1.224.00 46.46 -10.69 -46.48 2.00 -2.00 0.00 13.30" 1.300.00 1.41 347.05 1.297.74 49.15 -11.31 -49.18 2.00 -2.00 0.00 1.370.55 0.00 0.00 1.368.29 50.00 -11.50 -50.03 0.00 0.00 0.00 1.400.00 0.00 0.00 1.397.73 50.00 -11.50 -50.03 0.00 0.00 0.00 1.600.00 0.00 0.00 1.697.73 50.00 -11.50 -50.03 0.00 0.00 0.00 1.800.00 0.00 0.00 1.897.73 50.00 -11.50 -50.03 0.00 0.00 0.00 0.00 1.800.00 0.00 0.00 1.897.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2.000.00 0.00 0.00 2.997.73 50.00 -11.50 -50.03 0.00 0.00	1,200.00	3.41	347.05	1,197.83	45.05	-10.36	-45.08	2.00	-2.00	0.00
13 38"	1,226.20	2.89	347.05	1,224.00	46.46	-10.69	-46.48	2.00	-2.00	0.00
1,300.00 1,41 347.05 1,297.74 49.15 -11.31 -40.18 2.00 -2.00 0.00 1,370.55 0.00 0.00 1,368.29 50.00 -11.50 -50.03 2.00 -2.00 0.00 1,600.00 0.00 0.00 1,397.73 50.00 -11.50 -50.03 0.00 0.00 0.00 1,600.00 0.00 0.00 1,597.73 50.00 -11.50 -50.03 0.00 0.00 0.00 1,800.00 0.00 0.00 1,797.73 50.00 -11.50 -50.03 0.00 0.00 0.00 1,800.00 0.00 0.00 1,897.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,000.00 0.00 0.00 1,897.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2.00 0.00 0.00 0.00 2.00 0.00 0.00 0.00 2.00 0.00 0.00 0.00 2.00	13 3/8"									
1,370,55 0.00 1,382,29 50.00 -11.50 -50.03 2.00 -2.00 0.00 1,400,00 0.00 0.00 1,397,73 50.00 -11.50 -50.03 0.00 0.00 0.00 1,500,00 0.00 0.00 1,597,73 50.00 -11.50 -50.03 0.00 0.00 0.00 1,700,00 0.00 0.00 1,597,73 50.00 -11.50 -50.03 0.00 0.00 0.00 1,800,00 0.00 0.00 1,897,73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,000,00 0.00 0.00 1,897,73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,000,00 0.00 0.00 2,997,73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,90,00 0.00 0.00 0.00 2,90,00 0.00 0.00 0.00 2,90,00 0.00 0.00 0.00 0.00 0.00	1,300.00	1.41	347.05	1,297.74	49.15	-11.31	-49.18	2.00	-2.00	0.00
1.400.00 0.00 1.397.73 50.00 -11.50 -50.03 0.00 0.00 0.00 1.500.00 0.00 0.00 1.497.73 50.00 -11.50 -50.03 0.00 0.00 0.00 1.600.00 0.00 0.00 1.597.73 50.00 -11.50 -50.03 0.00 0.00 0.00 1.800.00 0.00 0.00 1.697.73 50.00 -11.50 -50.03 0.00 0.00 0.00 1.800.00 0.00 1.997.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2.000.00 0.00 0.00 1.997.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2.00 0.00 0.00 0.00 2.00 0.00 0.00 2.097.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2.297.73 50.00 -11.50 -50.03 0.00 0.00 2.00 0.00 0.00 2.297.73 50.00 -	1,370.55	0.00	0.00	1,368.29	50.00	-11.50	-50.03	2.00	-2.00	0.00
1,500.00 0.00 1,497.73 50.00 -11.50 -50.03 0.00 0.00 0.00 1,600.00 0.00 1,697.73 50.00 -11.50 -50.03 0.00 0.00 0.00 1,800.00 0.00 1,697.73 50.00 -11.50 -50.03 0.00 0.00 0.00 1,800.00 0.00 1,777 50.00 -11.50 -50.03 0.00 0.00 0.00 1,800.00 0.00 1,9773 50.00 -11.50 -50.03 0.00 0.00 0.00 2,000.00 0.00 0.00 1,9773 50.00 -11.50 -50.03 0.00 0.00 0.00 2,000.00 0.00 0.00 2,9773 50.00 -11.50 -50.03 0.00 0.00 0.00 2,300.00 0.00 0.00 2,497.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,600.00 0.00 0.00 2,597.73 50.00 -11.50<	1,400.00	0.00	0.00	1,397.73	50.00	-11.50	-50.03	0.00	0.00	0.00
1,600,00 0,00 1,597,73 50,00 -11,50 -50,03 0,00 0,00 0,00 1,700,00 0,00 0,00 1,697,73 50,00 -11,50 -50,03 0,00 <t< td=""><td>1,500.00</td><td>0.00</td><td>0.00</td><td>1,497.73</td><td>50.00</td><td>-11.50</td><td>-50.03</td><td>0.00</td><td>0.00</td><td>0.00</td></t<>	1,500.00	0.00	0.00	1,497.73	50.00	-11.50	-50.03	0.00	0.00	0.00
1,700.00 0.00 1,697.73 50.00 -11.50 -50.03 0.00 0.00 0.00 1,800.00 0.00 0.00 1,777.73 50.00 -11.50 -50.03 0.00 0.00 0.00 1,900.00 0.00 0.00 1,897.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,100.00 0.00 0.00 2,197.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,200.00 0.00 0.00 2,197.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,300.00 0.00 0.00 2,297.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,400.00 0.00 0.00 2,397.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,397.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,397.73 50.00 -11.50 -50.03 0.00 0.00	1,600.00	0.00	0.00	1,597.73	50.00	-11.50	-50.03	0.00	0.00	0.00
1,800.00 0.00 1,797.73 50.00 -11.50 -50.03 0.00 0.00 0.00 1,900.00 0.00 0.00 1,897.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,000.00 0.00 0.00 1,997.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,000.00 0.00 0.00 2,997.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,000.00 0.00 0.00 2,997.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,300.00 0.00 0.00 2,997.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,600.00 0.00 0.00 2,997.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,600.00 0.00 0.00 2,997.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,800.00 0.0	1,700.00	0.00	0.00	1,697.73	50.00	-11.50	-50.03	0.00	0.00	0.00
1,900.00 0.00 1,897.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,000.00 0.00 0.00 1,997.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,000.00 0.00 0.00 2,097.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,000.00 0.00 0.00 2,997.73 50.00 -11.50 -50.03 0.00	1,800.00	0.00	0.00	1,797.73	50.00	-11.50	-50.03	0.00	0.00	0.00
2000.00 0.00 1.997.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2100.00 0.00 0.00 2.097.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2200.00 0.00 0.00 2.197.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2300.00 0.00 0.00 2.297.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,500.00 0.00 2.497.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,600.00 0.00 0.00 2.497.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,600.00 0.00 0.00 2.697.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2.697.73 50.00 -11.50 -50.03 0.00 0.00 2.90.00 0.00 2.697.73 50.00 -11.50 -50.03 0.00 0.00 <	1,900.00	0.00	0.00	1,897.73	50.00	-11.50	-50.03	0.00	0.00	0.00
2,100.00 0.00 2,097,73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,000.00 0.00 0.00 2,197,73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,300.00 0.00 0.00 2,297,73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,400.00 0.00 0.00 2,397,73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,600.00 0.00 0.00 2,697,73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,600.00 0.00 0.00 2,697,73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,700.00 0.00 0.00 2,697,73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,800.00 0.00 0.00 2,897,73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,000.00 0.0	2,000.00	0.00	0.00	1,997.73	50.00	-11.50	-50.03	0.00	0.00	0.00
2,200,00 0.00 2,197,73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,300,00 0.00 0.00 2,297,73 50.00 -11.50 -50.03 0.00 0.00 0.00 0.00 2,400,00 0.00 0.00 2,397,73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,500,00 0.00 0.00 2,497,73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,600,00 0.00 0.00 2,697,73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,700,00 0.00 0.00 2,697,73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,800,00 0.00 0.00 2,697,73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,900,00 0.00 0.00 2,997,73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,000,0	2,100.00	0.00	0.00	2,097.73	50.00	-11.50	-50.03	0.00	0.00	0.00
2,300,00 0,00 0,00 2,297,73 50,00 -11,50 -50,03 0,00 0,00 0,00 2,400,00 0,00 0,00 2,397,73 50,00 -11,50 -50,03 0,00 0,00 0,00 2,500,00 0,00 0,00 2,497,73 50,00 -11,50 -50,03 0,00 0,00 0,00 2,600,00 0,00 0,00 2,597,73 50,00 -11,50 -50,03 0,00 0,00 0,00 2,600,00 0,00 0,00 2,697,73 50,00 -11,50 -50,03 0,00 0,00 0,00 2,800,00 0,00 0,00 2,697,73 50,00 -11,50 -50,03 0,00 0,00 0,00 2,900,00 0,00 0,00 2,997,73 50,00 -11,50 -50,03 0,00 0,00 0,00 3,000,00 0,00 0,00 3,097,73 50,00 -11,50 -50,03 0,00 0,00 0,00 3,100,0	2.200.00	0.00	0.00	2,197,73	50.00	-11.50	-50.03	0.00	0.00	0.00
2,400.00 0.00 2,397.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,500.00 0.00 0.00 2,497.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,600.00 0.00 0.00 2,597.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,700.00 0.00 0.00 2,697.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,800.00 0.00 0.00 2,897.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,900.00 0.00 0.00 2,897.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,000.00 0.00 0.00 2,897.73 50.00 -11.50 -50.03 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	2,300.00	0.00	0.00	2,297.73	50.00	-11.50	-50.03	0.00	0.00	0.00
2,500.00 0.00 2,497.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,600.00 0.00 0.00 2,597.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,700.00 0.00 0.00 2,697.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,800.00 0.00 0.00 2,797.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,800.00 0.00 0.00 2,897.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,000.00 0.00 0.00 2,897.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,000.00 0.00 3,097.73 50.00 -11.50 -50.03 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00 0.00	2,400.00	0.00	0.00	2,397.73	50.00	-11.50	-50.03	0.00	0.00	0.00
2,600.00 0.00 2,597.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,700.00 0.00 0.00 2,697.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,800.00 0.00 0.00 2,797.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,900.00 0.00 0.00 2,897.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,000.00 0.00 0.00 2,997.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,000.00 0.00 0.00 3,997.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,106.27 0.00 0.00 3,197.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,200.00 0.00 0.00 3,297.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,400.00 0.0	2,500.00	0.00	0.00	2,497.73	50.00	-11.50	-50.03	0.00	0.00	0.00
2,700.00 0.00 2,697.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,800.00 0.00 0.00 2,797.73 50.00 -11.50 -50.03 0.00 0.00 0.00 0.00 2,900.00 0.00 0.00 2,897.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,000.00 0.00 0.00 2,997.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,000.00 0.00 0.00 2,997.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,100.00 0.00 3,097.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,106.27 0.00 0.00 3,197.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,200.00 0.00 0.00 3,297.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,400.00 0.0	2,600.00	0.00	0.00	2,597.73	50.00	-11.50	-50.03	0.00	0.00	0.00
2,800.00 0.00 2,797.73 50.00 -11.50 -50.03 0.00 0.00 0.00 2,900.00 0.00 0.00 2,897.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,000.00 0.00 0.00 2,897.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,000.00 0.00 0.00 3,097.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,100.00 0.00 0.00 3,097.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,106.27 0.00 0.00 3,197.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,200.00 0.00 0.00 3,197.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,300.00 0.00 0.00 3,397.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,400.00 0.0	2,700.00	0.00	0.00	2,697.73	50.00	-11.50	-50.03	0.00	0.00	0.00
2.900.00 0.00 2.897.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3.000.00 0.00 0.00 2.997.73 50.00 -11.50 -50.03 0.00 0.00 0.00 0.00 3.100.00 0.00 0.00 3.097.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3.106.27 0.00 0.00 3.197.73 50.00 -11.50 -50.03 0.00 0.00 0.00 95/8"	2,800.00	0.00	0.00	2,797.73	50.00	-11.50	-50.03	0.00	0.00	0.00
3,000.00 0.00 2,997.73 50.00 -11.50 -50.03 0.00 <td>2,900.00</td> <td>0.00</td> <td>0.00</td> <td>2,897.73</td> <td>50.00</td> <td>-11.50</td> <td>-50.03</td> <td>0.00</td> <td>0.00</td> <td>0.00</td>	2,900.00	0.00	0.00	2,897.73	50.00	-11.50	-50.03	0.00	0.00	0.00
3,100.00 0.00 3,097.73 50.00 -11.50 -50.03 0.00 0.00 0.00 9.00 3,106.27 0.00 0.00 3,104.00 50.00 -11.50 -50.03 0.00 0.00 0.00 9.00 95/8" 3,200.00 0.00 3,197.73 50.00 -11.50 -50.03 0.00 0.00 0.00 9.00 3,200.00 0.00 0.00 3,197.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,300.00 0.00 0.00 3,197.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,400.00 0.00 0.00 3,397.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,600.00 0.00 0.00 3,497.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,600.00 0.00 0.00 3,697.73 50.00 -11.50 -50.03 0.00 0.00 0.0	3.000.00	0.00	0.00	2.997.73	50.00	-11 50	-50.03	0.00	0.00	0.00
3,106.27 0.00 0.00 3,104.00 50.00 -11.50 -50.03 0.00 0.00 0.00 9.00 9 5/8" 3,200.00 0.00 0.00 3,197.73 50.00 -11.50 -50.03 0.00 0.00 0.00 0.00 3,300.00 0.00 0.00 3,197.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,400.00 0.00 0.00 3,397.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,400.00 0.00 0.00 3,397.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,400.00 0.00 0.00 3,397.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,600.00 0.00 0.00 3,497.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,600.00 0.00 0.00 3,697.73 50.00 -11.50 -50.03 0.00 0.	3.100.00	0.00	0.00	3.097.73	50.00	-11.50	-50.03	0.00	0.00	0.00
9,100,11 0.00	3 106 27	0.00	0.00	3 104 00	50.00	-11.50	-50.03	0.00	0.00	0.00
3,200.00 0.00 0.00 3,197.73 50.00 -11.50 -50.03 0.00 0.00 0.00 0.00 3,300.00 0.00 0.00 3,297.73 50.00 -11.50 -50.03 0.00 0.00 0.00 0.00 3,400.00 0.00 0.00 3,397.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,600.00 0.00 0.00 3,497.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,600.00 0.00 3,497.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,600.00 0.00 3,497.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,600.00 0.00 3,697.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,800.00 0.00 0.00 3,897.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,900.00 0.0	9 5/8"	0.00	0.00	0,101.00	00.00	11.00	00.00	0.00	0.00	0.00
3,300.00 0.00 0.00 3,297.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,400.00 0.00 0.00 3,397.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,500.00 0.00 0.00 3,497.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,500.00 0.00 0.00 3,497.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,600.00 0.00 3,497.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,600.00 0.00 3,597.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,700.00 0.00 3,697.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,800.00 0.00 0.00 3,897.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,900.00 0.00 0.00 3,8	3.200.00	0.00	0.00	3,197,73	50.00	-11.50	-50 03	0.00	0.00	0.00
3,400.00 0.00 0.00 3,397.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,500.00 0.00 0.00 3,497.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,600.00 0.00 0.00 3,597.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,600.00 0.00 0.00 3,597.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,700.00 0.00 0.00 3,697.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,800.00 0.00 0.00 3,797.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,900.00 0.00 0.00 3,897.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,900.00 0.00 0.00 3,897.73 50.00 -11.50 -50.03 0.00 0.00 0.00 4,000.0	3,300.00	0.00	0.00	3,297.73	50.00	-11.50	-50.03	0.00	0.00	0.00
3,400.00 0.00 0.00 3,97.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,500.00 0.00 0.00 3,497.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,600.00 0.00 0.00 3,597.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,700.00 0.00 0.00 3,697.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,800.00 0.00 0.00 3,897.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,900.00 0.00 0.00 3,897.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,900.00 0.00 0.00 3,897.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,900.00 0.00 0.00 3,897.73 50.00 -11.50 -50.03 0.00 0.00 0.00 4,000.00	3 400 00	0.00	0.00	3 307 73	50.00	11 60	50.02	0.00	0.00	0.00
3,300.00 0.00 0.00 3,977.73 50.00 -11.50 -50.03 0.00 0.00 0.00 0.00 3,600.00 0.00 0.00 3,597.73 50.00 -11.50 -50.03 0.00 0.00 0.00 0.00 3,700.00 0.00 0.00 3,697.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,800.00 0.00 0.00 3,797.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,900.00 0.00 0.00 3,897.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,900.00 0.00 0.00 3,897.73 50.00 -11.50 -50.03 0.00 0.00 0.00 4,000.00 0.00 0.00 3,997.73 50.00 -11.50 -50.03 0.00 0.00 0.00	3,400.00	0.00	0.00	3,337.73	50.00	-11.50	-50.05	0.00	0.00	0.00
3,600.00 0.00 0.00 3,977.73 50.00 -11.50 -50.03 0.00 0.00 0.00 0.00 3,700.00 0.00 0.00 3,697.73 50.00 -11.50 -50.03 0.00 0.00 0.00 0.00 3,800.00 0.00 0.00 3,797.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,900.00 0.00 0.00 3,897.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,900.00 0.00 0.00 3,897.73 50.00 -11.50 -50.03 0.00 0.00 0.00 4,000.00 0.00 3,997.73 50.00 -11.50 -50.03 0.00 0.00 0.00	3,500.00	0.00	0.00	3,497.73	50.00	-11.50	-50.03	0.00	0.00	0.00
3,700.00 0.00 0.00 3,897.73 50.00 -11.50 -50.03 0.00 0.00 0.00 0.00 3,800.00 0.00 0.00 3,797.73 50.00 -11.50 -50.03 0.00 0.00 0.00 3,900.00 0.00 0.00 3,897.73 50.00 -11.50 -50.03 0.00 0.00 0.00 4,000.00 0.00 0.00 3,997.73 50.00 -11.50 -50.03 0.00 0.00 0.00	3,800.00	0.00	0.00	3,397.73	50.00	-11.50	-50.03	0.00	0.00	0.00
3,900.00 0.00 0.00 3,97.73 50.00 -11.50 -50.03 0.00 0.00 0.00 0.00 3,900.00 0.00 0.00 3,897.73 50.00 -11.50 -50.03 0.00 0.00 0.00 4,000.00 0.00 0.00 3,997.73 50.00 -11.50 -50.03 0.00 0.00 0.00	3,700.00	0.00	0.00	3,081.13	50.00	-11.50	-20.03	0.00	0.00	0.00
3,900.00 0.00 0.00 3,897.73 50.00 -11.50 -50.03 0.00 0.00 0.00 4,000.00 0.00 0.00 3,997.73 50.00 -11.50 -50.03 0.00 0.00 0.00 0.00	3,800.00	0.00	0.00	3.191.13	50.00	-11.50	-50.03	0.00	0.00	0.00
4,000.00 0.00 3,997.73 50.00 -11.50 -50.03 0.00 0.00 0.00	3,900.00	0.00	0.00	3,897.73	50.00	-11.50	-50.03	0.00	0.00	0.00
	4,000.00	0.00	0.00	3,997.73	50.00	-11.50	-50.03	0.00	0.00	0.00



