Tom 3160-3 March 2012) UNITED STATE: DEPARTMENT OF THE BUREAU OF LAND MAN APPLICATION FOR PERMIT TO 1a. Type of work:	S INTERIOR NAGEMENT	HOBES 28	2018	Expires C 5. Lease Serial No. NMLC058775	October 31, 20	
APPLICATION FOR PERMIT TO	DRILL OF	REENTER	ENVE	6. If Indian, Allotee	or Tribe N	lame
la. Type of work:	rer	Re		7. If Unit or CA Agre	ement, Na	me and No.
lb. Type of Well: 🗹 Oil Well 🗌 Gas Well 🗍 Other	- Sir	gle Zone 🔲 Multip	ole Zone	8. Lease Name and PERIDOT 8 FEDE		32.083
2. Name of Operator CONOCOPHILLIPS COMPANY	17817)		9. API Well No. 30-025-	44	522
3a. Address 600 N. Dairy Ashford Rd Houston TX 77079	3b. Phone No. (281)293-1	(include area code) 748		10. Field and Pool, or . MALJAMAR / YES	• •	44500
4. Location of Well (Report location clearly and in accordance with a	ny State requirem	ents.*)		11. Sec., T. R. M. or B		vey or Area
At surface SENW / 2634 FNL / 2047 FWL / LAT 32.849				SEC 8 / T17S / R3	2E / NMF)
At proposed prod. zone LOT 2 / 2310 FNL / 330 FWL / LA	T 32.850111	/ LONG -103.8134	39	12. County or Parish		13. State
 Id. Distance in miles and direction from nearest town or post office* 1.4 miles 				LEA		NM
 Distance from proposed* location to nearest 6 feet property or lease line, ft. (Also to nearest drig, unit line, if any) 	16. No. of a 480	cres in lease	17. Spacin 240.95	g Unit dedicated to this	well	
 Distance from proposed location* to nearest well, drilling, completed, 115 feet 	19. Proposed	l Depth	20. BLM/I	BIA Bond No. on file		
applied for, on this lease, ft.	5988 feet	12874 feet	FED: ES	\$0085		
21. Elevations (Show whether DF, KDB, RT, GL, etc.) 4045 feet	22 Approxit	nate date work will sta	rt*	23. Estimated duration 21 days	n	
4040 1661	24. Attac				· · ·	
The following, completed in accordance with the requirements of Onsh			ttached to thi	is form:		
 Well plat certified by a registered surveyor. A Drilling Plan. 		Item 20 above).	•	ns unless covered by an	existing b	ond on file (see
3. A Surface Use Plan (if the location is on National Forest System SUPO must be filed with the appropriate Forest Service Office).	n Lands, the	 Operator certifie Such other site BLM. 		ormation and/or plans a	s may be re	quired by the
25. Signature (Electronic Submission)		<i>(Printed/Typed)</i> n Maunder / Ph: (2	81)206-52	81	Date 04/05/2	2017
itle Senior Coordinator, Regulatory MCBU						
Approved by (Signature)		(Printed/Typed)			Date	
(Electronic Submission)	Office	Layton / Ph: (575)2	234-5959		02/23/2	2018
Supervisor Multiple Resources		SBAD				
Application approval does not warrant or certify that the applicant holonduct operations thereon. Conditions of approval, if any, are attached.	lds legal or equi	able title to those righ	its in the sub	ject lease which would e	entitle the a	pplicant to
itle 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a tates any false, fictitious or fraudulent statements or representations as	crime for any p s to any matter w	erson knowingly and vithin its jurisdiction.	willfully to m	nake to any department of	or agency (of the United
(Continued on page 2) GCP 2/n81	118	·····		*(Inst	ructions	on page 2)

APPROVID HAL-APPProval Date: 02/23/2018

Double a

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)