Survey Report



Company:	Matador Resources	Local Co-ordinate Reference:	Well No. 203H
Project:	Eddy County, NM	TVD Reference:	well @ 3304.50usft
Site:	Cueva De Oro Fed (113-123-133-203)	MD Reference:	well @ 3304.50usft
Well:	No. 203H	North Reference:	Grid
Wellbore:	ОН	Survey Calculation Method:	Minimum Curvature
Design:	Prelim Plan A	Database:	WellPlanner1

Planned Survey

Measured			Vertical			Vertical	Dogleg	Build	Turn
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Section	Rate	Rate	Rate
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100usft)	(°/100usft)	(°/100usft)
4,100.00	0.00	0.00	4,097.73	50.00	-11.50	-50.03	0.00	0.00	0.00
4,200.00	0.00	0.00	4,197.73	50.00	-11.50	-50.03	0.00	0.00	0.00
4,300.00	0.00	0.00	4,297.73	50.00	-11.50	-50.03	0.00	0.00	0.00
4,400.00	0.00	0.00	4,397.73	50.00	-11.50	-50.03	0.00	0.00	0.00
4,500.00	0.00	0.00	4,497.73	50.00	-11.50	-50.03	0.00	0.00	0.00
4,600.00	0.00	0.00	4,597.73	50.00	-11.50	-50.03	0.00	0.00	0.00
4,700.00	0.00	0.00	4,697.73	50.00	-11.50	-50.03	0.00	0.00	0.00
4,800.00	0.00	0.00	4,797.73	50.00	-11.50	-50.03	0.00	0.00	0.00
4,900.00	0.00	0.00	4,897.73	50.00	-11.50	-50.03	0.00	0.00	0.00
5,000.00	0.00	0.00	4,997.73	50.00	-11.50	-50.03	0.00	0.00	0.00
5,100.00	0.00	0.00	5,097.73	50.00	-11.50	-50.03	0.00	0.00	0.00
5,200.00	0.00	0.00	5,197.73	50.00	-11.50	-50.03	0.00	0.00	0.00
5,300.00	0.00	0.00	5,297.73	50.00	-11.50	-50.03	0.00	0.00	0.00
5,400.00	0.00	0.00	5,397.73	50.00	-11.50	-50.03	0.00	0.00	0.00
5,500.00	0.00	0.00	5,497.73	50.00	-11.50	-50.03	0.00	0.00	0.00
5,600.00	0.00	0.00	5,597.73	50.00	-1 1.50	-50.03	0.00	0.00	0.00
5,700.00	0.00	0.00	5,697.73	50.00	-11.50	-50.03	0.00	0.00	0.00
5,800.00	0.00	0.00	5,797.73	50.00	-11.50	-50.03	0.00	0.00	0.00
5,900.00	0.00	0.00	5,897.73	50.00	-11.50	-50.03	0.00	0.00	0.00
6,000.00	0.00	0.00	5,997.73	50.00	-11.50	-50.03	0.00	0.00	0.00
6,100.00	0.00	0.00	6,097.73	50.00	-11.50	-50.03	0.00	0.00	0.00
6,200.00	0.00	0.00	6,197.73	50.00	-11.50	-50.03	0.00	0.00	0.00
6,300.00	0.00	0.00	6,297.73	50.00	-11.50	-50.03	0.00	0.00	0.00
6,400.00	0.00	0.00	6,397.73	50.00	-11.50	-50.03	0.00	0.00	0.00
6,500.00	0.00	0.00	6,497.73	50.00	-11.50	-50.03	0.00	0.00	0.00
6,600.00	0.00	0.00	6,597.73	50.00	-11.50	-50.03	0.00	0.00	0.00
6,700.00	0.00	0.00	6,697.73	50.00	-11.50	-50.03	0.00	0.00	0.00
6,8 00.00	0.00	0.00	6,797.73	50.00	-11.50	-50.03	0.00	0.00	0.00
6,900.00	0.00	0.00	6,897.73	50.00	-11.50	-50.03	0.00	0.00	0.00
7,000.00	0.00	0.00	6,997.73	50.00	-11.50	-50.03	0.00	0.00	0.00
7,100.00	0.00	0.00	7,097.73	50.00	-11.50	-50.03	0.00	0.00	0.00
7,200.00	0.00	0.00	7,197.73	50.00	-11.50	-50.03	0.00	0.00	0.00
7,300.00	0.00	0.00	7,297.73	50.00	-11.50	-50.03	0.00	0.00	0.00
7,400.00	0.00	0.00	7,397.73	50.00	-11.50	-50.03	0.00	0.00	0.00
7,500.00	0.00	0.00	7,497.73	50.00	-11.50	-50.03	0.00	0.00	0.00
7,600.00	0.00	0.00	7,597.73	50.00	-11.50	-50.03	0.00	0.00	0.00
7,700.00	0.00	0.00	7,697.73	50.00	-11.50	-50.03	0.00	0.00	0.00
7,800.00	0.00	0.00	7,797.73	50.00	-11.50	-5 0.03	0.00	0.00	0.00
7,900.00	0.00	0.00	7,897.73	50.00	-11.50	-50.03	0.00	0.00	0.00
8,000.00	0.00	0.00	7,997.73	50.00	-11.50	-50.03	0.00	0.00	0.00
8,100.00	0.00	0.00	8,097.73	50.00	-11.50	-50.03	0.00	0.00	0.00
8,200.00	0.00	0.00	8,197.73	50.00	-11.50	-50.03	0.00	0.00	0.00
8,300.00	0.00	0.00	8,297.73	50.00	-11.50	-50.03	0.00	0.00	0.00

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Survey Report



Company:	Matador Resources	Local Co-ordinate Reference:	Well No. 203H
Project:	Eddy County, NM	TVD Reference:	well @ 3304.50usft
Site:	Cueva De Oro Fed (113-123-133-203)	MD Reference:	well @ 3304.50usft
Well:	No. 203H	North Reference:	Grid
Wellbore:	он	Survey Calculation Method:	Minimum Curvature
Design:	Prelim Plan A	Database:	WellPlanner1

Planned Survey

Measured Depth (usft)	Inclination	Azimuth	Vertical Depth (usft)	+N/-S	+E/-W	Vertical Section	Dogleg Rate (°/100usft)	Build Rate (°(100usft)	Turn Rate (°/100usft)
()		()	(,	(0310)	(usit)	(0011)	(()))))))	(
8,400.00	0.00	0.00	8,397.73	50.00	-11.50	-50.03	0.00	0.00	0.00
8,500.00	0.00	0.00	8,497.73	50.00	-11.50	-50.03	0.00	0.00	0.00
8,600.00	0.00	0.00	8,597.73	50.00	-11.50	-50.03	0.00	0.00	0.00
8,700.00	0.00	0.00	8,697.73	50.00	-11.50	-50.03	0.00	0.00	0.00
8,800.00	0.00	0.00	8,797.73	50.00	-11.50	-50.03	0.00	0.00	0.00
8,888.27	0.00	0.00	8,886.00	50.00	-11.50	-50.03	0.00	0.00	0.00
8,900.00	1.17	179.86	8,897.73	49.88	-11.50	-49.91	10.00	10.00	0.00
8,950.00	6.17	179.86	8,947.61	46.68	-11.49	-46.71	10.00	10.00	0.00
9,000.00	11.17	179.86	8,997.03	39.14	-11.47	-39.17	10.00	10.00	0.00
9,050.00	16.17	179.86	9,045.59	27.32	-11.45	-27.35	10.00	10.00	0.00
9,100.00	21.17	179.86	9,092.95	11.32	-11.41	-11.35	10.00	10.00	0.00
9,150.00	26.17	179.86	9,138.73	-8.75	-11.36	8.72	10.00	10.00	0.00
9,200.00	31.17	179.86	9,182.58	-32.73	-11.30	32.70	10.00	10.00	0.00
9,250.00	36.17	179.86	9,224.18	-60.45	-11.24	60.42	10.00	10.00	0.00
9,300.00	41.17	179.86	9,263.20	-91.68	-11.16	91.65	10.00	10.00	0.00
9.350.00	46.17	179.86	9,299.35	-126.20	-11.08	126.17	10.00	10.00	0.00
9,400.00	51.17	179.86	9,332.36	-163.73	-10.99	163.71	10.00	10.00	0.00
9,450.00	56.17	179.86	9,361.97	-204.00	-10.89	203.97	10.00	10.00	0.00
9,500.00	61.17	179.86	9,387.96	-246.70	-10.79	246.67	10.00	10.00	0.00
9,550.00	66.17	179.86	9,410.13	-291.50	-10.68	291.47	10.00	10.00	0.00
9,600.00	71.17	179.86	9,428.30	-338.06	-10.57	338.03	10.00	10.00	0.00
9,650.00	76.17	179.86	9,442.36	-386.03	-10.46	386.00	10.00	10.00	0.00
9,688.27	80.00	179.86	9,450.25	-423.46	-10.37	423.44	10.00	10.00	0.00
9,700.00	80.70	179.86	9,452.22	-435.03	-10.34	435.00	6.00	6.00	0.00
9,710.00	81.30	179.86	9,453.78	-444.91	-10.32	444.88	6.00	6.00	0.00
7"									
9,750.00	83.70	179.86	9,459.00	-484.56	-10.22	484.54	6.00	6.00	0.00
9,800.00	86.70	179.86	9,463,18	-534.38	-10.10	534.36	6.00	6.00	0.00
9.854.88	90.00	179.86	9,464,76	-589.23	-9.96	589.21	6.00	6.00	0.00
9,900.00	90.00	179.86	9,464.76	-634.35	-9.85	634.33	0.00	0.00	0.00
10,000.00	90.00	179.86	9,464.77	-734.35	-9.60	734.33	0.00	0.00	0.00
10,100.00	90.00	179.86	9,464.77	-834.35	-9.34	834.33	0.00	0.00	0.00
10,200.00	90.00	179.86	9,464.78	-934.35	-9.09	934.33	0.00	0.00	0.00
10,300.00	90.00	179.86	9,464.79	-1,034.35	-8.84	1,034.33	0.00	0.00	0.00
10,400.00	90.00	179.86	9,464.79	-1,134.35	-8.59	1,134.33	0.00	0.00	0.00
10,500.00	90.00	179.86	9,464.80	-1,234.35	-8.34	1,234.33	0.00	0.00	0.00
10,600.00	90.00	179.86	9,464.80	-1,334.35	-8.09	1,334.33	0.00	0.00	0.00
10,700.00	90.00	179.86	9,464.81	-1,434.35	-7.83	1,434.33	0.00	0.00	0.00
10,800.00	90.00	179.86	9,464.81	-1,534.35	-7.58	1,534.33	0.00	0.00	0.00
10,900.00	90.00	179.86	9,464.82	-1,634.35	-7.33	1,634.33	0.00	0.00	0.00
11,000.00	90.00	179.86	9,464.82	-1,734.35	-7.08	1,734.33	0.00	0.00	0.00
11,100.00	90.00	179.86	9,464.83	-1,834.35	-6.83	1,834.33	0.00	0.00	0.00
11,200.00	90.00	179.86	9,464.83	-1,934.35	-6.58	1,934.33	0.00	0.00	0.00
11,300.00	90.00	179.86	9,464.84	-2,034.35	-6.32	2,034.33	0.00	0.00	0.00

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Survey Report



Company:	Matador Resources	Local Co-ordinate Reference:	Well No. 203H
Project:	Eddy County, NM	TVD Reference:	well @ 3304.50usft
Site:	Cueva De Oro Fed (113-123-133-203)	MD Reference:	well @ 3304.50usft
Well:	No. 203H	North Reference:	Grid
Wellbore:	ОН	Survey Calculation Method:	Minimum Curvature
Design:	Prelim Plan A	Database:	WellPlanner1
			···· ··· ··· ·· ·· ··

Planned Survey

Measured			Vertical			Vertical	Dogleg	Build	Turn
Depth	Inclination	Azimuth	Depth	+N/-S	+E/-W	Section	Rate	Rate	Rate
(usft)	(°)	(°)	(usft)	(usft)	(usft)	(usft)	(°/100usft)	(*/100usft)	(°/100usft)
11,400.00	90.00	179.86	9,464.85	-2,134.35	-6.07	2,134.33	0.00	0.00	0.00
11,500.00	90.00	179.86	9,464.85	-2,234.35	-5.82	2,234.33	0.00	0.00	0.00
11,600.00	90.00	179.86	9,464.86	-2,334.35	-5.57	2,334.33	0.00	0.00	0.00
11,700.00	90.00	179.86	9,464.86	-2,434.35	-5.32	2,434.33	0.00	0.00	0.00
11,800.00	90.00	179.86	9,464.87	-2,534.35	-5.07	2,534.33	0.00	0.00	0.00
11,900.00	90.00	179.86	9,464.87	-2,634.35	-4.81	2,634.33	0.00	0.00	0.00
12,000.00	90.00	179.86	9,464.88	-2,734.35	-4.56	2,734.33	0.00	0.00	0.00
12,100.00	90.00	179.86	9,464.88	-2,834.34	-4.31	2,834.33	0.00	0.00	0.00
12,200.00	90.00	179.86	9,464.89	-2,934.34	-4.06	2,934.33	0.00	0.00	0.00
12,300.00	. 90.00	179.86	9,464.90	-3,034.34	-3.81	3,034.33	0.00	0.00	0.00
12,400.00	90.00	179.86	9,464.90	-3,134.34	-3.55	3,134.33	0.00	0.00	0.00
12,500.00	90.00	179.86	9,464.91	-3,234.34	-3.30	3,234.33	0.00	0.00	0.00
12,600.00	90.00	179.86	9,464.91	-3,334.34	-3.05	3,334.33	0.00	0.00	0.00
12,700.00	90.00	179.86	9,464.92	-3,434.34	-2.80	3,434.33	0.00	0.00	0.00
12,800.00	90.00	179.86	9,464.92	-3,534.34	-2.55	3,534.33	0.00	0.00	0.00
12,900.00	90.00	179.86	9,464.93	-3,634.34	-2.30	3,634.33	0.00	0.00	0.00
13,000.00	90.00	179.86	9,464.93	-3,734.34	-2.04	3,734.33	0.00	0.00	0.00
13,100.00	90.00	179.86	9,464.94	-3,834.34	-1.79	3,834.33	0.00	0.00	0.00
13,200.00	90.00	179.86	9,464.94	-3,934.34	-1.54	3,934.33	0.00	0.00	0.00
13,300.00	90.00	179.86	9,464.95	-4,034.34	-1.29	4,034.33	0.00	0.00	0.00
13,400.00	90.00	179.86	9,464.96	-4,134.34	-1.04	4,134.33	0.00	0.00	0.00
13,500.00	90.00	179.86	9,464.96	-4,234.34	-0.79	4,234.33	0.00	0.00	0.00
13,600.00	90.00	179.86	9,464.97	-4,334.34	-0.53	4,334.33	0.00	0.00	0.00
13,700.00	90.00	1 79.8 6	9,464.97	-4,434.34	-0.28	4,434.33	0.00	0.00	0.00
13,800.00	90.00	179.86	9,464.98	-4,534.34	-0.03	4,534.33	0.00	0.00	0.00
13,900.00	90.00	179.86	9,464.98	-4,634.34	0.22	4,634.33	0.00	0.00	0.00
14,000.00	90.00	179.86	9,464.99	-4,734.34	0.47	4,734.33	0.00	0.00	0.00
14,100.00	90.00	179.86	9,464.99	-4,834.34	0.72	4,834.33	0.00	0.00	0.00
14,209.66	90.00	179.86	9,465.00	-4,944.00	1.00	4,943.99	0.00	0.00	0.00

[Cuava#203H]BHL



Survey Report



Company:	Matador Resources	Local Co-ordinate Reference:	Well No. 203H
Project:	Eddy County, NM	TVD Reference:	well @ 3304.50usft
Site:	Cueva De Oro Fed (113-123-133-203)	MD Reference:	well @ 3304.50usft
Well:	No. 203H	North Reference:	Grid
Wellbore:	ОН	Survey Calculation Method:	Minimum Curvature
Design:	Prelim Plan A	Database:	WellPlanner1

Design Targets

Target Name

- hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	l atitudo	Longitude
(Cuava#203H)FPP - plan misses target o - Point	0.00 center by 230	0.00 22usft at 0.0	0.00 00usft MD (0	-230.00 0.00 TVD, 0.00	-10.00 N, 0.00 E)	569,421.00	578,963.00	32° 33' 54.663 N	104° 4' 37.291 W
[Cuava#203H]LPP - plan misses target o - Point	0.00 center by 4854	0.00 4.00usft at 0	0.00 .00usft MD (-4,854.00 (0.00 TVD, 0.0)	1.00 0 N, 0.00 E)	564,797.00	578,974.00	32° 33' 8.905 N	104° 4' 37.293 W
[Cuava#203H]BHL - plan hits target cent - Point	0.00 ter	0.00	9,465.00	-4,944.00	1.00	564,707.00	578,974.00	32° 33' 8.014 N	104° 4' 37.295 W

Casing Points

	Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (**)
	404.00	404.00	20"	20	26
	1,226.20	1,224.00	13 3/8"	13-3/8	17-1/2
	3,106.27	3,104.00	9 5/8"	9-5/8	12-1/4
	9,710.00	9,453.78	7"	7	7-1/2
					·
Checked By:			Approved By:	Date	e:

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Anticollision Report



Company:	Matador Resources	Local Co-ordinate Reference:	Well No. 203H
Project:	Eddy County, NM	TVD Reference:	well @ 3304.50usft
Reference Site:	Cueva De Oro Fed (113-123-133-203)	MD Reference:	well @ 3304.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	No. 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Weilbore	ОН	Database:	WellPlanner1
Reference Design:	Prelim Plan A	Offset TVD Reference:	Reference Datum
Reference	Prelim Plan A		