Approval Date: 02/23/2018

Additional Operator Remarks

Location of Well

SHL: SENW / 2634 FNL / 2047 FWL / TWSP: 17S / RANGE: 32E / SECTION: 8 / LAT: 32.849192 / LONG: -103.79055 (TVD: 0 feet, MD: 0 feet)
 PPP: SENW / 2326 FNL / 2640 FWL / TWSP: 17S / RANGE: 32E / SECTION: 7 / LAT: 32.850102 / LONG: -103.805806 (TVD: 6029 feet, MD: 10530 feet)
 PPP: SENW / 2310 FNL / 2022 FWL / TWSP: 17S / RANGE: 32E / SECTION: 8 / LAT: 32.850082 / LONG: -103.790625 (TVD: 5487 feet, MD: 5500 feet)
 BHL: LOT 2 / 2310 FNL / 330 FWL / TWSP: 17S / RANGE: 32E / SECTION: 7 / LAT: 32.850111 / LONG: -103.813439 (TVD: 5988 feet, MD: 12874 feet)

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BLM Point of Contact

Name: Priscilla Perez Title: Legal Instruments Examiner Phone: 5752345934 Email: pperez@blm.gov

(Form 3160-3, page 3)

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.

Approval Date: 02/23/2018

(Form 3160-3, page 4)

AFMSS

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

Application Data Report

02/26/2018

APD ID: 10400006350 **Operator Name: CONOCOPHILLIPS COMPANY** Well Name: PERIDOT 8 FEDERAL Well Type: OIL WELL

Submission Date: 04/05/2017

Well Number: 15H

Well Work Type: Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - General		
APD ID: 10400006350	Tie to previous NOS?	Submission Date: 04/05/2017
BLM Office: CARLSBAD	User: Susan Maunder	Title: Senior Coordinator, Regulatory
Federal/Indian APD: FED	Is the first lease penetrated	MCBU for production Federal or Indian? FED
Lease number: NMLC058775	Lease Acres: 480	
Surface access agreement in place?	Allotted? R	eservation:
Agreement in place? NO	Federal or Indian agreement	t:
Agreement number:		
Agreement name:		
Keep application confidential? NO		
Permitting Agent? NO	APD Operator: CONOCOPH	ILLIPS COMPANY
Operator letter of designation:	dat 8 Ead COB COC IOA Cat	Ltr. 04.02.2017 adf

Peridot_8_Fed_COP_COG_JOA_Cert_Ltr_04-03-2017.pdf

Operator Info

1

	• •	
Operator Organization Name:	CONOCOPHILLIPS COMPANY	,
Operator Address: 600 N. Dai	ry Ashford Rd	7 :-, 77 070
Operator PO Box:		Zip: 77079
Operator City: Houston	State: TX	
Operator Phone: (281)293-174	18	
Operator Internet Address:		

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: PERIDOT 8 FEDERAL	Well Number: 15H	Well API Number:
Field/Pool or Exploratory? Field and Pool	Field Name: MALJAMAR	Pool Name: YESO WEST

Is the proposed well in an area containing other mineral resources? NONE

......

Page 1 of 3

Operator Name: CONOCOPHILLIPS COMPANY **Well Name:** PERIDOT 8 FEDERAL

Well Number: 15H

Describe other minerals: Is the proposed well in a Helium production area? N Use Existing Well Pad? NO New surface disturbance? Type of Well Pad: MULTIPLE WELL Multiple Well Pad Name: Number: 5H PERIDOT 8 FEDERAL Well Class: HORIZONTAL Number of Legs: 1 Well Work Type: Drill Well Type: OIL WELL **Describe Well Type:** Well sub-Type: INFILL Describe sub-type: Distance to town: 1.4 Miles Distance to nearest well: 115 FT Distance to lease line: 6 FT Reservoir well spacing assigned acres Measurement: 240.95 Acres Well plat: Peridot_8_Fed_15H_C102_04-03-2017.pdf Peridot_8_Fed_15H_Leases_w_wellsMap_20180123124303.pdf Peridot_8_Fed_15H_SerialRegister_20180123124317.pdf Well work start Date: 04/15/2019 Duration: 21 DAYS **Section 3 - Well Location Table**