Filter type:	NO GLOBAL FILTER: Using user defined selection & f	iltering criteria		
Interpolation Method:	MD Interval 100.00usft	Error Model:	ISCWSA	
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D	
Results Limited by:	Maximum center-center distance of 2,071.41 usft	Error Surface:	Pedal Curve	
Warning Levels Evaluat	ed at: 2.00 Sigma	Casing Method:	Not applied	

		=====:				 	of these
Survey Tool Program	m	Date 11/23/2016					
From	То						
(usft)	(usft)	Survey (Wellbore)	Tool Na	me Des	scription		
0.00	400.00	Prelim Plan A (OH)	MWD - C	DWSG MW	VD - OWSG		
400.00	1,220.00	Prelim Plan A (OH)	MWD - 0	JWSG MW	VD - OWSG		
1,220.00	3,100.00	Prelim Plan A (OH)	MWD - 0	DWSG MW	VD - OWSG		
3,100.00	9,723.00	Prelim Plan A (OH)	MWD - 0	JWSG MW	VD - OWSG		
9,723.00	14,209.32	Prelim Plan A (OH)	MWD - 0	JWSG MW	VD - OWSG		

Summary						
	Reference	Offset	Dista	nce		
	Measured	Measured	Between	Between	Separation	Warning
Site Name Offset Well - Wellbore - Design	Depth (usft)	Depth (usft)	Centres (usft)	Ellipses (usft)	Factor	
Cueva De Oro Fed (113-123-133-203)						
No. 113H - OH - Prelim Plan A	600.00	600.00	30.00	27.16	10.546 CC, ES	
No. 113H - OH - Prelim Plan A	700.00	698.85	33.43	30.17	10.265 SF	
No. 123H - OH - Prelim Plan A	600.00	600.00	42.43	39.58	14.914 CC, ES	
No. 123H - OH - Prelim Plan A	7,300.00	7,307.88	280.00	246.61	8.386 SF	
No. 133H - OH - Prelim Plan A	712.18	712.60	29.72	26.40	8.958 CC, ES	
No. 133H - OH - Prelim Plan A	14,209.66	13,857.42	235.00	155.71	2.964 SF	

Offeat Da	sian	Cueval		d (113,123	133-203)	- No 113H	- OH - Prelim	Plan A				·	Offset Site Error	0.00 usft
Summer Dream	angin namo (LM			WSG 1720-MW		3100-MWD - 0	wsg	r ian A						
Refer	ence	Offs	et	Semi Major	Axis	3100-4110 - 0			Dista	nce			Offset Well Error:	0.00 usft
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usit)	Vertical Depth (usit)	Reference (usft)	Offset (usit)	Highside Toolface (*)	Offset Wellbon +N/-S (usft)	= Centre +E/-W (usft)	Between Centres (usit)	Between Ellipses (usit)	Minimum Separation (usft)	Separation Factor	Warning	
0.00	0 00	0.00	0.00	0.00	0.00	180.00	-30.00	0.00	30.00					į
100.00	100.00	100.00	100.00	0.13	0.13	180.00	-30.00	0.00	30 00	29.74	0.26	117.047		1
200.00	200.00	200.00	200.00	0.49	0.49	180.00	-30.00	0 00	30.00	29.03	0 97	30.825		
300.00	300.00	300.00	300.00	0.85	0.85	180.00	-30.00	0.00	30.00	28.31	1 69	17.749		
400.00	400.00	400.00	400.00	1.20	1.04	180.00	-30.00	0.00	30.00	27.76	2.24	13.372		
500.00	500.00	500.00	500.00	1 39	1 16	180.00	-30.00	0 00	30.00	27.45	2.55	11.759		
600 00	600.00	600.00	600.00	1.48	1.36	180.00	-30.00	0 00	30.00	27.16	2.84	10.546 CC.	ES	
700.00	699.98	698.85	698.83	1.65	1.60	-167.61	-31.70	-0 05	33 43	30,17	3.26	10.265 SF		
800 008	799.84	797.00	796.84	1.87	1.88	-168 75	-36.77	-0.21	43.69	39.94	3.76	11.632		
900.00	899.45	905 31	894 21	2.14	2.21	-169.82	-44.79	-0.46	60.39	56.04	4.35	13.885		
1,000.00	998 76	1,007.37	991.77	2,44	2.54	-170.76	-53.32	-0.72	80.56	75.59	4.96	16.226		
1,100.00	1,098 14	1.109.30	1,089 46	2.76	2.89	-171.34	-61 86	-0 98	100.09	94.50	5.59	17.905		
1,200.00	1,197.83	1,189.37	1,187 76	3.10	3.18	-171.50	-70 46	-1.24	116.31	110.15	6 16	18.881		
1,300.00	1,297 74	1,288.54	1,286 55	3.27	3.39	-171,39	-79.10	-1.51	129.11	122.60	6.51	19.839		
1,400.00	1,397.73	1,388.08	1,385.71	3.31	3.47	175.96	-87.77	-178	138.64	132.04	6.60	21.015		
1.500.00	1.497 73	1,487.70	1,484.95	3.39	3.58	176.31	-96.45	-2 04	147.31	140.56	6.75	21.828		
1,600 00	1,597.73	1,587.32	1,584.19	3 50	3.72	176.61	-105.13	-2.31	155.99	149.02	6.97	22.375	- <u></u>	

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Matador Resources	1
Project:	Eddy County, NM	
Reference Site:	Cueva De Oro Fed (113-123-133-203)	1
Site Error:	0.00 usft	1
Reference Well:	No. 203H	:
Well Error:	0.00 usft	
Reference Wellbore	OH	1
Reference Design:	Prelim Plan A	

Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method: Output errors are at Database: Offset TVD Reference:

Well No. 203H well @ 3304.50usft well @ 3304.50usft Grid Minimum Curvature 2.00 sigma WellPlanner1 Reference Datum

Offset De	sign	Cueva l	De Oro Fe	ed (113-123-	133-203)	- No. 113H	- OH - Prelim	Plan A					Offset Site Error:	0.00 usft
Survey Progr	nama: 0-M	WD - OWSG, 4	00-MWD - 0	WSG, 1220-MV	VD - OWSG.	3100-MWD - O	WSG						Offset Well Error:	0 00 usft
Refere	Martical	Offse	Martical	Semi Major Reference	Axis	Hinheide	Offerst Wellhow	. Canton	Dista	Batmaan	Minimum	Constation		
Depth (usft)	Depth (usit)	Depth (usft)	Depth (usft)	(usft)	(usit)	Toolface (*)	+N/-S (usft)	+E/-W (usfl)	Centres (usft)	Ellipses (usit)	Separation (usft)	Factor	Warning	
1.700.00	1,697 73	1,686.94	1,683.43	3.64	3.89	176.88	-113.81	-2.58	164.67	157.41	7.26	22.684		
1,800.00	1,797.73	1,786.56	1,782.67	3.82	4 09	177.13	-122.48	-2.85	173.36	165.75	7 60	22.797		
1,900.00	1,897.73	1,886.17	1,881.91	4.01	4 32	177.35	-131.16	-3.11	182.04	174.05	8.00	22.757		
2,000.00	1,997 73	1,985.79	1,981.15	4.23	4.57	177.55	-139.84	-3.38	190.74	182.30	8.44	22.606		
2,100.00	2.097.73	2,005.41	2,060.40	4.47	4.04	177.90	-148.52	-3.05	208.12	190.52	0.91 9.42	22 377		
2,300.00	2.297.73	2,284 65	2.278.88	4.98	5.41	178.06	-165.88	-4 18	216.82	206.87	9.95	21.790		
2,400.00	2,397.73	2,384 27	2,378.12	5.26	5.72	178.20	-174.55	-4 45	225 52	215.01	10.50	21.468		
2,500 00	2,497.73	2,483 89	2,477.36	5.55	6.03	178.33	-183.23	-4.71	234.22	223.14	11.08	21.142		
2.600.00	2,597.73	2,583 51	2,576.60	5.84	6.35	178.46	-191.91	-4.98	242 92	231.25	11.67	20.819		
2,700.00	2,697.73	2,683 13	2,675.84	6.14	6.68	178.57	-200.59	-5.25	251 62	239.35	12.27	20.504		
2.800.00	2,797.73	2,782.75	2,775.08	6.45	7.02	178.68	-209 27	-5.52	260.32	247.44	12.89	20.200		
2,900.00	2,897.73	2,882.37	2,874.32	6.76	7.36	178.78	-217.95	-5.78	269 03	255.51	13.51	19.908		
3,000.00	2,997.73	2,981.99	2,9/3.50	7.07	7.70 P.05	1/8.8/	-226 62	-6.05	277.73	263.58	14.15	19.630		
3,100.00	3,097.73	3 181 23	3,072,00	7.59	8.05	179.04	-235 30	-6.32	200.44	271.00	14.79	19.300		
3 300 00	3 297 73	3 280 85	3 271 28	7 57	8 37	179 12	-252.66	-6.85	303.85	288.64	15.21	19 978		
3,300,00	3 397 73	3 380 47	3 370 52	7.61	8.45	179 12	-261.34	-0 65	312.55	200.04	15.21	20 463		
3,500.00	3,497.73	3,480.09	3,469.76	7.66	8.54	179.26	-270.01	-7.39	321.26	305.89	15.37	20.898		
3,600.00	3,597.73	3,579 71	3,569.00	7.72	8.65	179.33	-278.69	-7 65	329.97	314.46	15.50	21.282		
3,700.00	3,697.73	3,679.33	3,668.24	7.81	8.78	179.39	-287.37	-7 92	338.68	323.01	15.67	21.615		
3.800.00	3,797.73	3,778.94	3.767.48	7.90	8.92	179.45	-296 05	-8 19	347.39	331.52	15.86	21.899		
3,900.00	3,897.73	3,878.56	3,866.72	8.02	9.08	179.51	-304 73	-8.45	356 09	340.01	16.09	22.134		
4,000.00	3,997.73	3,978.18	3,965.96	8.15	9 25	179.56	-313.41	-8.72	364.80	348.46	16.34	22.324		
4,100.00	4,09773	4.077.80	4,065.20	8.29	9.43	179.61	-322 08	-8.99	3/3.51	356.89	16.62	22.472		
4,200.00	4.157.75	4,177.42	4,104,44	0.44	5.02	113.00	-330.70	-9.23	302.22	303.29	10.55	22.3/5		
4,300.00	4.297.73	4,277 04	4.263.68	8 61	9.83	17971	-339.44	-9 52	390.93	373.67	17.26	22.651		
4.400 00	4.397.73	4,384.12	4.370.40	8.78	10.05	179 75	-348.27	-9 79	399.21	381.58	17.63	22.639		•
4,500.00	4 497.73	4,500.29	4,486.42	8.97	10.29	179.78	-353.88	-9 97	404.04	385.99	18.04	22 391		
4,600.00	4,59773	4,01101	4,397.73	9.17	10.47	179.79	-355.00	-10.00	405.00	386.17	18.44	21 961		
				0.00		470 70	000.00	10.00	-03.50		10.04	21.001		
4,800.00	4,797.73	4,811.61	4,797 73	9.59	10.81	179 79	-355.00	-10.00	405.00	385.75	19.25	21.040		
4,900.00	4,89773	4,911,61 5,011,61	4,897 73	9.82	11.00	179.79	~355.00	-10.00	405.00	385.32	19.68	20.580		
5.100.00	5.097 73	5,111,61	5.097.73	10.29	11.39	179 79	-355.00	-10.00	405.00	384.41	20.59	19 671		
5,200.00	5,197 73	5,211.61	5,197.73	10.54	11.59	179 79	-355.00	-10.00	405.00	383.94	21.06	19.227		
5,300.00	5,297 73	5,311.61	5,297.73	10.79	11.81	179.79	-355.00	-10.00	405.00	383.45	21.55	18.790		
5,400.00	5,397.73	5,411.01	5,397.73	11 31	12 03	179.79	-355.00	-10.00	405.00	382.95	22.00	17.945		
5 600 00	5.597.73	5.611.61	5,597 73	11 58	12.49	179 79	-355.00	-10.00	405 00	381.91	23.09	17.537		
5.700.00	5,697.73	5,711.61	5,697 73	11 86	12.73	179 79	-355.00	-10 00	405 00	381 37	23.63	17.140		
E 800.00	6 707 72	5 911 61	5 707 73	17.14	12 09	170 70	355.00	10.00	405.00	200.02	24.47	16 765		
5,000.00	5 897 73	5,011,01	5 897 73	12.14	13.23	179 79	-355.00	-10.00	405.00	380.28	24.17	16 380		
6.000.00	5,997 73	6.011.61	5,997.73	12.71	13.48	179.79	-355.00	-10.00	405.00	379 72	25.29	16.000		
6,100.00	6,097.73	6,111.61	6,097.73	13.00	13,74	179 79	-355.00	-10.00	405.00	379 15	25.86	15.664		
6.200.00	6.197.73	6,211.61	6,197.73	13 29	14.01	179.79	-355.00	-10.00	405.00	378.57	26.43	15.323		
6,300.00	6,297.73	6.311.61	6,297.73	13.59	14,27	179,79	-355.00	-10 00	405.00	377.99	27 01	14.993		
6.400.00	6,397.73	6.411.61	6,397.73	13 88	14,55	179.79	-355 00	-10.00	405.00	377.40	27.60	14.673		
6,500.00	6,497.73	6 511.61	6,497.73	14 19	14.82	179 79	-355 00	-10.00	405 00	376.81	28.20	14.363		
6,506.28	6,504 01	6,517.89	6.504.01	14.21	14.84	179.79	-355.00	-10 00	405.00	376.77	28.24	14.344		
6,600.00	6.597.73	6,600.00	6,586.12	14,49	15.07	179.79	-355.17	-10.00	405.34	376.58	28 77	14.091		
6.700.00	6,697.73	6.659.14	6,645 06	14.80	15.26	179.79	-359.68	-9.99	413.05	383.89	29.16	14.165		

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Offset Site Error:

0.00 usft

Matador Resources	Local Co-ordinate Reference:	Well No. 203H
Eddy County, NM	TVD Reference:	well @ 3304.50usft
Cueva De Oro Fed (113-123-133-203)	MD Reference:	well @ 3304.50usft
0.00 usft	North Reference:	Grid
No. 203H	Survey Calculation Method:	Minimum Curvature
0.00 usft	Output errors are at	2.00 sigma
ОН	Database:	WellPlanner1
Prelim Plan A	Offset TVD Reference:	Reference Datum
	Matador Resources Eddy County, NM Cueva De Oro Fed (113-123-133-203) 0.00 usft No. 203H 0.00 usft OH Prelim Plan A	Matador ResourcesLocal Co-ordinate Reference:Eddy County, NMTVD Reference:Cueva De Oro Fed (113-123-133-203)MD Reference:0.00 usftNorth Reference:No. 203HSurvey Calculation Method:0.00 usftOutput errors are at0HDatabase:Prelim Plan AOffset TVD Reference:

 Offset Design
 Cueva De Oro Fed (113-123-133-203) - No. 113H - OH - Prelim Plan A

 Survey Program:
 0-MWD - OWSG, 400-MWD - OWSG, 1220-MWD - OWSG, 3100-MWD - OWSG

Survey Progr	am: 0-N	IWD - OWSG, 4	00-MWD - 0	WSG. 1220-MV	VD - OWSG	3100-MWD - 0	WSG						Offset Well Error:	0.00 usft
Refere	Ince	Offs	et	Semi Major	Axis				Dista	nce				
Measured	Vertical	Measured	Vertical	Reference	Offset	Highside	Offset Wallbor	e Centre	Between	Between	Minimum	Separation	Warning	
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor		
(usit)	(usit)	(usit)	(usft)	(usft)	(usit)	(T)	(usft)	(usft)	(usit)	(usit)	(usft)			
6,800.00	6,797.73	6,715.85	6,700.86	15.11	15.46	179 79	-369.68	-9.96	430.72	401.31	29.41	14.648		
6,900.00	6,897.73	6,770.10	6,753.06	15.42	15.68	179.79	-384.36	-9.93	457.82	428.31	29.52	15.511		
7,000.00	6,997.73	6,821 13	6,800.69	15.73	15.92	179.80	-402.62	-9.89	493.65	464.13	29.52	16.724		
7,100.00	7,097.73	6,868.50	6,843.30	16.05	16.15	179.80	-423.30	-9.84	537 36	507.92	29.44	18.252		
7,200.00	7,197.73	6.912.00	6,880.80	16.37	16.38	179.80	-445.34	-9.78	588.05	558.74	29.32	20.060		
7,300.00	7,297 73	6,950.00	6,912.10	16.68	16.60	179.80	-466.86	-9.73	644.87	615.73	29.14	22.131		
7,400.00	7,397.73	6,987.64	6,941.64	17.00	16.84	179.81	-490.18	-9.68	706.98	677.97	29.01	24.369		
7,500.00	7,497,73	7,020.16	6,965.88	17.33	17 05	179.81	-511.86	-9.62	773.66	744.80	28.87	26.801		
7,600.00	7,597.73	7,050.00	6,987.00	17.65	17.25	179.81	-532.92	-9.57	844.27	815.52	28.75	29.368		
7,700.00	7,697.73	7,076.06	7,004 54	17.97	17.44	179.81	-552 20	-9.53	918.24	889.60	28.64	32.062		
7,800.00	7,797.73	7,100.00	7,019.85	18.30	17.62	179.81	-570.60	-9.48	995.11	966.54	28.57	34.835		
7,900.00	7,897.73	7,121.73	7,033.08	18.63	17.79	179.82	-587.83	-9.44	1,074.46	1,045.94	28.52	37.673		
8,000.00	7,997.73	7,150.00	7,049.30	18.96	18.02	179.82	-610.99	-9.39	1,156 05	1,127.45	28.60	40.423		
8,100.00	8,097.73	7,150 00	7,049.30	19.29	18.02	179.82	-610.99	-9.39	1,239.41	1,211.00	28.41	43 621		
8,200.00	8,197.73	7,175.59	7,062.97	19.62	18.23	179.82	-632.61	-9 33	1,324.26	1,295 71	28.54	46.394		
8,300.00	8,297.73	7,200.00	7,075.11	19.95	18.44	179.82	-653.79	-9.28	1,410.73	1,382.04	28.69	49.172		
8,400.00	8,397.73	7,200,00	7,075,11	20.28	18.44	179.82	-653.79	-9.28	1,498 22	1,469.58	28.64	52.312		
8,500.00	8,497.73	7,200.00	7,075 11	20.61	18.44	179.82	-653.79	-9.28	1,587.20	1,558.57	28.63	55.432		
8,600.00	8,597.73	7,228.18	7,087.98	20.95	18.69	179.82	-678.86	-9.22	1,676,49	1 647.60	28.89	58.032		
8,700.00	8,697.73	7,250.00	7.097.09	21.28	18.89	179.82	-698.68	-9.18	1,767.09	1,737.98	29.11	60.710		
8,800.00	8,797.73	7,250.00	7,097.09	21.62	18.89	179.82	-698.68	-9.18	1,858.15	1,828.98	29.18	63.686		
8,900.00	8.897 73	7,250.00	7,097.09	21.95	18.89	-0.04	-698.68	-9.18	1,950.05	1,920.78	29.27	66.623		
9,000.00	8,997.03	7,268,46	7,104.20	22.25	19 07	-0.03	-715.72	-9.14	2,037.80	2.008.35	29.45	69 199		