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83

Vertical Datum: NAVD88

Survey number:

	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 Leg #1	263 4	FNL	204 7	FWL	17S	32E	8	Aliquot SENW	32.84919 2	- 103.7905 5	LEA	1	NEW MEXI CO	F	NMLC0 58775	404 5	0	0
KOP Leg #1	231 0	FNL	202 2	FWL	17S	32E	8	Aliquot SENW	32.85008 2	- 103.7906 26	LEA		NEW MEXI CO	F	NMLC0 58775	F	555 0	553 7

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: PERIDOT 8 FEDERAL

Well Number: 15H

	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
PPP Leg #1	231 0	FNL	202 2	FWL	17S	32E	8	Aliquot SENW	32.85008 2	- 103.7906 25	LEA	NEW MEXI CO	NEW MEXI CO	F	NMLC0 58775	- 144 2	550 0	548 7
PPP Leg #1	232 6	FNL	264 0	FWL	17S	32E	7	Aliquot SENW	32.85010 2	- 103.8058 06	LEA	NEW MEXI CO	NEW MEXI CO	F	NMLC0 29406B	- 198 4	105 30	602 9
EXIT Leg #1	232 6	FNL	264 0	FWL	17S	32E	7	Aliquot SWNE	32.85010 2	- 103.8058 06	LEA		NEW MEXI CO	F	NMLC0 58775	- 198 4	105 30	602 9
BHL Leg #1	231 0	FNL	330	FWL	17S	32E	7	Lot 2	32.85011 1	- 103.8134 39	LEA	NEW MEXI CO		F	NMLC0 29406B	- 194 3	128 74	598 8



ConocoPhillips Company 600 N. Dairy Ashford Road, Off EC3-10-W285 Houston, TX 77079-1175

Susan B. Maunder Sr. Coordinator, Regulatory Phone: (281) 206-5281

March 28, 2017

Bureau of Land Management Carlsbad Field Office 620 East Greene Street Carlsbad, New Mexico 88220-6292

RE: Joint Operating Agreement Pending APD – Peridot 8 Federal 5H, 15H Section 8, T17S, R32E Lease Number – NMLC058775

Section.

Dear Sir or Madam,

ConocoPhillips Company has negotiated a Joint Operating Agreement with COG Operating LLC which covers approximately 480 acres in Township 17 South, Range 32 East. The agreement, along with other terms, provides access to surface operated by the other party. This mutual access will allow more oil and gas resource recovery by maximizing horizontal wellbore, formation contact.

Please accept this letter as our certification our two companies are, in agreement of operating rights within the Peridot 8 Federal area. In regards to Peridot development, COP respectfully requests BLM to process the referenced APD to afford the maintenance of the lease in a timely manner.

If you have questions regarding this certification, I can be reached at 281-206-5281 or via email at Susan.B.Maunder@conocophillips.com.

Sincerely,

Susan & Maunder

Susan B. Maunder Senior Coordinator, Regulatory ConocoPhillips Company

DEPARTMENT OF THE INTERIOR BUREAU OF LAND MANAGEMENT CASE RECORDATION Run Time: 04:03 PM. Page 1 of ? Run Date: 07/24/2017 (MASS) Serial Register Page 01 02-25-1920;04/STAT0437;30USC226 Case Type 310781: OAS RENEWAL LEASE - PD Commodity 459: Total Acres 480.000 Serial Number NMLC- 0 058775 Commodity 459: OIL & GAS Case Type 310781: OAS GAS Case Disposition: AUTHORIZED Total Acres 480.000 Serial Number NMLC- 0 058775 Serial Number: NMLC 0 058775 Commodity 459: 100 8000 000000000000000000000000000000	al Register P		Go] ⇔ ⇒ [] [く () > ゆ ม 	, 	H X	
Run Date: 07/24/2017 (MASS) Serial Register Page 01 02-25-1920;041STAT0437;30USC226 Case Type 310781: O&G RENEWAL LEASE - PD Commodity 469: OIL & GAS Case Disposition: AUTHORIZED Total Acres 480.000 Serial Number NMLC- 0 058775 Name & Address COMOCOPHILLIPS CO PO B0X 7500 BARTLESVILLE 0K 740057500 LESSEE 100 800000006 Serial Number: NMLC- 0 058775 Int Rel % Intere COMOCOPHILLIPS CO PO B0X 7500 BARTLESVILLE 0K 740057500 LESSEE 100 800000006 Serial Number: NMLC- 0 058775 Serial Number: NMLC- 0 058775 <	Click here to) see où 1	nap	BUREAU (F LAND MANAGEMEN			
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02/14/1949 314 RENBWAL APLN FOLED	1-/06/19/0		50	BELD BY PECD - ACTUAT				

03/22/1945	500	GEOGRAPEIC NAME	N MALJAMAR FLD;
03/22/1945	530	KMA CLASSIFIED	
02/14/1949	314	RENEWAL APLN FOLED	
05/06/1949	650	HELD BY PROD - ACTUAL	
05/06/:949	5 C B	MEMO OF IST PROD-ACTUAL	
06/01/1949	242	LEASE RENEWED	THRU 07 31/59;
04/17/1959	317	RENEWAL APLN FILED	
08/01/1959	747	LEASE RENEWED	THRU C7/31/69;
04/14/1969	314	RENEWAL APLN FILED	
07/16/1969	646	MEMO OF LAST PROD-ACTUAL	
08/01/1969	242	LEASE RENEWED	THR0 67:31/79;
12/18/1970	058	NOTICE SENT-NONPROD STAT	
03/19/1979	314	RENEWAL APLN FILED	
06/01/1979	242	LEASE RENEWED	CHRU C7 31/69;
10/24/1979	940	NAME CHARGE RECOGNIZED	CONTL 011/CONOCO 110
07/06/1984	111	RENTAL RECEIVED	\$480.00;1YR/\$4-P5
07/08/1925	111	RENTAL RECEIVED	548C.CC;1YK/85-06
07/07/1986	:**	REDTAL RECEIVED	548C.CC;1YF/86-27
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12/06/1987	974	AUDOMATED RECORD VERIF	HKC/VL
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02/27/1989	314	RENEWAL APLN FILED	
98610571989		RENTAL RECEIVED	\$480.00;1YR/89-90
06/12/1989	974	AUCOMATED RECORD VERIE	MCS/MT
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2801/1989	568	EFFECTIVE DATE	
07/05/1990	:::	BENTAL RECEIVED	\$48C.CC;43/1103645

NO WARRANTY IS MADE BY BLM FOR USE OF THE DATA FOR PURPOSES NOT INTENDED BY BLM

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CHASE RICHARD L		PO BOX 359	ARTESIA NM 882110359		ATING RIGHTS 0.00000000	
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01/11/1983	140	ASGN FILED	(2) CONOCO PINRSHE PRO			
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01/20/1905	139	ASGN APPROVED	(4)EFF 02+01/83;			
	139	ASGN APPROVED	EFF 03/01/53;			
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NO WARRANTY IS MADE BY BLM FOR USE OF THE DATA FOR PURPOSES NOT INTENDED BY BLM

FMSS

U.S. Department of the Interior BUREAU OF LAND MANAGEMENT Drilling Plan Data Report