Anticollision Report



Company:	Matador Resources	Local Co-ordinate Reference:	Well No. 203H
Project:	Eddy County, NM	TVD Reference:	well @ 3304.50usft
Reference Site:	Cueva De Oro Fed (113-123-133-203)	MD Reference:	well @ 3304.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	No. 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ОН	Database:	WellPlanner1
Reference Design:	Prelim Plan A	Offset TVD Reference:	Reference Datum

Offset De	sign	Cueva	De Oro Fe	d (113-123-	133-203)	- No. 123H	- OH - Prelim	Plan A					Offset Site Error:	0.00 usfl,
Survey Prog	ram: 0-A	WD-OWSG.	400-MWD - 01	WSG. 1220-MV	VD - OWSG	, 3100-MWD - C	WSG						Offset Well Error:	0.00 usft
Refer	ence	Offs	et	Semi Major	Axis				Dist	Ince				
Measured	Vertical	Measured	Vertical	Reference	Offset	Highside	Offset Wellbor	e Centre	Between	Between	Minimum	Separation	Warning	
Depth	Depth	Depth	Depth		4	Toolface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor		
(usn)	(usn)	(usit)	(usit)	(USR)	(usn)	(1)	(usft)	(usft)	(usft)	(usit)	(usn)			
0.00	0.00	0.00	0.00	0.00	0.00	135.00	-30.00	30.00	42.43					
100.00	100.00	100 00	100.00	0.13	0.13	135.00	-30 00	30.00	42.43	42.17	0.26	165.529		
200.00	200.00	200.00	200.00	0.49	0.49	135.00	-30 00	30.00	42.43	41.45	0.97	43.592		
300.00	300.00	300.00	300.00	0.85	0.85	135.00	-30.00	30.00	42.43	40.74	1.69	25.102		
400.00	400.00	400.00	400.00	1.20	1.04	135.00	-30.00	30.00	42.43	40.18	. 2.24	18.911		
500.00	500.00	500 00	500.00	1.39	1.16	135.00	-30.00	30.00	42.43	39.88	2.55	16.630		
600.00	600.00	600.00	600.00	1.48	1.36	135.00	-30.00	30.00	42.43	39.58	2.84	14.914 C	C. ES	
700.00	699.98	699.07	699.05	1.65	1.61	150.92	-31.68	29.66	44.92	41.67	3.25	13.802		
800.00	799.84	797.47	797.31	1.87	1.88	158.03	-36.67	28.65	53.00	49.24	3.75	14.120		
900.00	899.45	905.59	893.90	2.14	2.21	165.84	-44.81	27.00	67.64	63.28	4.35	15.537		
1,000.00	998.76	i 1, 007.9 4	991.00	2.44	2.55	171.92	-54.81	24.98	87.64	82.67	4.98	17.615		
1,100.00	1,098.14	1,089.84	1.088.25	2.76	2.84	175.75	-64.83	22.95	107.61	102.07	5.54	19.434		
1.200.00	1.197 83	3 1,188.26	1,186,13	3.10	3 19	178.33	-74.91	20.91	124.53	118.36	6.17	20.182		
1,300.00	1.297.74	1,287.21	1.284.55	3.27	3 4 1	-179.71	-85.05	18.85	138.18	131.66	6.52	21.188		
1,400.00	1.397.73	1,386.58	1,383.36	3.31	3.51	168.98	-95.23	16.79	148.66	142.04	6 62	22.471		
1,500.00	1.497.73	1,486.03	1.482.27	3.39	3 62	170.42	-105.42	14.73	158.37	151.60	6.77	23.393		
								_						
1,600.00	1.597.73	1,585 48	1,581 18	3.50	3 78	171.70	-115.61	12.66	168.18	161.18	7.00	24.040		
1,700.00	1 697.73	1,684.93	1,680.09	3.64	3.96	172.83	-125.80	10.60	178.06	170.77	7.29	24 438		
1,800.00	1,797.73	1,784.39	1.778.99	3.82	4.18	173.85	-135 99	8.54	188.00	180.37	7 63	24.629		
1,900.00	1,897.73	1,883.84	1,877.90	4.01	4.42	174.76	-146 17	6 47	197.99	189.96	8.03	24.656		
2,000.00	1.997.73	1,983.29	1,976.81	4 23	4 68	175.59	-156 36	4 4 1	208.03	199.56	8.47	24.561		
2,100 00	2,097.73	2,082.74	2,075.72	4047	4.96	176.34	-166.55	2.35	218 11	209.16	8.95	24 380		
2,200 00	2,197 73	2,182 19	2,174.62	4.72	5.26	177.02	-176.74	0 28	228.22	218.77	9.45	24.142		
2,300.00	2,297.73	2,281.65	2,273 53	4.98	5.56	177.65	-186.93	-1.78	238.36	228.37	9.99	23.868		
2,400.00	2,397.73	2,381 10	2,372 44	5.26	5.88	178.22	-197.12	-3 84	248.53	237.99	10.54	23.575		
2,500.00	2,497.73	2,480 55	2,471 34	5.55	6 21	178.75	-207.31	-5 90	258.72	247 60	11 12	23.273		
2,600.00	2,597.73	2,582.84	2,573 09	5.84	6 55	179.25	-217.62	-7.99	268.78	257 06	11.72	22.934		
2,700.00	2,697.73	2,692.80	2,682.73	6.14	6.90	179.61	-225.67	-9 62	276.08	263.72	12.36	22 331		
2,800.00	2,797 73	2,803 22	2,793 08	6.45	7.23	179.78	-229.59	-10 42	279 64	266 63	13 00	21 503		
2,900.00	2,897.73	2,907.88	2,897 73	6.76	7.50	179.80	-230.00	-10.50	280.00	266.39	13.61	20.578		
3,000.00	2,997 73	3,007.88	2,997 73	7.07	7.76	179.80	-230.00	-10,50	280.00	265.80	14.20	19.712		
2 100 00	2 007 72	7 107 99	3 007 73	7 20	0.00	170.80	220.00	10 50	200.00	005.00	14.00	10.017		
3,100.00	3 107 73	3,107.88	3 107 73	7.59	8.14	179.80	-230.00	10.50	200.00	203.20	14.00	19.520		
3,200.00	2,107,73	3,207.00	3,137,73	7.50	9.16	179.00	-230.00	-10,50	200.00	204 90	15.10	10.335		
3,300.00	3,291.13	3.307.88	3,251 13	7.57	0 10	179.00	-230.00	-10.50	280.00	204.00	15.14	18.490		
3,400.00	3,397.73	3,407.88	3,397 73	7.61	8 19	179.80	-230.00	-10.50	280.00	264 79	15.21	18.412		
3,300.00	3,491.73	3.507.88	3,491.13	00.1	0.24	179.00	-230.00	-10,50	280.00	264.69	15.31	10.289		
3,600,00	3 597 73	3 607 88	3,597,73	7 72	8.30	179.80	-230.00	-10 50	280.00	264 56	15.44	18 129		
3 700 00	3 697 72	3 707 88	3 607 73	7.81	8 1.9	179.80	.230.00	10.50	200.00	264.30	15.51	17 075		
3,00.00	1 707 72	3,807,99	3 707 72	7 60	R 49	170.80	-330 00	-10.00	200.00	204.39	15.01	17 711		
3,000.00	3,107.73	3 007.00	3,6773	, 50	9 E 9	170.00	-230.00	-10.00	200.00	204 19	10.01	17 /60		
3,900.00	3,097.73	3 907 88	3,097.73	802	0.00	179.00	-230.00	-10.50	280.00	203.97	16.04	17.400		
4,000.00	3,997.73	4.007.66	2,991.13	6 15	0.70	179.00	-230.00	-10.50	280.00	26371	10.29	17 180		
4 100 00	4 097 73	4 107 88	4 097 73	8 20	8 83	179 80	-230.00	.10.50	280.00	263 43	16 57	16 893		
4 200.00	A 107 72	4 207 8	4 107 73	8 <i>1 A</i>	809	170 80	230 00	-10.50	200.00	20343	16.90	16 595		
4 200.00	רד דחר איין איי רד דחר א	4 207.00	4,131,13 A 207 73	0.44	0.50	170 80	-230.00	-10 30	200.00	203.12	10 00	16 364		
4,00.00	4,207.73	4,307.00	4 207 72	0.01	0.34	179.00	-230.00	-10.50	200.00	202.79	17.22	10 204		
4,400.00	4,597.73	4,407 88	4.39//3	8.78	9.31	179.60	-230.00	-10,50	280.00	262.43	17.57	15.935		
4,500.00	4.497 73	4,507.88	4,497 73	8.97	9.48	1/9 80	-230.00	-10 50	280.00	262 05	17.95	15 600		
4 600 00	4 507 73	4 607 89	4 507 72	0 17	9.67	179.80	.230.00	-10.50	200.00	261 66	18 75	15 262		
4,000.00	4,331.73	4,007 00	4,JJ//J	91/	9.07	179 00	-230.00	-10 50	200.00	201.00	10.35	13.202		
4,700.00	4,037.73	4,707.00	4,097.73	9.38	9.0/	179 00	-230.00	-10.50	280.00	201.24	10./0	14 923		
4,600.00	4,797.73	4,807.88	4,/9/./3	a.28	10.08	179.80	-230.00	-10.50	280.00	260.80	19.20	14 585		
4 900.00	4,897.73	4,907 88	4,897.73	9 82	10.29	1/9.80	-230 00	-10.50	280.00	260 35	19.65	14 250		
5,000.00	4,997.73	5,007.88	4,997.73	10 05	10.52	1/9 80	-230.00	-10.50	280.00	259 89	20.12	13.920		
5 100 00	5 097 73	5 107 88	5 097 73	10.29	10.75	179.80	-230.00	-10.50	280.00	259 / 1	20.60	13 595		
	5,551,13	0,107,00	5,007 73	10.23			-230.00	-10.00	200.00	£38,41	20.00	13.383		

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Offset Site Error:

0.00 usft

Company:	Matador Resources	Local Co-ordinate Reference:	Well No. 203H
Project:	Eddy County, NM	TVD Reference:	well @ 3304.50usft
Reference Site:	Cueva De Oro Fed (113-123-133-203)	MD Reference:	well @ 3304.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	No. 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ОН	Database:	WellPlanner1
Reference Design:	Prelim Plan A	Offset TVD Reference:	Reference Datum

Offset Design Cueva De Oro Fed (113-123-133-203) - No. 123H - OH - Prelim Plan A Survey Program: 0-MWD - 0WSG, 400-MWD - 0WSG, 1220-MWD - 0WSG, 3100-MWD - 0WSG

Survey Progr	Survey Program: 0-MIND - OWSG, 400-MIND - OWSG, 1220-MIND - OWSG, 3100-MIND - OWSG Offset Well Error: 0 00 usft													
Refere	nce	Offse	it.	Semi Major	Axis				Dista	nce				
Measured	Vertical	Measured	Vertical	Reference	Offset	Highside	Offset Weilbor	e Centre	Between	Between	Minimum	Separation	Warning	
Depth	Depth	Depth	Depth			Toolface	+N/-S	+E/-W	Centres	Ellipses	Separation	Factor		
(usft)	(usft)	(usft)	(usit)	(usit)	(usft)	(*)	(usft)	(usit)	(usft)	(usit)	(usit)			
5,200.00	5,197.73	5,207.88	5,197.73	10.54	10.99	179.80	-230.00	-10.50	280.00	258.91	21.09	13.277		
5,300.00	5,297.73	5,307.88	5,297.73	10.79	11 23	179.80	-230.00	-10.50	280.00	258.41	21.60	12.965		
5,400.00	5.397.73	5.407.88	5.397.73	11.05	11.48	179.80	-230.00	-10.50	280.00	257.89	22.11	12.661		
5.500.00	5.497.73	5.507.88	5,497,73	11.31	11.73	179.80	-230.00	-10.50	280.00	257 36	22.64	12 365		
5,600,00	5 597 73	5 607 88	5 597 73	11.58	12.00	179.80	-230.00	-10.50	280.00	256.82	23.18	12.000		
5 700 00	5 697 73	5 707 88	5 697 73	11.86	12.26	179.80	-230.00	-10.50	280.00	256.02	23.10	11 708		
0,100.00	0,001.10	0.107.00	0,007.70	11.00	12.20	11 5.00	200.00	-10.50	200 00	250.27	23.75	11.730		
5,800.00	5,797,73	5,807.88	5,797.73	12.14	12.53	179.80	-230 00	-10.50	290.00	255.71	24.29	11.528		
5,900.00	5.897.73	5.907.88	5.897.73	12.42	12.81	179.80	-230 00	-10 50	280.00	255 15	24 86	11 265		
00 000 8	5 997 73	6 007 88	5 997 73	12 71	13.08	179.80	-230.00	-10 50	280.00	254 57	25.43	11 011		
6 100 00	6 097 73	6 107 88	6 097 73	13.00	13.37	179.80	-230.00	-10.50	280.00	253.99	26.01	10.766		
6 200 00	6 197 73	6 207 88	6 197 73	13.29	13.65	179.80	-230.00	-10.50	280.00	253.41	26.60	10.528		
0,200.00	0,101.70	0,207.00	0.101.10	10.20	10.00		2.50.00	-10.50	200.00	2.33.41	20.00	10.520		
6.300.00	6,297.73	6,307 88	6,297.73	13.59	13.94	179.80	-230.00	-10.50	280.00	252.81	27 19	10.298		
6.400.00	6.397.73	6.407.88	6.397.73	13 88	14.24	179.80	-230.00	-10 50	280.00	252 21	27 79	10 076		
6 500 00	6 497 73	6 507 88	6 497 73	14 19	14 53	179.80	-230.00	-10 50	280.00	251.61	28.39	9.862		
6,600,00	6 597 73	6 607 88	6 597 73	14 49	14 83	179.80	-230.00	-10.50	280.00	251.00	29.00	9 654		
6 700 00	6 607 73	6 707 88	6 607 73	14.90	15.13	179.80	-230.00	-10 50	280.00	250.38	20.62	0.454		
0.100.00	0,057.15	0,107.00	0.031.15	14.00	10.10	173.00	-250.00	-10.50	200.00	230.30	25.02	3.434		
6 800.00	6.797.73	6.807.88	6.797.73	15 11	15.43	179.80	-230.00	-10.50	280.00	249.77	30 24	9.261		
6 900 00	6 897 73	6 907 88	6.897.73	15 42	15 74	179 80	-230.00	-10 50	280.00	249 14	30.86	9.074		
7 000 00	6 997 73	7.007.88	6 997 73	15 73	16 05	179 80	-230.00	-10 50	280.00	248 52	31.49	8 893		
7 100 00	7 097 73	7 107 88	7 097 73	16.05	16.36	179.80	-230.00	-10 50	280.00	247 88	32 12	8.000 8.718		
7 200 00	7 197 73	7 207 88	7 197 73	16.37	16.67	179.80	-230.00	-10 50	280.00	247.00	32.75	8 549		
1,200.00	7,107.70	7,201 00	1.101.10	10 0.1	-0.01		200.00	-10.50	200.00	LTILU	52.75	0.040		
7.300.00	7,297,73	7,307 88	7,297.73	16.68	16.98	179.80	-230.00	-10 50	280.00	246.61	33.39	8.386 SF		
7,400.00	7.397.73	7.376 18	7,365,91	17.00	17,19	179 80	-233.58	-10.49	285.36	251.53	33.83	8 436		
7 500 00	7 497 73	7 441 39	7 430 15	17.33	17.40	179 80	-244 51	-10.46	302 17	268 15	34.02	8 882		
7 600 00	7 597 73	7 500 00	7 486 51	17.65	17.60	179.80	260.52	-10.43	329.84	295.90	33.05	9 716		
7 700 00	7 697 73	7 561 04	7 543 14	17.00	17.82	179.81	-283 21	-10.37	367 33	333.48	33.85	10.851		
1,100.00	1,001.10	1,001.04	1,040.14			1.0.01	200.21	10.51	501.55	303 40	55.05	10.001		
7,800.00	7,797.73	7,613,79	7,589.91	18.30	18.03	179.81	-307.59	-10.31	413 60	380.00	33 59	12.312		
7.900.00	7.897.73	7,661,46	7,630.08	18 63	18 24	179.81	-333 23	-10.25	467.45	434.16	33.29	14.043		
8 000 00	7.997.73	7,700.00	7.660.90	18.95	18 4 1	179 82	-356 34	-10 19	527 79	494 91	32.88	16.050		
8 100 00	8 097 73	7 750 00	7 698 46	19.29	18 65	179.82	-389 32	-10 11	593.65	560.82	32.83	18 082		
8 200 00	8 197 73	7 776 16	7 7 16 93	19.62	18 79	179.82	-407 84	-10.07	663.93	631 51	32.60	20 482		
0,200.00	0.101.10		1,1 10.00	10.02	10.10		401.04	10.07	000.00	00101	52 42	20.402		
8,300 00	8,297.73	7,800.00	7,733.01	19.95	18.92	179.82	-425.45	-10.02	738.22	706.13	32.09	23.004		
8,400.00	8,397.73	7,833.16	7,754,12	20.28	19.11	179.82	-451 01	-9.96	815.63	783.60	32.03	25.467		
8.500.00	8.497.73	7.850.00	7.764.27	20.61	19.20	179.82	-464.45	-9.93	895.90	864.10	31.80	28 173		
8 600 00	8.597.73	7.878.58	7,780 57	20.95	19.38	179.83	-487 92	-9 87	978 32	946 50	31.82	30 744		
8 700 00	8 697 73	7 900 00	7 792 01	21.28	19.51	179.83	-506.03	-9.83	1 062 78	1 030 97	31.81	33 412		
0,,00.00	0,001.10	1,500.00		2			000 00	9.00		.,	01.01	55 TE		
8,800.00	8,797.73	7.915.20	7,799.72	21 62	19.62	179.83	-519.13	-9.79	1,148.89	1,117 11	31 78	36 154		
8,900.00	8,897.73	7,930.92	7,807.32	21.95	19.72	-0.03	-532.89	-9.76	1,236.38	1,204,57	31.81	38 873		
9.000.00	8,997.03	7,950,00	7.816.03	22,25	19.85	-0 02	-549,86	-9.72	1.319.73	1.287.91	31.82	41 481		
9,100.00	9.092.95	7.967.65	7.823.58	22.54	19.98	-0.02	-565.81	-9.68	1.394.41	1.362.67	31.74	43.928		
9 200.00	9.182.58	8.000.00	7.836 13	22.80	20.21	-0.02	-595.63	-9.61	1,459,38	1 427 63	31.75	45 967		
											• • • •			
9,300.00	9,263.20	8,000.00	7,836 13	23.08	20.21	-0.02	-595 63	-9.61	1,513.44	1.481.99	31.45	48.118		
9.400.00	9.332.36	8.050.00	7.852.17	23.39	20.59	-0.01	-642 97	-9.49	1,555 84	1 524.32	31 52	49.360		
9.500.00	9.387.96	8.050.00	7.852.17	23.75	20.59	-0 01	-642.97	-9 49	1.586 09	1 554.86	31.23	50 792		
9 600 00	9 428 30	8 100 00	7 864 02	24 17	20.99	-0.01	-691 53	-9.37	1 603 72	1 572 45	31.28	51 277		
9 700 00	9 452 22	8 100 00	7 864 02	24 66	20.99	-0.01	-691 53	-9.37	1 608 78	1 577 72	31.07	51 787		
3,100.00	JJ2.22	5,100.00	7,004.02	27 00	20 38	001	-031.33	-5 57	1,000.10	1.011.12	31.07	0.707		
9.800.00	9.463.18	8.150.00	7.871.59	27.87	21 42	-0.01	-740,93	-9.25	1.604.94	1.573.92	31.02	51,747		
9,900,00	9 464 76	8 167 57	7.873.22	27.92	21.57	+0.01	-758 42	-9.21	1 596 37	1.565.78	30.58	52 198		
10.000.00	9 464 77	8 200 00	7 874 83	27.02	21.96	-0.01	.700.91	-0.12	1 500 04	1 560 50	20.00	52 366		
10,000,00	0.464.77	8 220 60	7 874 06	21.27	22.05	-0.01	-790.01	-513	1,030.34	1 550 55	20.00	52,500		
10,000.04	3,404.77	0.440.09	7 974 00	20.00	22.00	-0.01	-134.40	-3.12	1,009.01	1,008.00	30.27	52.528		
10,100.00	3,404 //	0.243.30	1,014.90	20.02	22.20	-0.01	-034.37	-9.03	1,069.82	1,009.45	30.30	92.398		
10 200 00	Q 464 70	8 343 56	7 874 QF	28.08	23 23	-0.01	-934 37	-8 79	1 580 82	1 550 06	30.76	51 683		
10,200.00	5,404 70	0,040.00			2020	0.01		0.70	1,000.02	1,000 00	55.76	01.000		

CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation



Anticollision Report



Company:	Matador Resources	Local Co-ordinate Reference:	Well No. 203H
Project:	Eddy County, NM	TVD Reference:	well @ 3304.50usft
Reference Site:	Cueva De Oro Fed (113-123-133-203)	MD Reference:	well @ 3304.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	No. 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ОН	Database:	WellPlanner1
Reference Design:	Prelim Plan A	Offset TVD Reference:	Reference Datum

Offset De	sign	Cueva	De Oro Fe	d (113-123-	133-203)	- No. 123H	I - OH - Prelim	Plan A					Offset Site Error:	0.00 usft
Survey Prog	ram: 0-N	IWD - OWSG, 4	400-MWD - 0	WSG, 1220-MW	ND - OWSG	. 3100-MWD - C	DWSG						Offset Well Error:	0.00 usft
Refer	ence	Offs	et	Semi Major	Axis				Dista	Ince				
M#2sured Depth	Vertical	Measured Deoth	Vertical	Reference	Offset	Highside Toolface	Offset Wellbo	re Centre	Setween Centres	Between	Minimum	Separation Eactor	Warning	
(usit)	(usit)	(usit)	(usR)	(usit)	(usft)	(*)	+nu-s (usft)	+E/-W (usft)	(usft)	(usft)	(usit)	, actor		
		0.440.50	7 674 06	20.62	24.27	0.01	1024.27	,,	1 580 83	4 550 60	24.22	60.007		
10,300.00	9,464.79	9 543 55	7,074.90	20.02	24.21	-0.01	-1.034.37	-6.54	1,009.00	1,558.00	31.23	50.907		
10,400.00	9,404.79	0,043.00	7 874 96	29 55	20.00	-0.01	-1.134.37	-0.29	1,309.03	1,555.00	37.79	JU.042		
10,500.00	04.64.90	8 743 56	7 974 96	31.61	20.00	-0.01	-1 334 37	-0.03	1 589 84	1,556,79	33.05	48 108		
10,700,00	9 464 81	8 843 56	7 874 96	32.71	29.04	-0.01	-1 434 36	-7.56	1 589 84	1 556 07	33.78	47 069		
10,800,00	9 464 81	8.943.56	7.874.97	33.87	30.35	-0.01	-1.534.36	-7.32	1.589.85	1.555.28	34.56	45,999		
			•											
10,900.00	9,464.82	9.043.56	7,874.97	35.06	31.69	-0.01	-1,634.36	-7.07	1,589.85	1,554.45	35.40	44.911		
11,000.00	9,464.82	9,143.56	7,874.97	36.30	33.06	-0.01	-1,734.36	-6.83	1,589.86	1,553.57	36 29	43.815		
11,100.00	9,464.83	9,243.56	7,874.97	37.56	34.46	-0.01	-1,834.36	-6.59	1,589.86	1,552.65	37.22	42.720		
11,200.00	9,464.83	9.343.56	7,874.97	38.86	35.88	-0 01	-1,934.36	-6.34	1,589.87	1,551.68	38.19	41.633		
11.300.00	9,464.84	9,443.56	7,874.97	40 19	37.32	-0.01	-2,034.36	-6 10	1,589.87	1,550.67	39.20	40.560		
11 400 00	9 464 85	9 543 56	7 874 97	41 54	38 78	-0.01	-2 134 36	-5.85	1 589 87	1 549 63	40.24	39 506		
11 500.00	9 464 85	9 643 56	7 874 97	42.91	40.26	+0.01	-2 234 36	-5.61	1 589 88	1 548 56	41.32	38 475		
11 600 00	9 464 86	9,743,56	7 874 97	44 31	41.75	-0.01	-2.334.36	-5.37	1,589,88	1.547.45	42.43	37.470		
11,700,00	9 464 86	9,843.56	7.874.97	45.72	43.26	-0.01	-2.434 36	-5 12	1.589.89	1.546.32	43.57	36,492		
11.800.00	9,464.87	9,943.56	7,874.98	47 15	44.78	-0.01	-2,534.36	-4.88	1,589.89	1,545.16	44.73	35 544		
11.900.00	9,464.87	10,043.56	7,874.98	48 60	46 30	-0.01	-2,634.36	-4.63	1.589.90	1,543.98	45.92	34.625		
12.000.00	9,464.88	10,143.56	7,874.98	50.06	47.84	-0.01	-2,734 36	-4.39	1,589.90	1,542.78	47.13	33.737		
12,100.00	9,464.88	10,243.56	7,874.98	51.53	49.39	-0.01	-2,834.36	-4.15	1.589.91	1,541.55	48.36	32.879		
12,200.00	9,464.89	10,343.56	7,874 98	53.01	50.94	-0.01	-2,934.36	-3.90	1,589.91	1,540.31	49.60	32.052		
12,300.00	9,464.90	10,443.56	7,874.98	54.51	52.50	-0.01	-3,034.36	-3.66	1.589.91	1,539.04	50.87	31 254		
12 400 00	9 464 90	10 543 56	7 874 98	56.02	54 07	-0.01	-3 134 36	-3.41	1 589 92	1 537 77	52 15	30 486		
12,500.00	9,464,91	10,643 56	7,874.98	57.53	55.65	0.00	-3,234 36	-3.17	1,589.92	1,536,47	53.45	29.746		
12,600 00	9,464.91	10,743 56	7.874.9B	59.05	57.23	0.00	-3,334.36	-2.93	1,589.93	1,535.17	54 76	29.034		
12,700 00	9,464.92	10,843 56	7.874.98	60.59	58.81	0.00	-3,434.36	-2.68	1,589 93	1,533.85	56.09	28 348		
12,800.00	9,464.92	10,943 56	7.874 99	62.12	60.40	0.00	-3.534.36	-2.44	1,589.94	1,532,51	57.42	27.688		
12,900.00	9,464.93	11,043 56	7,874.99	63.67	62.00	0 00	-3,634.36	-2 19	1,589.94	1.531.17	58 77	27.053		
13,000.00	9,464.93	11,143.56	7,874.99	65.22	63.60	0.00	-3.734.36	-1.95	1,589 95	1.529 81	60 13	26.441		
13,100.00	9,464.94	11,243.56	7,874.99	66.78	65 20	0.00	-3,834.36	-1.71	1,589.95	1.528.45	61.50	25.853		
13,200.00	9,464.94	11,343 56	7,874.99	68.34	60.81	0.00	-3,934,36	-146	1,589.95	1,527.08	62 88	25 286		
13,300.00	9,464 93	11,443.30	1,014.99	09.91	00.42	0.00	-4 034.36	-1.22	1.309 90	1,523.09	04 21	24.740		
13.400.00	9,464.96	11,543.56	7,874.99	• 71.48	70 03	0.00	-4 134.36	-0 98	1,589.96	1,524.30	65.66	24.215		
13,500.00	9,464 96	11,643.56	7,874.99	73.06	7164	0.00	-4,234.36	-0.73	1,589.97	1,522.90	67.06	23 708		
13,600.00	9,464.97	11,743.56	7,874.99	74.64	73.26	0.00	-4,334 36	-0 49	1,589 97	1,521.50	68.47	23 220		
13,700.00	9,464.97	11,843.56	7,874.99	76.23	74.88	0.00	-4,434 36	-0.24	1,589 98	1,520.09	69.89	22 749		
13,800.00	9,464.98	11,943.56	7,875.00	77.82	76.50	0.00	-4,534.36	0.00	1,589.98	1,518.67	71.31	22 295		
12 000 00	0 10 1 00	10.040.50	7 075 00	70	70.40	0.00	4 69 4 30	0.01			70 7 .	01.057		
13,900.00	9.464.98	12,043 56	7,875.00	/9.41	78 13	0.00	-4,634 36	0.24	1,589.99	1,517.24	72.74	21.857		
14,000 00	9,464.99	12,143.56	7,875.00	81.01	79.75	0.00	-4.734 36	0.49	1,589.99	1,515 81	/4.18	21.435		
14,100.00	9.464.99	12,243.56	1,0/0.00	82.01	01.30	0.00	-4,834 35	0.73	1.390.00	1,514,38	/5.62	21 026		
14,200.00	9,465.00	12,343 30	7,873.00	04.UJ 84.17	0J.UI 83.17	0.00	-4,334 35	0.98	1,590,00	1,513 29	76.01	20 121		
14,203.00	00.604,6	(2,303 22	1,010,00	04 U	03 (1	0.00	3+4 UZ	1.00	1,350.00	1,313.10	(0.02	20 030		
1														



Anticollision Report



Offset Site Error:

Offset Well Error:

0.00 usft

0.00 usft

Company:	Matador Resources	Local Co-ordinate Reference:	Well No. 203H
Project:	Eddy County, NM	TVD Reference:	well @ 3304.50usft
Reference Site:	Cueva De Oro Fed (113-123-133-203)	MD Reference:	well @ 3304.50usft
Site Error:	0.00 usft	North Reference:	Grid
Reference Well:	No. 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ОН	Database:	WellPlanner1
Reference Design:	Prelim Plan A	Offset TVD Reference:	Reference Datum

 Offset Design
 Cueva De Oro Fed (113-123-133-203) - No. 133H - OH - Prelim Plan A

 Survey Program:
 0-MWD - OWSG, 400-MWD - OWSG, 1220-MWD - OWSG, 3100-MWD - OWSG

Keler	ence	Offse	l	Semi Major	Axis				Uista	nca			
Measured Depth (usR)	Vertical Depth (ust)	Measured Depth	Vertical Depth	Reference	Offset	Highside Toolface (*)	Offset Wellborn +N/-S	+E/-W	Between Centres	Between Ellipses	Minimum Separation	Separation Factor	Warning
(0014	((0210)	(4.01.)	(0311)	lasid	0	(usn)	(usn)	(oan)	(usit)	(03+1)		
0.00	0.00	0.00	0.00	0.00	0.00	90.00	0.00	30.00	30.00				
100.00	100.00	100.00	100.00	0.13	0.13	90.00	0.00	30.00	30.00	29.74	0.26	117.047	
200.00	200.00	200.00	200.00	0.49	0.49	90.00	0.00	30.00	30.00	29.03	0.97	30.825	
300.00	300.00	300.00	300.00	0.85	0.85	90.00	0.00	30.00	30.00	28.31	1.69	17.749	
400.00	400.00	400.00	400.00	1.20	1.04	90.00	0.00	30.00	30.00	27.76	2.24	13.372	
500.00	500.00	500.00	500.00	1.39	1 16	90.00	0 00	30.00	30.00	27.45	2.55	11.759	
600.00	600.00	600.00	600.00	1.48	1.36	90.00	0.00	30.00	30.00	27.16	2.84	10.546	
700.00	699.98	700.40	700.38	1.65	1.61	109.23	-1 54	29.16	29.73	26.47	3.26	9.128	
712.18	712 15	712.60	712.57	1 68	1.64	110.86	-1.94	28.94	29.72	26.40	3.32	8.958 CC, ES	
800.00	799.84	800.15	799.99	1.87	1.89	127.53	-6.13	26.65	31.04	27.28	3.75	8.268	
900.00	899.45	898.64	898 10	2.14	2,19	150.72	-13 65	22.54	38.97	34.64	4.33	9.001	
1,000.00	998.76	995 91	994 70	2.44	2.52	168.02	-23 65	17.07	55 64	50.69	4.95	11.244	
1,100.00	1,098.14	1.106.46	1,091 60	2.76	2.91	177.32	-34.09	11.37	74.67	69.06	5.62	13.297	
1,200.00	1,197.83	1.208.21	1,189.12	3 10	3 28	-177.14	-44.59	5.62	91.48	85.22	6.25	14.629	
1,300.00	1,297.74	1.290.57	1.287.16	3.27	3.45	-173.13	-55.16	-0.15	105.44	98.88	6.56	16.074	
1,400.00	1,397.73	1.392.91	1.388.90	3.31	3.55	176 97	-64.81	-5.43	115.31	108.65	6.66	17.305	
1,500.00	1,497.73	1.496.33	1,492.05	3.39	3.66	178.82	-71.34	-9.00	121.50	114.67	6.83	17.788	
1,600.00	1,597.73	1,600.16	1,595.80	3.50	3.79	179.67	-74.61	-10.78	124.62	117.56	7.06	17.644	
1,700.00	1,697.73	1.702.09	1,697.73	3.64	3.91	179.77	-75.00	-11.00	125.00	117 66	7.34	17.023	
1,800.00	1,797.73	1,802.09	1,797.73	3.82	4.06	179.77	-75.00	-11.00	125.00	117.33	7.67	16.290	
1,900.00	1,897.73	1,902.09	1,897.73	4.01	4 24	179 77	-75.00	-11.00	125.00	116.95	8.05	15.521	
2,000.00	1,997.73	2,002.09	1,997.73	4.23	4.43	179.77	-75.00	-11.00	125.00	116.52	8 48	14.744	
2.100.00	2,097.73	2,102.09	2,097.73	4.47	4.65	179.77	-75.00	-11.00	125.00	116.06	8 94	13.983	
2,200.00	2.197 73	2,202.09	2.197.73	4.72	4.88	179.77	-75.00	-11.00	125.00	115.57	9.43	13.251	
2,300.00	2.297.73	2,302.09	2,297.73	4 98	5.13	179.77	-75.00	-11.00	125.00	115.05	9.95	12.558	
2,400.00	2.397.73	2,402.09	2,397 73	5 26	5 39	179 77	-75.00	-11.00	125.00	114.50	10.50	11 908	
2,500 00	2.497.73	2.502.09	2,497.73	5.55	5.66	179.77	-75.00	-11.00	125.00	113.94	11 06	11.301	
2,600 00	2,597 73	2.602.09	2.597.73	5 84	5.94	179.77	-75.00	-11.00	125.00	113.36	11.64	10.738	
2,700.00	2,697.73	2,702.09	2,697.73	6.14	6.23	179 77	-75 00	-11.00	125.00	112.76	12.24	10.216	
2,800.00	2,797.73	2.802.09	2,797.73	6.45	6 52	179 77	-75.00	-11.00	125.00	112.16	12.84	9.732	
2,900.00	2.897.73	2.902.09	2,897.73	6.76	6 82	179 77	-75.00	-11 00	125.00	111.54	13.46	9.286	
3,000.00	2,997.73	3.002.09	2,997.73	7.07	7 13	179.77	-75.00	-11 00	125.00	110.91	14.09	8.872	
3,100.00	3,097.73	3.102.09	3,097.73	7.39	7 44	179.77	-75.00	-11 00	125 00	110.28	14.72	8.491	
3,200.00	3,197.73	3.202.09	3,197.73	7.56	7 59	179.77	-75.00	-11.00	125.00	109.96	15.04	8.309	
3,300.00	3,297.73	3.302.09	3,297 73	7.57	7.61	179.77	-75.00	-11 00	125.00	109.92	15.08	8.290	
3,400.00	3,397.73	3.402.09	3,397 73	7 61	7.64	179.77	-75.00	-11 00	125.00	109.85	15.15	8.253	
7 500 00	3 407 73	3 600 00	3 487 73	7.65	7.00	170 77	75.00	11.00	175.00	100.75	15.26	0.100	
3,500.00	3,497.73	3.502.09	3,497 73	7.00	7 09	17977	-75 00	-11.00	125.00	109.75	15.25	8.198	
3,600.00	3,597.73	3,602.09	3,597 73	7.72	776	1/9.//	-75.00	-11.00	125.00	109.62	15.38	8.126	
3,700.00	3,697 73	3,702.09	3,697 73	7.81	7.84	179.77	-75.00	-11.00	125.00	109.45	15 55	8.039	
3,800.00	3,797 73	3,802.09	3,797.73	7.90	7.94	1/9.//	-75.00	-11.00	125.00	109.25	15 75	7.938	
3,900.00	3,897.73	3,902.09	3,897 73	8.02	8.05	179.77	-75.00	-11.00	125.00	109.03	15.97	7.825	
4 000 00	2 007 72	4 000 00	3 007 73	0 15	0 10	170 77	75.00	11.00	125.00	109 77	16 33	7 700	
4,000.00	3,99773	4.002.09	3,997 73	8 15	8 18	17977	-75.00	-11.00	125.00	108.77	10.23	7.702	
4,100.00	4,097.73	4,102.09	4,097.73	8 29	8 32	179 77	-75.00	-11.00	125.00	108 49	10.01	7.570	
4,200.00	4,197 73	4,202.09	4,197.73	8 44	8.48	179 77	-75.00	-11.00	125.00	108 18	16.82	7.431	
4,300.00	4,297.73	4.302.09	4,297.73	8.61	8 64	179 77	-75.00	-11.00	125.00	107.85	17,15	7.287	
4,400.00	4,397.73	4,402.09	4,397.73	8.78	8.82	179 77	-75.00	-11.00	125.00	107 49	17 51	7 139	
					<i></i>	474						0.000	
4,500.00	4,497.73	4.502.09	4,497.73	8.97	9 01	179 77	-75 00	-11.00	125.00	107.11	17.89	6.988	
4,600.00	4,597.73	4.602.09	4.597 73	9 17	9 20	179 77	-75.00	-11.00	125 00	106 71	18 29	6.836	
4,700.00	4,697.73	4.702.09	4,697.73	9.38	9.41	179 77	-75.00	-11.00	125.00	106.30	18.70	6.683	
4,800.00	4,797.73	4.802.09	4,797.73	9.59	9.63	179 77	-75.00	-11.00	125 00	105.86	19.14	6.531	
4,900.00	4,897.73	4.902.09	4.897 73	9 82	9.85	179.77	-75.00	-11.00	125.00	105.41	19.59	6 38 1	
5,000.00	4,997.73	5.002.09	4,997.73	10.05	10.08	179.77	-75.00	-11.00	125.00	104.94	20.06	6.232	