APD ID: 10400006350

Submission Date: 04/05/2017

Highlighted data reflects the most recent changes

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: PERIDOT 8 FEDERAL

Well Number: 15H

Show Final Text

Well Type: OIL WELL

Well Work Type: Drill

Section 1 - Geologic Formations

Formation			True Vertical	Measured			Producing
ID	Formation Name	Elevation	Depth	Depth	Lithologies	Mineral Resources	Formation
1	RUSTLER	3224	835	835	DOLOMITE,ANHYDRIT E	USEABLE WATER	No
2	SALADO	2249	975	975	SALT,ANHYDRITE	NONE	No
3	TANSILL	1169	2055	2058	DOLOMITE,ANHYDRIT E	NONE	No
4	YATES	1029	2195	2198	DOLOMITE,ANHYDRIT E	NONE	No
5	SEVEN RIVERS	724	2500	2504	SANDSTONE,DOLOMIT E,ANHYDRITE	NATURAL GAS,OIL	No
6 .	QUEEN	104	3120	3126	SANDSTONE,DOLOMIT E,ANHYDRITE	NATURAL GAS,OIL	No
7	GRAYBURG	-326	3550	3558	SANDSTONE,DOLOMIT E	NATURAL GAS,OIL	No
8	SAN ANDRES	-636	3860	3869	SANDSTONE,DOLOMIT E	NATURAL GAS,OIL	No
9	GLORIETA	-2146	5370	5383	SANDSTONE,DOLOMIT E,SILTSTONE	NATURAL GAS,OIL	No
10	PADDOCK	-2241	5465	5478	DOLOMITE,ANHYDRIT E,SILTSTONE	NATURAL GAS,OIL	No
11	BLINEBRY	-2555	5779	5801	DOLOMITE,ANHYDRIT E,SILTSTONE	NATURAL GAS,OIL	Yes

Section 2 - Blowout Prevention

Pressure Rating (PSI): 3M

Rating Depth: 6110

Equipment: Rotating Head, Annular Preventer, Pipe/Blind Rams, Kill Lines, Choke Lines, Adapter Spool. All required equipment per federal regulations to be in place prior to drilling out the surface casing **Requesting Variance?** YES

Variance request: We request variance to use flexible choke line(s) from the BOP to Choke Manifold. Testing certificate is attached in "Flexhose Variance data" document. We also request approval to have the option of using a 13" BOP as represented on attached BOP diagram.

Testing Procedure: BOP/BOPE tested by independent company to 250 psi low and the high of 50% working psi, as required by federal and state regulations. See attached "Drill Plan" document.

Choke Diagram Attachment:

Well Number: 15H

Peridot_8_Fed_15H_3M_Choke_Manifold_04-03-2017.pdf

Peridot_8_Fed_15H_FlexhoseVarianceData_04-03-2017.pdf

BOP Diagram Attachment:

Peridot_8_Fed_15H_BOP_Diagrams_04-03-2017.pdf

Section 3 - Casing

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	17.5	13.375	NEW	API	N	0	885	0	885	-2065	-2950	885	J-55	54.5	STC	2.89	6.98	DRY	10.7	DRY	17.7
	INTERMED IATE	12.2 5	9.625	NEW	API	N	0	2250	0	2250	-2065	-4065	2250	J-55	40	LTC	2.2	3.38	DRY	5.78	DRY	7
	PRODUCTI ON	8.75	7.0	NEW	API	Y	0	5200	0	5200	-2065	-7265	5200	L-80	29	LTC	2.88	3.35	DRY	3.89	DRY	4.48
	PRODUCTI ON	8.75	5.5	NEW	API	Y	5200	12874	5200	5988	-7265	-8175	7674	L-80	20	LTC	3.15	3.28	DRY	3.41	DRY	3.04

Casing Attachments

Casing ID: 1 String Type: SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Peridot_8_Fed_15H_Csg_Worksheet_20180123094530.pdf

Operator Name: CONOCOPHILLIPS COMPANY Well Name: PERIDOT 8 FEDERAL

Well Number: 15H

Casing Attachments

Casing ID: 2 String Type: INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Peridot_8_Fed_15H_Csg_Worksheet_20180123094911.pdf

Casing ID: 3 String Type: PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Peridot_8_Fed_15H_Csg_Worksheet_20180123094924.pdf

Casing Design Assumptions and Worksheet(s):

Peridot_8_Fed_15H_Csg_Worksheet_20180123094941.pdf

Casing ID: 4 String Type: PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Peridot_8_Fed_15H_Csg_Worksheet_20180123094957.pdf

Casing Design Assumptions and Worksheet(s):

Peridot_8_Fed_15H_Csg_Worksheet_20180123095012.pdf

Section 4 - Cement

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: PERIDOT 8 FEDERAL

Well Number: 15H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	585	500	1.68	13.5	840	50	Class C	4.0% Bentonite + 0.2% Anti-Foam + 2.0% CaCl2 +0.125lb/sk LCM + 0.1% Dispersant
SURFACE	Tail		585	885	400	1.35	14.8	540	50	Class C	0.2% Anti-Foam + 0.1% Lost Circ Control + 2 Ibs/bbl CemNET (losses Control)
INTERMEDIATE	Lead		0	1750	450	2.29	11.5	1031	50	Class C	10.0% Bentonite + 0.2% Anti-Foam + 2.0% Expanding + 0.15% Viscosifier + 1.3% Retarder
INTERMEDIATE	Tail		1750	2250	300	1.29	13.5	387	50	Class C	1% Extender + 3 lb/sk Extender + 0.2% Anti- Foam + 0.1% Dispersant + 13 lb/sk LCM + 0.5% Fluid Loss + 0.7% Retarder
PRODUCTION	Lead	-	1700	5200	650	3.2	11	2080	15	Class C	6% Extender + 10% Gas Migration Control + 2% Sodium Metasilicate (dry) + 1% Cement Bonding Agent + 3% Aluminum Silicate + 0.125 lb/sx Cello Flake + 3 lb/sx LCM-1

PRODUCTION	Lead	5200	1287	1900	1.37	14	2603	15	Tail: Class C	3lb/sk LCM + 1.5%
	'		4							Fluid Loss + 0.1% + 1%
										Sodium Metasilicate
										(dry) + 1.5% Fluid Loss
										Control

Operator Name: CONOCOPHILLIPS COMPANY Well Name: PERIDOT 8 FEDERAL

Well Number: 15H

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: Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times. See attached "Drill Plan" for additional information.

Describe the mud monitoring system utilized: Closed-loop mud system using steel mud containers will be on location. Mud monitoring of any changes in levels (gains or losses) will use Pressure Volume Temperature instrumentation, Pason, Visual Observations. See attached "Drill Plan" for additional information.

Circulating Medium Table

Top Depth	Bottom Depth	Mud Type	Min Weight (Ibs/gal)	Max Weight (Ibs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	На	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	885	OTHER : Freshwater Gel	8.5	9							
2250	1287 4	OTHER : Cut Brine	8.6	10							
885	2250	SALT SATURATED	10	10							

Section 6 - Test, Logging, Coring

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

Will run GR/CNL from TD to surface (horizontal well – vertical portion of hole). Stated logs run will be in the Completion Report and submitted to the BLM. Production tests will be conducted multiple times per week, through a test separator, during first months following completion. Thereafter, tests will be less frequent. See attached "Drill Plan" for additional information.

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

CNL,GR

Coring operation description for the well:

No coring operation is planned, at this time.

Operator Name: CONOCOPHILLIPS COMPANY Well Name: PERIDOT 8 FEDERAL

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 2815

Anticipated Surface Pressure: 1488.62

Well Number: 15H

Anticipated Bottom Hole Temperature(F): 110

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:

Peridot_8_Fed_15H_H2S_CPlan_04-03-2017.pdf Peridot_8_Fed_15H_Typical_Rig_Layout_20180123100411.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Peridot_8_Fed_15H_DrillWasteContainment_04-03-2017.pdf

Peridot_8_Fed_15H_DirectionalPlanV2_20180123100749.pdf

Peridot_8_Fed_15H_Drill_PlanV3_20180123100819.pdf

Peridot_8_Fed_15H_Wellbore_SchematicV2_20180123100849.pdf

Other proposed operations facets description:

Option to upgrade casing connection to BTC is requested, in addition to the ability to upgrade our BOP equipment depending on availability. Cement volumes will be adjusted based on hole conditions. We request approval of option to run open hole sliding sleeve in lateral section (option attachment included). We request variance to use multi-bowl wellhead. See attached "Drill Plan" for additional information.