CC - Min centre to center distance or covergent point, SF - min separation factor. ES - min ellipse separation



Anticollision Report



Company:	Matador Resources	Local Co-ordinate Reference:	Well No. 203H
Project:	Eddy County, NM	TVD Reference:	well @ 3304.50usft
Reference Site:	Cueva De Oro Fed (113-123-133-203)	MD Reference:	well @ 3304.50usft
Site Error:	0.00 usft	North Reference:	Gnd
Reference Well:	No. 203H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 usft	Output errors are at	2.00 sigma
Reference Wellbore	ОН	Database:	WellPlanner1
Reference Design:	Prelim Plan A	Offset TVD Reference:	Reference Datum

Offset Design Cueva De Oro Fed (113-123-133-203) - No. 133H - OH - Prelim Plan A Survey Program: 0-MWD - OWSG, 400-MWD - OWSG, 1220-MWD - OWSG, 3100-MWD - OWSG								Offset Site Error: Offset Well Error:	0.00 usft 0.00 usft					
Refer	81 1CB	Offse	et	Semi Major	Axis				Dista	ince				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usR)	Vertical Depth (usft)	Reference (usit)	Offset (usft)	Highside Toolface (*)	Offset Wellbor +N/-S (usft)	e Centre +E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usit)	Separation Factor	Warning	
E 100 00	5 007 7	E 103.00	5 007 73	10.20	10.00	170 77	75.00	11.00	125.00	104.45	20.54	6.086		
5,100.00	5,097.7	3 5,102.09	5,097.73	10.29	10.32	179.77	-75.00	-11.00	125.00	104.40	20.54	0.060		
5,200.00	5, 197.7	5,202.09	5,197.73	10.54	10.57	179.77	-75.00	-11.00	125.00	103.97	21.03	5.943		
5,300.00	5,297 73	3 5,302.09	5,297.73	10.79	10.82	1/9.//	-75.00	-11 00	125.00	103.46	21.54	5.803		
5,400.00	5,397.73	3 5,402.09	5,397.73	11.05	11.08	1/9.//	-/5.00	-11 00	125.00	102.94	22.06	5.666		
5,500.00	5,497.73	3 5,502.09	5,497.73	11.31	11.34	179.77	-75.00	-11 00	125.00	102.41	22.59	5 534		
5,600.00	5,597 73	3 5,602.09	5,597.73	11.58	11 61	179 77	-75.00	-11.00	125.00	101.87	23.13	5.404		
5,700.00	5,697 73	3 5,702.09	5,697.73	11.86	11.89	179.77	-75.00	-11.00	125.00	101 32	23.68	5.279		
5,800.00	5,797.73	5.802.09	5,797.73	12.14	12.17	179 77	-75.00	-11.00	125.00	100.76	24.24	5.158		
5,900.00	5,897.73	3 5,902.09	5,897.73	12.42	12.45	179.77	-75.00	-11.00	125.00	100.20	24.80	5.040		
6,000.00	5,997 73	3 6.002.09	5,997 73	12 71	12.73	179.77	-75.00	-11.00	125.00	99.62	25.38	4.926		
6,100.00	6.097 73	6,102.09	6.097 73	13.00	13.02	179.77	-75.00	-11.00	125.00	99.04	25.96	4.816		
£ 200 00	E 107 7	6 202 00	6 107 73	42.20	43.33	170 77	75.00	11.00	125.00	09.46	76.66	4 700		
6,200.00	0,19/7.	3 6,202.09	6,197.73	13.29	13 32	179.77	-75.00	-11.00	125.00	98.46	20.55	4.709		
6,300.00	0,29/ /.	3 0,302.09	6,29773	13.59	13.61	179.77	-75.00	-11.00	125.00	97.86	27.14	4 606		
6,400.00	6.397.75	3 6,402.09	6,39773	13.88	13 91	1/9 //	-75.00	-11,00	125.00	97 26	27.74	4 506		
6,500.00	6,497 7.	3 6,502.09	6,497 73	14 19	14.21	1/9.//	-75.00	-11.00	125.00	96.66	28.34	4.410		
6,600.00	6,597.73	6,602.09	6,597 73	14.49	14.52	179.77	-75.00	-11.00	125.00	96.05	28.95	4.317		
6,700.00	6,697.73	6,702.09	6,697 73	14 80	14.82	179.77	-75 00	-11.00	125.00	95.43	29.57	4.227		
6,800 00	6,797.73	6,802.09	6,797.73	15 11	15 13	179.77	-75.00	-11.00	125.00	94.81	30.19	4 141		
6,900.00	6,897.73	6.902.09	6.897.73	15.42	15.44	179 77	-75.00	-11.00	125.00	94.19	30.81	4.057		
7,000.00	6,997.73	7.002.09	6,997.73	15 73	15.76	179 77	-75.00	-11 00	125 00	93 56	31,44	3 976		
7,100.00	7,097.73	3 7 102.09	7.097 73	16.05	16.07	179.77	-75.00	-11.00	125.00	92.93	32.07	3.898		
7 200 00	7 197 73	7 202 09	7 197 73	16 37	16 39	179 77	-75.00	-11.00	125.00	92.29	32 71	3 822		
7 300.00	7 297 7	7 302.09	7 297 73	16.68	16 71	179 77	-75 00	-11.00	125.00	91.66	33 34	3 749		
7,300.00	7 307 75	7 402.09	7 207 73	17.00	17.03	179 77	-75.00	-11.00	125.00	01.00	33.34	3.745		
7,400.00	7 407 73	7 502.09	7 407 73	17 22	17.05	179 77	-75.00	-11.00	125.00	51.01	33.55	3.078		
7,000.00	7 507 73	3 7,502.09	7 507 73	17.55	17.33	179.77	-75.00	-11.00	125.00	90.37	34 03	3 6 10		
7,600.00	1,591.13	0 7.002.09	1,581 / 5	17 05	17.07	11971	-75.00	-11.00	125.00	09.72	30.28	3.543		
7.700.00	7,697.73	7,702.09	7,697.73	17 97	18 00	179 77	-75.00	-11.00	125.00	89.07	35 93	3.479		
7,800.00	7,797.73	7,802.09	7,797.73	18 30	18.32	179.77	-75.00	-11.00	125.00	88.42	36 58	3.417		
7,900.00	7,897.73	7,902.09	7,897.73	18 63	18.65	179.77	-75.00	- 1 1.00	125.00	87.77	37.23	3.357		
8,000.00	7,997.73	8,002.09	7,997.73	18.96	18 98	179.77	-75.00	-11.00	125.00	87.11	37 89	3.299		
8,100.00	8.097 73	8.102.09	8.097 73	19.29	19.31	179 77	-75 00	- 1 1.D0	125 00	86.45	38 55	3.243		
P 200 00	9 107 77	8 30 3 00	0 107 77	10.67	10.64	170 77	75.00	11.00	175.00	95 70	20.24	2 100		
8,200.00	0,197.73	B 202 09	0.197.73	19 02	10.07	170 77	-75 00	-11.00	125.00	03.79	3921	3.100		
8,300.00	0.207.70	8,302.09	0,231 13	19.90	20.20	170.77	-75 00	-11.00	125.00	03.13	39.67	3.133		
8,400.00	0,397,73	8,402.09	0,397.73	20 28	20.30	179.77	-75.00	-11.00	125.00	84.40	40 54	3.063		
8,500.00	0,497.73	8,502.09	0,497.73	20.61	20.63	17977	-75.00	-11.00	125 00	83.79	4121	3.034		
8,600.00	6,597.73	8,602.09	8,597.73	20.95	20.97	11311	-75.00	-11.00	125 00	83.13	41.87	2.985		
8,603.75	8.601.48	8.605.84	8,601.48	20.96	20.98	179.77	-75 00	-11 00	125.00	83.10	41.90	2.983		
8,700.00	8,697.73	8.694 76	8.690 38	21.28	21 27	179.77	-75.97	-11.00	126.19	83.71	42.48	2.971		
8,800.00	8,797.73	8.775 36	8,770.25	21.62	21.52	179 78	-86.30	-10.97	139.05	96.36	42.68	3 258		
8,900.00	8,897.73	8,850.00	8.842.25	21.95	21.75	-0 07	-105 78	-10.92	165.25	122.80	42.44	3.893		
9,000.00	8,997.03	8,924.65	8,911 13	22.25	21.99	-0 06	-134 44	-10.85	193.67	151.66	42.02	4.609		
0 100 00	0 002 05	8 006 10	9 073 03	22 64	22.22	0.05	170.04	10.77	212.40	176 40	41.07	5 365		
9,100.00	9,092.93	0,990 10	0,973.03	22.54	22.22	-0.06	-170.04	-10.77	217.42	1/0 10	41 27	5.209		
9,200,00	0.060.00	0 135 05	9,029.10	22.00	22 47	-0.05	-212 32	-10 00	230.20	195.69	40.32	5.659		
9,300,00	9,203.20	9,135.95	9,079.15	23.08	22.74	-0.05	-200.57	-10.54	249.80	210.57	39 23	6 36/		
9,400.00	9.332.36	9,204.96	9,122.64	23.39	23.03	-0.05	-314,10	-10.41	258.06	219.97	38 08	6.776		

-734 35 CC - Min centre to center distance or covergent point, SF - min separation factor, ES - min ellipse separation

-372.24

-434.35

-499.76

-568.03

-638 31

-647 21

-10.27

-10.11

-9.95

-9.78

-9.61

-9.59

-9.37

260.89

258.27

250 27

241 18

234 92

234 81

234.81

223.94

222.33

215.12

206.58

201 23

201 19

200.97

36.96

35.95

35 16

34.60

33.69

33 61

33.84

7 059

7 185

7 119

6.971

6.974

6 985

6 938

9,500.00 9,387.96

9.428.30

9,452.22

9,463 18

9,464 76

9,464.76

9,464.77

9,600.00

9,700.00

9,800.00

9,900.00

9,912 86

10,000 00

9,273.71 9,159.26

9,342.46 9,188.65

9.562.09 9,229.96

9,647.75 9.229.96

9,210 46

9,224 36

9,229.88

9.411 46

9,481 17

9,551.71

23.75

24.17

24.66

27.87

27.92

27 93

27.97

23.35

23 70

24.09

24 52

24.98

25.05

25.67

-0.05

-0 05

-0.05

-0 05

-0.06

-0.05

-0.05



Offset Design

Measured

Depth

(usft)

Pro Directional

Anticollision Report



Offset Site Error:

Warning

0.00 usft

0.00 usft

Company:	Matador Resources	Local Co-ordinate Reference:	Wel
Project:	Eddy County, NM	TVD Reference:	well
Reference Site:	Cueva De Oro Fed (113-123-133-203)	MD Reference:	well
Site Error:	0.00 usft	North Reference:	Gno
Reference Well:	No. 203H	Survey Calculation Method:	Mini
Well Error:	0.00 usft	Output errors are at	2.00
Reference Wellbore	ОН	Database:	Wel
Reference Design:	Prelim Plan A	Offset TVD Reference:	Refe

Cueva De Oro Fed (113-123-133-203) - No. 133H - OH - Prelim Plan A

II No. 203H @ 3304.50usft @ 3304.50usft imum Curvature 0 sigma IIPlanner1 erence Datum

0-MWD - OWSG, 400-MWD - OWSG, 1220-MWD - OWSG, 3100-MWD - OWSG Survey Program: Offset Well Error: Reference Offset Semi Major Axis Distance Vertical Measured Vertical Reference Offset Highside **Offset Weilbore Centre** Rety en Retween Minimum Senaration Depth Depth Depth Toolface Centres Ellipses Factor +N/-S +E/-W Separation (usft) (usft) (usit) (usft) (usft) (") (usft) (usft) (usft) (usit) (usft) -834.35 10.100.00 9.464.77 9,747,75 9.229.96 28.02 26.47 -0.05 -9.13 234.81 200.64 34.17 6.871 10,200.00 9,464.78 9,847.75 9,229.96 28.08 27.34 -0.05 -934.35 -8.88 234.82 200.25 34.57 6.793 10,300.00 9,464.79 9,947.75 9,229.96 28.62 28.29 -0.05 -1,034.35 -8.64 234.82 199 79 35.03 6.703 10,400.00 9,464.79 10,047.75 9,229.96 29.55 29.30 -0.05 -1,134.35 -8.39 234 83 199.27 35.56 6.604 10,500.00 9,464.80 10,147.75 9,229.96 30.55 30.37 -0.05 -1,234.35 -8.14 234.83 198.69 36.14 6.497 10,600.00 9,464.80 10,247.75 9,229,96 31.61 31 49 -0.05 -1.334.35 -7.90 234.84 198.05 36.79 6.383 10,700.00 9,464 81 10,347.75 9,229.97 32.71 32.66 -0.04 -1,434.35 -7.65 234.84 197.36 37.49 6.265

10,800.00	9,464.61	10,447.75	9,229 97	33.87	33.88	+0.04	-1,534.35	-7.40	234.85	196.61	38.24	6.142
10,900.00	9,464.82	10,547.75	9,229.97	35.06	35.13	-0.04	-1,634.35	-7.16	234.85	195.82	39.04	6 0 1 6
11,000.00	9,464.82	10,647.75	9,229.97	36.30	36.41	-0.04	-1,734.35	-6 91	234.86	194.98	39.88	5.889
11,100.00	9,464.83	10,747.75	9,229.97	37 56	37.72	-0 04	-1,834.35	-6.66	234.86	194.09	40.77	5.761
11,200.00	9,464.83	10,847.75	9,229.97	38 86	39.07	-0 04	-1,934.35	-6.42	234.86	193.17	41.70	5.633
11,300.00	9,464.84	10,947.75	9,229.97	40 19	40.43	-0 04	-2.034.35	-6 17	234.87	192.21	42.66	5.505
11.400.00	9,464.85	11,047.75	9,229.97	41 54	41.82	-0.04	-2.134.35	-5.92	234.87	191.21	43.66	5.379
11.500.00	9,464.85	11,147.75	9,229.97	42 91	43.23	-0 03	-2,234.35	-5.68	234.88	190.18	44.69	5.255
11.600.00	9,464.86	11,247.75	9,229.97	44.31	44.66	-0.03	-2,334.35	-5.43	234.88	189.12	45 76	5.133
11.700.00	9.464.86	11.347.75	9.229.98	45 72	46.10	-0.03	-2.434.35	-5.19	234.89	188.04	46 85	5.014
11,800.00	9,464.87	11,447.75	9,229.98	47 15	47.56	-0.03	-2,534.35	-4.94	234.89	186.92	47.97	4.897
11,900.00	9,464.87	11,547.75	9,229.98	48.60	49.03	-0.03	-2,634.35	-4.69	234.90	185.78	49.11	4.783
12,000.00	9.464.88	11,647 75	9,229.98	50.06	50.52	-0.03	-2,734.35	4.45	234.90	184.62	50 28	4.672
12,100.00	9,464.88	11,747 75	9,229.98	51.53	52 02	-0.03	-2,834.35	-4.20	234.90	183.44	51.47	4.564
12,200.00	9,464.89	11,847.75	9,229.98	53 01	53.52	-0 03	-2,934.35	-3.95	234.91	182 23	52 68	4.460
12,300.00	9,464.90	11,947 75	9,229.98	54.51	55.04	-0.02	-3,034.35	-3.71	234 91	181.01	53.90	4 358
12,400.00	9,464.90	12,047.75	9,229.98	56 02	56.57	-0 02	-3.134.35	-3.46	234 92	179.77	55.15	4.260
12,500.00	9,464.91	12,147.75	9,229.98	57.53	58.10	-0.02	-3.234.35	-3.21	234 92	178.52	56.41	4.165
12,600.00	9,464 91	12,247.75	9,229.98	59 05	59.64	-0.02	-3 334.35	-2.97	234 93	177 24	57.68	4.073
12,700.00	9,464.92	12,347.75	9,229,99	60.59	61.19	-0.02	-3.434.35	-2.72	234 93	175.96	58.97	3.984
12,800.00	9,464.92	12,447.75	9,229.99	62 12	62.74	-0.02	-3.534.34	-2.47	234.94	174.66	60.28	3 898
12,900.00	9,464.93	12,547.75	9,229.99	63.67	64.30	-0.02	-3,634.34	-2.23	234.94	173.35	61.59	3.814
13,000.00	9,464.93	12,647.75	9,229 99	65.22	65 87	-0.02	-3,734.34	-1.98	234.95	172.03	62.92	3.734
13,100 00	9.464.94	12,747,75	9,229 99	66.78	67 44	-0.01	-3,834.34	-1.73	234,95	170.69	64.26	3 656
12 200 00	0 464 0 *	10 017 75	0 220 00	69.24	60.03	0.01	2 024 24		724.05	160.25	65.51	3 601
13,200.00	9.404.94	12,047 75	9,229 99	68.34	70.02	-0.01	-3,934.34	-149	234.95	109.35	66.00	3.301
13,300.00	9,464.95	12,947.75	9,229,99	09.91	70.60	-0.01	-4.034 34	-1 24	234.96	108.00	00.90	3.509
13,400.00	9,464.95	13,047.75	9,229.99	73.00	72.18	-0.01	-4,134.34	-1.00	234.96	100.03	08 33	3.439
13,500.00	9,404 96	13,147.75	9,229,99	73.06	13.11	-0.01	-4,234 34	-0.75	234.97	105.20	09.71	3.3/1
13,600.00	9,464.97	13,247.75	9,229.99	74.54	15.30	-0 01	-4 334 34	-0.50	234.97	103.88	/1.09	3.305
13,700.00	9,464.97	13,347.75	9.230.00	76.23	76.96	-0.01	-4,434.34	-0.26	234.98	162.49	72.48	3.242
13,800.00	9,464.98	13,447.75	9,230.00	77 82	78.56	-0.01	-4,534.34	-0.01	234.98	161.10	73.88	3.181
13,900.00	9,464.98	13,547.75	9.230.00	79.41	80.16	0.00	-4,634,34	0.24	234.99	159.70	75.29	3.121
14,000.00	9.464. 9 9	13,647.75	9,230 00	81 01	81 76	0.00	-4,734.34	0.48	234.99	158.29	76.70	3.064
14,100.00	9,464.99	13,747.75	9,230.00	82.61	83.37	0.00	-4,834.34	0.73	235.00	156.88	78.12	3.008
	D 105 05		0 000 00			0.00					70.40	0.000
14,200.00	9,465.00	13,847.75	9,230.00	84.03	84.98	0.00	-4,934,34	0.98	235.00	155.81	79.19	2.968
	0 465 00	13 857 42	9 230 00	84 17	85.14	0.00	-4.944.00	1 00	235 00	155.71	79.29	2.964 SF