Other proposed operations facets attachment:

Peridot_8_Fed_15H_Generic_WH_5M_04-03-2017.pdf Peridot_8_Fed_15H_OH_Sleeve_Option_20180123101435.pdf Peridot_8_Fed_GasCapturePlan_20180123101506.pdf

Other Variance attachment:



All Tees must be Targeted

- Item Description
 - 1 Remote Controlled Hydraulically Operated Adjustable Choke, 2-1/16", 3M
 - 2 Manual Adjustable Choke, 2-1/16", 3M
 - 3 Gate Valve, 2-1/16" 5M
 - 4 Gate Valve, 2-1/16" 5M
 - 5 Gate Valve, 2-1/16" 5M
 - 6 Gate Valve, 2-1/16" 5M
 - 7 Gate Valve, 3-1/8" 3M
 - Gate Valve, 2-1/16" 5M 8
 - 9 Gate Valve, 2-1/16" 5M

 - 10 Gate Valve, 2-1/16" 5M
 - 11 Gate Valve, 3-1/8" 3M
 - 12 Gate Valve, 2-1/16" 5M
 - 13 Pressure Gauge
 - 14 2" hammer union tie-in point for BOP Tester

The 3M Choke Manifold & Valves will be tested to rated working pressure.

5

Peridot 8 Federal 15H



Wellhead / Fire Guarded System







Reliance Eliminator Choke & Kill

This hose can be used as a choke hose which connects the BOP stack to the b manifold or a kill hose which connects the mud stand pipe to the BOP kill valve.

The Reliance Eliminator Choke & Kill hose contains a specially bonded compounded cover that replaces rubber covered Asbestos, Fibreglass and other fire retardant materials which are prone to damage. This high cut and gouge resistant cover overcomes costly repairs and downtime associated with older designs.

The Reliance Eliminator Choke & Kill hose has been verified by an independent engineer to meet and exceed EUB Directive °G6 fdf 06 minutes)

Nom.	ID	No	m OD	V	Veight	Min	Bend Radiu	ıs Max	WP
in.	mm.	in.	mm	lb/ft	kg/m	in.	mm.	psi	Мра
3	76.2	5.11	129.79	14.5	21.46	48	1219.2	5000	34.47
3-1/2	88.9	5.79	147.06	20.14	29.80	54	1371.6	5000	34.47

End Connections

FittingsFlangesHammer UnionsOtherRC4X5055R35 - 3-1/85000#APIType6BAll UnionConfigurationsLPThreaded (RC3X5055R31 - 3-1/83000#APIType6BGraylockGraylockRC4X5575CustomEndsCustomEndsCustomEnds

MICK



Groeley, CO 80631 Ph 970-346-3751 Fax 970-353-3168 2030E 8th Street, Suite B

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1001 M&O Drive

Please remit payment to: 608 - 19 Avenue, Nisku, AB Canada T9E 7W1

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 Sen Antonio, TX 78217
 Willieton, ND 58801

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 Ph: 701-572-7035

 Fax: 318-687-5491
 Fax: 210-650-3133
 Fax: 701-572-7030
 4970 Hwy 85

 Midland, TX 78706
 Houston, TX 77388

 Ph: 432-689-0102
 Ph: 281-268-9720

 Fax: 432-699-4898
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Peridot 8 Federal 15H

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Peridot 8 Federal 15H

2904 SCR 1250 Industrial Products Ltd. MIDLAND, TX 79706 CERTIFICATE Т ES Т **Customer Information Material Information** TRINIDAD DRILLING Customer: 3.1/2" FIREGUARD H Hose Type P.O. #: PO22132 Hose ID 3.1/2" **RIG# 435** Rig # Assembly Length 8 6 Fireguard Yes/No Cust Tracking # YES **Test Information** Material Tracking - Coupling #1 Coupling #1: MTR# - Stem MTR# - Shell **R35 FIXD FLANGE** Cert No .: 105-013482/001 H-01 Date: (YYYY-MM-DD) #2016-11-11# Working Pressure : 5000 PSI Test Pressure: 10000 PSI NACE# Duration (mins) 20 Material Tracking - Coupling #2 Traceability Coupling #2: R35 FLOATING FLAN NEW MTR# - Stem RECERT 13482 MTR# - Shell H-01 NACE# **Previous Reference #** Comments TESTED AND CERTIFIED @ 10000 PSI FOR 10 MINUTES CERT TAG SN# 13482-H01 15000 1.5 r rin i Sec. 58 - 30 (led) 13050 11000 Pressure 9000 7000 5000 3000 1000 -10000 60 14 20 7 80 4.00 Pressurized Time (mins) 9 Acceptable ISIDRO SANCHEZ \square Not Acceptable Test Technician (Print Name) Super sor Sig **RIP-HAFM 006** VER II est Technician Signature

PERIDOT 8 FEDERAL 15H



ltem

- Description
- 1 Rotating Head, 11"
- 2A Fill up Line and Valve
- 2B Flow Line (10")
- 2C Shale Shakers and Solids Settling Tank
- 2D Cuttings Bins for Zero Discharge
- 2E Rental Mud Gas Separator with vent line to flare and return line to mud system
- 3 Annular BOP (11", 3M)
- 4 Double Ram (11", 3M, Blind Ram top x Pipe Ram bottom)
- 5 Kill Line (2" flexible hose, 3M)
- 6 Kill Line Valve, Inner (2-1/16", 3M)
- 7 Kill Line Valve, Outer (2-1/16", 3M)
- 8 Kill Line Check Valve (2-1/16", 3M)
- 9 Choke Line (3-1/8" 3M Coflex Line)
- 10 Choke Line Valve, Inner (3-1/8", 3M)
- 11 Choke Line Valve, Outer, (3-1/8", Hydraulically operated, 3M)
- 12 Adapter Flange (11" 5M to 11" 3M)
- 13 Spacer Spool (11", 5M)
- 14 Casing Head (11" 5M)
- 15 Ball Valve and Threaded Nipple on Casing Head Outlet, 2" 5M
- 16 Surface Casing

A variance is requested to permit the use of flexible hose. The testing certificate for the specific hose will be available on the rig prior to commencing drilling operations.

Attachment #4.1

PERIDOT 8 FEDERAL 15H



Item

- Description 1 Rotating Head, 13-5/8"
- 2A Fill up Line and Valve
- 2B Flow Line (10")
- 2C Shale Shakers and Solids Settling Tank
- 2D Cuttings Bins for Zero Discharge
- 2E Rental Mud Gas Separator with vent line to flare and return line to mud system
- 3 Annular BOP (13-5/8", 5M)
- 4 Double Ram (13-5/8", 5M, Blind Ram top x Pipe Ram bottom)
- 5 Kill Line (2" flexible hose, 3M)
- 6 Kill Line Valve, Inner (2-1/16", 5M)
- 7 Kill Line Valve, Outer (2-1/16", 5M)
- 8 Kill Line Check Valve (2-1/16", 5M)
- 9 Choke Line (3-1/8", 3M Coflex Line)
- 10 Choke Line Valve, Inner (3-1/8", 5M)
- 11 Choke Line Valve, Outer (3-1/8", Hydraulically operated, 5M)
- 12 Spacer Spool (13-5/8", 5M)
- 13 Casing Head (13-5/8" 5M)
- 14 Ball Valve and Threaded Nipple on Casing Head Outlet, 2" 5M
- 15 Surface Casing

A variance is requested to permit the use of flexible hose. The testing certificate for the specific hose will be available