Anticollision Report



Company:	Matador Resources	L
Project:	Eddy County, NM	т
Reference Site:	Cueva De Oro Fed (113-123-133-203)	N
Site Error:	0.00 usft	N
Reference Well:	No. 203H	S
Well Error:	0.00 usft	c
Reference Wellbore	ОН	C
Reference Design:	Prelim Plan A	c

Local Co-ordinate Reference: TVD Reference: MD Reference: North Reference: Survey Calculation Method: Output errors are at Database: Offset TVD Reference: Well No. 203H well @ 3304.50usft well @ 3304.50usft Grid Minimum Curvature 2.00 sigma WellPlanner1 Reference Datum

Reference Depths are relative to well @ 3304.50usft Offset Depths are relative to Offset Datum Central Meridian is 104° 20' 0.000 W Coordinates are relative to: No. 203H Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30 Grid Convergence at Surface is: 0.14°





Pro Directional

Anticollision Report



Company:	Matador Resources
Project:	Eddy County, NM
Reference Site:	Cueva De Oro Fed (113-123-133-203)
Site Error:	0.00 usft
Reference Well:	No. 203H
Well Error:	0.00 usft
Reference Wellbore	ОН
Reference Design:	Prelim Plan A

Local Co-ordinate Reference: **TVD Reference: MD Reference:** North Reference: Survey Calculation Method: Output errors are at Database: Offset TVD Reference:

Well No. 203H well @ 3304.50usft well @ 3304.50usft Grid Minimum Curvature 2.00 sigma WellPlanner1 Reference Datum

Reference Depths are relative to well @ 3304.50usft Offset Depths are relative to Offset Datum Central Meridian is 104° 20' 0.000 W

Coordinates are relative to: No. 203H Coordinate System is US State Plane 1927 (Exact solution), New Mexico East 30 Grid Convergence at Surface is: 0.14°





Technical Specifications

Connection Type:
DWC/C-IS PLUS Casing
standard

125.000

135,000

5.500

VST P110 EC

Size(O.D.): 5-1/2 in

Minimum Yield Strength (psi)

Nominal Pipe Body O.D. (in)

Minimum Ultimate Strength (psi)

Weight (Wall): 20.00 lb/ft (0.361 in) Grade: VST P110 EC



VAM USA 4424 W. Sam Houston Pkwy. Suite 150 Houston, TX 77041 Phone: 713-479-3200 Fax: 713-479-3234 E-mail: <u>VAMUSAsales@vam-usa.com</u>



4.778Nominal Pipe Body I.D.(in)0.361Nominal Wall Thickness (in)0.202Neminal Wall thickness (in)

Pipe Dimensions

20.00 Nominal Weight (lbs/ft)

Material

Grade

- 19.83 Plain End Weight (lbs/ft)
- 5.828 Nominal Pipe Body Area (sq in)

Pipe Body Performance Properties

- 729,000 Minimum Pipe Body Yield Strength (lbs)
- 12,090 Minimum Collapse Pressure (psi)
- 14,360 Minimum Internal Yield Pressure (psi)
- 13,100 Hydrostatic Test Pressure (psi)

Connection Dimensions

- 6.300 Connection O.D. (in)
- 4.778 Connection I.D. (in)
- 4.653 Connection Drift Diameter (in)
- 4.13 Make-up Loss (in)
- 5.828 Critical Area (sq in)
- 100.0 Joint Efficiency (%)

Connection Performance Properties

729,000	Joint Strength (Ibs)	
26,040	Reference String Length (ft) 1.4 Design Facto	r
728,000	API Joint Strength (Ibs)	
729,000	Compression Rating (lbs)	
12,090	API Collapse Pressure Rating (psi)	
14,360	API Internal Pressure Resistance (psi)	
104.2	Maximum Uniaxial Bend Rating [degrees/100 f	t]
	Appoximated Field End Torque Values	

- 16,600 Minimum Final Torque (ft-lbs)
- 19,100 Maximum Final Torque (ft-lbs)
- 21,600 Connection Yield Torque (ft-lbs)

For detailed information on performance properties, refer to DWC Connection Data Notes on following page(s).

Connection specifications within the control of VAM USA were correct as of the date printed. Specifications are subject to change without notice. Certain connection specifications are dependent on the mechanical properties of the pipe. Mechanical properties of mill proprietary pipe grades were obtained from mill publications and are subject to change. Properties of mill proprietary grades should be confirmed with the mill. Users are advised to obtain current connection specifications and verify pipe mechanical properties for each application.

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DWC Connection Data Notes:

- 1. DWC connections are available with a seal ring (SR) option.
- 2. All standard DWC/C connections are interchangeable for a give pipe OD. DWC connections are interchangeable with DWC/C-SR connections of the same OD and wall.
- 3. Connection performance properties are based on nominal pipe body and connection dimensions.
- DWC connection internal and external pressure resistance is calculated using the API rating for buttress connections. API Internal pressure resistance is calculated from formulas 31, 32, and 35 in the API Bulletin 5C3.
- 5. DWC joint strength is the minimum pipe body yield strength multiplied by the connection critical area.
- 6. API joint strength is for reference only. It is calculated from formulas 42 and 43 in the API Bulletin 5C3.
- 7. Bending efficiency is equal to the compression efficiency.
- 8. The torque values listed are recommended. The actual torque required may be affected by field conditions such as temperature, thread compound, speed of make-up, weather conditions, etc.
- 9. Connection yield torque is not to be exceeded.
- Reference string length is calculated by dividing the joint strength by both the nominal weight in air and a design factor (DF) of 1.4. These values are offered for reference only and do not include load factors such as bending, buoyancy, temperature, load dynamics, etc.
- 11. DWC connections will accommodate API standard drift diameters.



Connection specifications within the control of VAM USA were correct as of the date printed. Specifications are subject to change without notice. Certain connection specifications are dependent on the mechanical properties of the pipe. Mechanical properties of mill proprietary pipe grades were obtained from mill publications and are subject to change. Properties of mill proprietary grades should be confirmed with the mill. Users are advised to obtain current connection specifications and verify pipe mechanical properties for each application.

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4/14/2015

DRILL PLAN PAGE 1

Matador Production Company Cueva de Oro Fed 203H SHL 101' FNL & 1859' FEL Sec. 21 BHL 240' FSL & 1870' FEL Sec. 21 T. 20 S., R. 29 E., Eddy County, NM

Drilling Program

1. ESTIMATED TOPS

Formation	TVD	MD	Resource
Quaternary	000	000	water
Salado/Salt	440	440	salt
(КОР	600	600	N/A)
Yates	1210	1211	gypsum
Seven Rivers	1525	1526	dolomite
Capitan Reef	1610	1611	water
Cherry Canyon	3080	3082	hydrocarbons
Brushy Canyon	4320	4321	hydrocarbons
Bone Spring Lime	5910	5911	hydrocarbons
1 st Bone Spring Carbonate	6565	6567	hydrocarbons
1 st Bone Spring Sand	7005	7007	hydrocarbons
2 nd Bone Spring Carbonate	7285	7287	hydrocarbons
2 nd Bone Spring Sand	7745	7747	Hydrocarbons
3 rd Bone Spring Carbonate	8070	8072	hydrocarbons
3 rd Bone Spring Sand	8880	8882	hydrocarbons
Wolfcamp Carbonate	9235	9249	hydrocarbons & goal
TD	9465	14210	hydrocarbons

2. NOTABLE ZONES

Wolfcamp is the goal for this well. Hole will extend south of the last perforation point to allow for pump installation. All perforations will be \geq 330' from the dedication perimeter. A windmill is \geq 3,200' west-northwest, but it is not in the State Engineer's database. Closest water well (CP 00752) in the database is 3096' northeast. No depth to water was recorded in the 2567' deep well.

3. PRESSURE CONTROL

Matador requests a variance for a 2000-psi annular to be installed after running 20" surface casing.

After 20" surface casing, a 5M BOP stack with 3 rams + 2 pipe rams + 1 blind ram + 1 annular preventer will be installed. The BOP will be used below intermediate casing 1 to TD. See attached BOP and choke manifold diagrams.

An accumulator complying with Onshore Order 2 requirements for the BOP stack pressure rating will be present. Rotating head will be installed as needed.

Pressure tests will be conducted before drilling out from under all casing strings. BOP will be inspected and operated as required by Onshore Order 2. Kelly cock and sub equipped with a full opening valve sized to fit the drill pipe and collars will be available on the rig floor in the open position.

A third party company will test the BOPs.

Intermediate 1 casing pressure tests will be made to 250 psi low and 2000 psi high. Intermediate 2 casing pressure tests will be made to 250 psi low and 3000 psi high. Intermediate 3 casing pressure tests will be made to 250 psi low and 7500 psi high. Annular preventer will be tested to 250 psi low and 2500 psi high on the intermediate 1 casing and tested to 250 psi low and 2500 psi high on the intermediate 2 and 3 casing. In the case of running a speed head with landing mandrel for 9.625" and 7.625" x 7"casing, initial intermediate 1 casing test pressures will be 250 psi low and 3000 psi . high, with wellhead seals tested to 5000 psi once the 9.625" casing has been landed and cemented.

BOP will then be lifted to install the D-section of the wellhead. Matador will nipple the BOP back up and pressure tests will be made to 250 psi low and 7500 psi high. Annular will be tested to 250 psi low and 2500 psi high.

Matador requests a variance to use a speed head. Speed head diameter range is from 13.375" to 2.375".

Matador requests a variance to use a co-flex line between the BOP and choke manifold. Certification for proposed co-flex hose is attached. The hose is not required by the manufacturer to be anchored. If the specific hose is unavailable, then one of equal or higher rating will be used.

4. CASING & CEMENT

All casing will be API and new. Minimum safety factors are burst = 1.125, collapse = 1.125, and tension = 1.8.

Hole O. D.	Set MD	Set TVD	Name	Casing O. D.	тос	Weight (lb/ft)	Grade	Joint
26"	0′ - 400'	0′ - 400'	Surface	20"	GL	94	K-55	BTC
17.5"	0′ - 1200'	0' - 1197'	Intermediate 1	13.375"	GL	54.5	J-55	BTC
12.25"	0′ - 3100'	0′ - 3098'	Intermediate 2	9.625"	GL	40	J-55	BTC
	0′ - 3000'	0′ - 2998'		7.625"		29.7	P-110	BTC
8.75"	3000'- 8838'	2998'- 8837'	Intermediate 3	7.625″	2100′	29.7	P-110	Hydril 513
	8838'- 9688'	8837'- 9450'		7″		29	P-110	BTC
C 125%	0′ - 8738′	0' - 8737'	Dreduction	5.5″	0722/	20	P-110	Tenaris XP
0.125	8738'- 14210'	8737'- 9465'	Production	4.5″	8723	13.5	P-110	Tenaris XP

Casing String	Туре	Sacks	Yield	Cu. Ft.	Weight	Blend	
Surface	Tail	873	1.38	1204	14.8	Class C + 5% NaCl + LCM	
TOC = GL		100% Excess			Centralizers per Onshore Order 2.III.B.1f		
Intermediate 1	Lead	528	2.09	1103	12.6	Class C + Bentonite + 1% CaCl ₂ + 8% NaCl + LCM	
	Tail	322	1.38	444	14.8	Class C + 5% NaCl + LCM	
TOC = GL		100% Excess			2 on btm jt, 1 on 2nd jt, 1 every 4th jt to GL		
Intermediate 2	Lead	499	2.48	1237	11.9	Class C + Bentonite + 2% CaCl ₂ + 3% NaCl + LCM	
	Tail	308	1.26	388	14.4	Class C + 5% NaCl + LCM	
TOC = GL		1	00% Exce	SS	2 on btn	n jt, 1 on 2nd jt, 1 every 4th jt to GL	
Intermediate	Lead	641	2.36	1512	11.5	TXI + Fluid Loss + Dispersant + Retarder + LCM	
3	Tail	248	1.38	342	13.2	TXI + Fluid Loss + Dispersant +	

						Retarder + LCM	
TOC = 2100'		3	35% Exces	S	2 on btm jt, 1 on 2nd jt, 1 every other jt to top of tail cement (500' above TOC), 1 every 4 th jt to GL		
Production	Tail	414	1.38	571	15.8	Class H + Fluid loss + Dispersant + Retarder +LCM	
TOC = 8688'		10% excess		2 on btm jt, 1 on 2 nd jt, 1 every 3 rd jt to top of tail cement (1000' tie back)			

5. MUD PROGRAM

An electronic Pason mud monitoring system complying with Onshore Order 1 will be used. All necessary mud products (barite, bentonite, LCM) for weight addition and fluid loss control will be on location at all times. Mud program is subject to change due to hole conditions. A closed loop system will be used.

Mud Type	Interval	lb/gal	Viscosity	Fluid Loss
fresh water spud	0' - 400'	8.4	28	NC
brine water	400' - 1220'	10.0	30-32	NC
fresh water	1220' - 3100'	8.4 - 8.6	28-30	NC
fresh water/cut brine	3100' - 8738'	9.0	30-32	NC
oil based mud	8738′ – 14210′	12.5	50-60	<10

6. CORES, TESTS, & LOGS

No core or drill stem test is planned.

A 2-person mud-logging program will be used from ≈1220' to TD.

No electric logs are planned at this time. GR will be collected through the MWD tools from intermediate 2 casing to TD. CBL with CCL will be run as far as gravity will let it fall to TOC.

7. DOWN HOLE CONDITIONS

No abnormal pressure or temperature is expected. Maximum expected bottom hole pressure is ≈7099 psi. Expected bottom hole temperature is ≈135° F.

Matador does not anticipate that there will be enough H_2S from the surface to the Bone Spring to meet BLM's minimum requirements for the submission of an " H_2S Drilling Operation Plan" or "Public Protection Plan" for drilling and completing this well. Since Matador has an H_2S safety package on all wells, an " H_2S Drilling Operations Plan" is attached. Adequate flare lines will be installed off the mud/gas separator where gas may be flared safely. All personnel will be familiar with all aspects of safe operation of equipment being used.

8. OTHER INFORMATION

Anticipated spud date is upon approval. It is expected it will take \approx 3 months to drill and complete the well.



U.S. Department of the Interior BUREAU OF LAND MANAGEMENT



APD ID: 10400012705 Operator Name: MATADOR PRODUCTION COMPANY Well Name: CUEVA DE ORO FEDERAL Well Type: CONVENTIONAL GAS WELL

Submission Date: 03/31/2017

Well Number: 203H Well Work Type: Drill Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

Cueva_203H_Road_Map_08-02-2017.pdf

Existing Road Purpose: ACCESS, FLUID TRANSPORT

Row(s) Exist? NO

ROW ID(s)

ID:

Do the existing roads need to be improved? NO

Existing Road Improvement Description:

Existing Road Improvement Attachment:

Section 2 - New or Reconstructed Access Roads

. ~

Will new roads be needed? YES					
New Road Map:					
Cueva_203H_Road_Map_08-02-2017.pdf					
New road type: LOCAL					
Length: 518.21	Feet	Width (ft.): 30			
Max slope (%): 1		Max grade (%): 1			
Army Corp of Engineer	s (ACOE) permit req	uired? NO			
ACOE Permit Number(s	i):				
New road travel width: 14					
New road access erosion control: Crowned and ditched					
New road access plan or profile prepared? NO					
New road access plan attachment:					
Access road engineering design? NO					
Access road engineering design attachment:					

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: CUEVA DE ORO FEDERAL

Well Number: 203H

Access surfacing type: GRAVEL Access topsoil source: ONSITE Access surfacing type description: Access onsite topsoil source depth: 6 Offsite topsoil source description: Onsite topsoil removal process: Grader Access other construction information: Access miscellaneous information: Number of access turnouts: Acc

Access turnout map:

Drainage Control

New road drainage crossing: OTHER

Drainage Control comments: No drainage crossing

Road Drainage Control Structures (DCS) description: None

Road Drainage Control Structures (DCS) attachment:

Access Additional Attachments

Additional Attachment(s):

Section 3 - Location of Existing Wells

Existing Wells Map? YES Attach Well map: Cueva_203H_Well_Map_03-27-2017.pdf Existing Wells description:

Section 4 - Location of Existing and/or Proposed Production Facilities

Submit or defer a Proposed Production Facilities plan? SUBMIT

Production Facilities description: Production Facilities map: Cueva_203H_Production_Diagram_03-27-2017.PDF

Section 5 - Location and Types of Water Supply

Water Source Table

Operator Name: MATADOR PRODUCTION COMPANY Well Name: CUEVA DE ORO FEDERAL Well Number: 203H Water source use type: CAMP USE, DUST CONTROL, Water source type: GW WELL INTERMEDIATE/PRODUCTION CASING, STIMULATION, SURFACE CASING **Describe type:** Source longitude: Source latitude: Source datum: Water source permit type: WATER WELL Source land ownership: FEDERAL Water source transport method: TRUCKING Source transportation land ownership: PRIVATE Water source volume (barrels): 15000 Source volume (acre-feet): 1.9333965 Source volume (gal): 630000 Water source and transportation map: Cueva_203H_Water_Source_Map_03-27-2017.pdf Water source comments: New water well? NO **New Water Well Info** Well latitude: Well Longitude: Well datum: Well target aquifer: Est. depth to top of aquifer(ft): Est thickness of aquifer: **Aquifer comments:** Aquifer documentation: Well depth (ft): Well casing type: Well casing outside diameter (in.): Well casing inside diameter (in.): New water well casing? Used casing source: **Drilling method: Drill material:** Grout material: Grout depth: Casing top depth (ft.): Casing length (ft.):

Completion Method:

Well Production type:

Water well additional information:

State appropriation permit:

Additional information attachment:

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: CUEVA DE ORO FEDERAL

Well Number: 203H

Section 6 - Construction Materials

Construction Materials description: NM One Call (811) will be notified before construction starts. An unmarked way, resembling a pipeline trench, crosses the east edge of the pad in a NNW-SSE direction. If it is abandoned, then the 370' segment will be removed. If it is in use, some combination of padding the pipe, moving the pipe, or trimming back the edge of the pad will be selected. Route is under what will become the interim reclaimed portion of the pad. Top 6" of soil and brush will be stockpiled east of the pad. Pipe racks will be to the south. A closed loop drilling system will be used. Caliche will be hauled from existing Constructors, Inc. pits on private land in NWNE 34-21s-27e and S2 13-22s-26e. **Construction Materials source location attachment:**

Section 7 - Methods for Handling Waste

Waste type: DRILLING

Waste content description: All trash will be placed in a portable trash cage. It will be hauled to the Eddy County landfill. There will be no trash burning. Contents (drill cuttings, mud, salts, and other chemicals) of the mud tanks will be hauled to R360's state approved (NM1-6-0) disposal site at Halfway. Human waste will be disposed of in chemical toilets and hauled to the Carlsbad wastewater treatment plant.

Amount of waste: 15000 barrels

Waste disposal frequency : Daily

Safe containment description: Steel tanks

Safe containmant attachment:

Waste disposal type: HAUL TO COMMERCIAL Disposal location ownership: PRIVATE FACILITY Disposal type description:

Disposal location description: Halfway NM

Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit?

Reserve pit length (ft.) Reserve pit width (ft.)

Reserve pit depth (ft.)

Reserve pit volume (cu. yd.)

Is at least 50% of the reserve pit in cut?

Reserve pit liner

Reserve pit liner specifications and installation description

Cuttings Area

Cuttings Area being used? NO

Are you storing cuttings on location? NO

Description of cuttings location

Operator Name: MATADOR PRODUCTION COMPANY **Well Name:** CUEVA DE ORO FEDERAL

Well Number: 203H

Cuttings area length (ft.)

Cuttings area width (ft.) Cuttings area volume (cu. yd.)

Is at least 50% of the cuttings area in cut?

WCuttings area liner

Cuttings area depth (ft.)

Cuttings area liner specifications and installation description

Section 8 - Ancillary Facilities

Are you requesting any Ancillary Facilities?: NO

Ancillary Facilities attachment:

Comments:

Section 9 - Well Site Layout

Well Site Layout Diagram:

Cueva_203H_Well_Site_Layout_03-27-2017.pdf

Comments:

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance

Multiple Well Pad Name: CUEVA DE ORO Multiple Well Pad Number: SLOT 3

Recontouring attachment:

Cueva_203H_Recontouring_Plat_03-27-2017.PDF

Drainage/Erosion control construction: Pad moved away from Karst feature

Drainage/Erosion control reclamation: Interim reclamation will shrink the pad 29% by removing caliche and reclaiming the east side (125' x 370'), leaving 2.59 acres for 4 wells, truck turn around, and production equipment. Disturbed areas will be contoured to match pre-construction grades. Soil and brush will be evenly spread over disturbed areas. Disturbed areas will be seeded in accordance with BLM requirements. Enough stockpiled topsoil will be retained to cover the remainder of the pad when the wells are plugged. Once the last well is plugged, then the remainder of the pad and new road will be similarly reclaimed. Noxious weeds will be controlled.

Wellpad long term disturbance (acres): 2.59	Wellpad short term disturbance (acres): 3.65
Access road long term disturbance (acres): 0.36	Access road short term disturbance (acres): 0.36
Pipeline long term disturbance (acres): 0	Pipeline short term disturbance (acres): 0
Other long term disturbance (acres): 0	Other short term disturbance (acres): 0
Total long term disturbance: 2.95	Total short term disturbance: 4.01

Operator Name: MATADOR PRODUCTION COMPANY

Well Name: CUEVA DE ORO FEDERAL

Well Number: 203H

Reconstruction method: Interim reclamation will shrink the pad 29% by removing caliche and reclaiming the east side (125' x 370'), leaving 2.59 acres for 4 wells, truck turn around, and production equipment. Disturbed areas will be contoured to match pre-construction grades. Soil and brush will be evenly spread over disturbed areas. Disturbed areas will be seeded in accordance with BLM requirements. Enough stockpiled topsoil will be retained to cover the remainder of the pad when the wells are plugged. Once the last well is plugged, then the remainder of the pad and new road will be similarly reclaimed. Noxious weeds will be controlled. **Topsoil redistribution:** Evenly

Soil treatment: None planned

Existing Vegetation at the well pad:

Existing Vegetation at the well pad attachment:

Existing Vegetation Community at the road:

Existing Vegetation Community at the road attachment:

Existing Vegetation Community at the pipeline:

Existing Vegetation Community at the pipeline attachment:

Existing Vegetation Community at other disturbances:

Existing Vegetation Community at other disturbances attachment:

Non native seed used? NO

Non native seed description:

Seedling transplant description:

Will seedlings be transplanted for this project? NO

Seedling transplant description attachment:

Will seed be harvested for use in site reclamation? NO Seed harvest description: Seed harvest description attachment:

Seed Management

Seed Table

Seed type:	Seed source:
Seed name:	
Source name:	Source address:
Source phone:	

Operator Name: MATADOR PRODUCTION COMPANY
Well Name: CUEVA DE ORO FEDERAL

Well Number: 203H

Seed cultivar:		
Seed use location:		
PLS pounds per acre:		Proposed seeding season:
Seed Su	mmary	Total pounds/Acre:
Sood Type	Bounds/Aoro	
Seed Type	Pounds/Acre	
Seed reclamation attachment	:	
Operator Contact/R	esponsible Offici	ial Contact Info
First Name:		Last Name:
Phone:		Email:
Seedbed prep:		
Seed BMP:		
Seed method:		
Existing invasive species? No	C	
Existing invasive species trea	atment description:	
Existing invasive species trea	atment attachment:	
Weed treatment plan descript	ion: To BLM standards	
Weed treatment plan attachm	ent:	
Monitoring plan description:	To BLM standards	
Monitoring plan attachment:		
Success standards: To BLM s	atisfaction	
Pit closure description: No pit		
Pit closure attachment:		
Section 11 - Surface	Ownership	

Disturbance type: WELL PAD Describe: Surface Owner: BUREAU OF LAND MANAGEMENT Other surface owner description: BIA Local Office: BOR Local Office: COE Local Office:
Operator Name: MATADOR PRODUCTION COMPANY **Well Name:** CUEVA DE ORO FEDERAL

Well Number: 203H

Use APD as ROW?

DOD Local Office:	
NPS Local Office:	
State Local Office:	
Military Local Office:	
USFWS Local Office:	
Other Local Office:	
USFS Region:	
USFS Forest/Grassland:	USFS Ranger District:

Section 12 - Other Information

Right of Way needed? NO ROW Type(s):

ROW Applications

SUPO Additional Information: 8/2/17: See revised Road Map (Maps 3.1 and 3.2) to address 10-day deficiency letter; revised road map indicates the road is 18.21' longer than originally submitted. See revised Surface Reclamation table and General SUPO attachment to reflect change in road length. No pipeline or power line plans have been formulated to date. (See item 4 in General SUPO attachment) Road re-route will not interfere with karst feature; edge of road is 115.7' from karst. (See Maps 4 & 5 in revised Road Map)

Use a previously conducted onsite? YES

Previous Onsite information: On site inspection was held with Vance Wolf, Cassie Brooks, and Stan Allison (both BLM) on August 18, 2016.

Other SUPO Attachment

Cueva_203H_General_SUPO_07-20-2017.pdf















THIS PROPOSED PAD SITE LOCATION SHOWN HEREON HAS BEEN SURVEYED ON THE GROUND UNDER MY SUPERVISION AND PREPARED ACCORDING TO THE EVIDENCE FOUND AT THE TIME OF SURVEY. AND DATA PROVIDED BY MATADOR PRODUCTION COMPANY. THIS CERTIFICATION IS MADE AND LIMITED TO THOSE PERSONS OR ENTITIES SHOWN ON THE FACE OF THIS PLAT AND IS NON-TRANSFERABLE. THIS SURVEY IS CERTIFIED FOR THIS TRANSACTION ONLY.

ORIGINAL DOCUMENT SIZE: 8.5" X 11"







ORIGINAL DOCUMENT SIZE: 8.5" X 11"





Rig Diagram



Matador Production Company Cueva de Oro Fed 203H SHL 101' FNL & 1859' FEL Sec. 21 BHL 240' FSL & 1870' FEL Sec. 21 T. 20 S., R. 29 E., Eddy County, NM

Surface Use Plan

1. <u>ROAD DIRECTIONS & DESCRIPTIONS</u> (See MAPS 1 – 4)

From the junction of US 285 and Us 62/180 in Carlsbad... Go East 9.1 miles on paved US 62/180 to the equivalent of Mile Post 44.15 Then turn left and go North 5.8 miles on paved County Road 243 Then turn sharply right and go East 2.6 miles on paved County Road 238 Then turn left and go North ≈100' on a caliche road onto the proposed pad

Non-county roads will be maintained as needed to Gold Book standards. This includes pulling ditches, preserving the crown, and cleaning culverts. This will be done at least once a year, and more often as needed. Caliche will be hauled from Constructors, Inc. existing pits on private land in NWNE 34-21s-27e and S2 13-22s-26e.

2. ROAD TO BE BUILT OR UPGRADED (See MAPS 3.0 - 4)

518.21 feet of new road will be built as a permanent detour since the new pad will block the existing road. Three companies have rights-of-way to use the road (NMNM-084180: SM Energy, NMNM-090168: Oxy USA, & NMNM-121374: (Mewbourne). The new road will be crowned and ditched, have a 14' wide driving surface, and be surfaced with caliche. Four hundred feet of straw wattle will be laid on the west side of the new road to protect a karst feature. Maximum disturbed width = 30'. Maximum grade = 1%. Maximum cut or fill = 1'. No upgrade, culvert, cattle guard, or vehicle turn out is needed.

3. EXISTING WELLS (See MAP 2)

Existing oil, gas, water, disposal, and P & A wells are within a mile. No injection well is within a mile.

4. PROPOSED PRODUCTION FACILITIES

Facilities will be built on the east side of the pad (see Interim Reclamation & Production Diagram). Pipeline and power line plans have not been finalized.

5. WATER SUPPLY (See MAPS 1 - 4)

Matador Production Company Cueva de Oro Fed 203H SHL 101' FNL & 1859' FEL Sec. 21 BHL 240' FSL & 1870' FEL Sec. 21 T. 20 S., R. 29 E., Eddy County, NM

Water will be trucked from two water wells (C 03570 and C 03607) on private land in NENENE and SENENE 24-21s-27e.

6. <u>CONSTRUCTION MATERIALS & METHODS</u> (see MAP 4)

NM One Call (811) will be notified before construction starts. An unmarked way, resembling a pipeline trench, crosses the east edge of the pad in a NNW-SSE direction. If it is abandoned, then the \approx 370' segment will be removed. If it is in use, some combination of padding the pipe, moving the pipe, or trimming back the edge of the pad will be selected. Route is under what will become the interim reclaimed portion of the pad.

Top \approx 6" of soil and brush will be stockpiled east of the pad. Pipe racks will be to the south. A closed loop drilling system will be used. Caliche will be hauled from existing Constructors, Inc. pits on private land in NWNE 34-21s-27e and S2 13-22s-26e.

7. WASTE DISPOSAL

All trash will be placed in a portable trash cage. It will be hauled to the Eddy County landfill. There will be no trash burning. Contents (drill cuttings, mud, salts, and other chemicals) of the mud tanks will be hauled to R360's state approved (NM1-6-0) disposal site at Halfway. Human waste will be disposed of in chemical toilets and hauled to the Carlsbad wastewater treatment plant.

8. ANCILLARY FACILITIES

There will be no airstrip or camp. Camper trailers will be on location for the company man, tool pusher, or mud logger.

9. WELL SITE LAYOUT

See Rig Diagram for depictions of the well pad, trash cage, access onto the location, parking, living facilities, and rig orientation.

10. RECLAMATION

Matador Production Company Cueva de Oro Fed 203H SHL 101' FNL & 1859' FEL Sec. 21 BHL 240' FSL & 1870' FEL Sec. 21 T. 20 S., R. 29 E., Eddy County, NM

Interim reclamation will shrink the pad \approx 29% by removing caliche and reclaiming the east side (125' x 370'), leaving 2.59 acres for 4 wells, truck turn around, and production equipment. Disturbed areas will be contoured to match pre-construction grades. Soil and brush will be evenly spread over disturbed areas. Disturbed areas will be seeded in accordance with BLM requirements. Enough stockpiled topsoil will be retained to cover the remainder of the pad when the wells are plugged. Once the last well is plugged, then the remainder of the pad and new road will be similarly reclaimed. Noxious weeds will be controlled.

11. SURFACE OWNER

All construction will be on BLM. Land use:

 $518.21' \times 30' \text{ road} = 0.36 \text{ acre}$ $+ 370' \times 430' \text{ pad} = 3.65 \text{ acres}$ 4.01 acres short term - 1.06 acres interim reclamation 2.95 acres long term (0.36 road + 2.59 pad)

12. OTHER INFORMATION

On site inspection was held with Vance Wolf, Cassie Brooks, and Stan Allison (both BLM) on August 18, 2016.

Matador paid the Permian Basin programmatic agreement archaeology fund.

Matador Production Company Cueva de Oro Fed 203H SHL 101' FNL & 1859' FEL Sec. 21 BHL 240' FSL & 1870' FEL Sec. 21 T. 20 S., R. 29 E., Eddy County, NM

CERTIFICATION

I hereby certify that I, or someone under my direct supervision, have inspected the drill site and access route proposed herein; that I am familiar with the conditions which currently exist; that I have full knowledge of state and Federal laws applicable to this operation; that the statements made in this APD package are, to the best of my knowledge, true and correct; and that the work associated with the operations proposed herein will be performed in conformity with this APD package and the terms and conditions under which it is approved. I also certify that I, or the company I represent, am responsible for the operations conducted under this application. These statements are subject to the provisions of 18 U. S. C. 1001 for the filing of false statements. Executed this 15th day of March, 2017.

Brian Wood, Consultant Permits West, Inc. 37 Verano Loop, Santa Fe, NM 87508 (505) 466-8120 FAX: (505) 466-9682

Field representative will be: Sam Pryor, Senior Staff Landman Matador Production Company 5400 LBJ Freeway, Suite 1500 Cellular: (505) 699-2276

Matador Production Company Cueva de Oro Fed 203H SHL 101' FNL & 1859' FEL Sec. 21 BHL 240' FSL & 1870' FEL Sec. 21 T. 20 S., R. 29 E., Eddy County, NM

> Dallas TX 75240 Phone: (972) 371-5241 FAX: (214) 866-4841





Section 1 - General

Would you like to address long-term produced water disposal? NO

Section 2 - Lined Pits

Would you like to utilize Lined Pit PWD options? NO Produced Water Disposal (PWD) Location: **PWD surface owner:** Lined pit PWD on or off channel: Lined pit PWD discharge volume (bbl/day): Lined pit specifications: Pit liner description: Pit liner manufacturers information: Precipitated solids disposal: Decribe precipitated solids disposal: Precipitated solids disposal permit: Lined pit precipitated solids disposal schedule: Lined pit precipitated solids disposal schedule attachment: Lined pit reclamation description: Lined pit reclamation attachment: Leak detection system description: Leak detection system attachment: Lined pit Monitor description: Lined pit Monitor attachment: Lined pit: do you have a reclamation bond for the pit? Is the reclamation bond a rider under the BLM bond? Lined pit bond number: Lined pit bond amount: Additional bond information attachment:

PWD disturbance (acres):

Section 3 - Unlined Pits

Would you like to utilize Unlined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

Do you propose to put the produced water to beneficial use?

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

Does the produced water have an annual average Total Dissolved Solids (TDS) concentration equal to or less than that of the existing water to be protected?

TDS lab results:

Geologic and hydrologic evidence:

State authorization:

Unlined Produced Water Pit Estimated percolation:

Unlined pit: do you have a reclamation bond for the pit?

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

Section 4 - Injection

Would you like to utilize Injection PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner:

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

PWD disturbance (acres):

PWD disturbance (acres):

Injection well type: Injection well number: Assigned injection well API number? Injection well new surface disturbance (acres): Minerals protection information: Mineral protection attachment: Underground Injection Control (UIC) Permit? UIC Permit attachment:

Section 5 - Surface Discharge

Would you like to utilize Surface Discharge PWD options? NO

Produced Water Disposal (PWD) Location: PWD surface owner: Surface discharge PWD discharge volume (bbl/day): Surface Discharge NPDES Permit? Surface Discharge NPDES Permit attachment: Surface Discharge site facilities information: Surface discharge site facilities map:

Section 6 - Other

Would you like to utilize Other PWD options? NO

Produced Water Disposal (PWD) Location: PWD surface owner: Other PWD discharge volume (bbl/day): Other PWD type description: Other PWD type attachment: Have other regulatory requirements been met? Other regulatory requirements attachment:

PWD disturbance (acres):

PWD disturbance (acres):

Injection well name: Injection well API number:

FAFMSS

U.S. Department of the Interior BUREAU OF LAND MANAGEMENT

Bond Information

Federal/Indian APD: FED

BLM Bond number: NMB001079

BIA Bond number:

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Bond Info Data Report

02/14/2018

Is the reclamation bond BLM or Forest Service?

BLM reclamation bond number:

Forest Service reclamation bond number:

Forest Service reclamation bond attachment:

Reclamation bond number:

Reclamation bond amount:

Reclamation bond rider amount:

Additional reclamation bond information attachment: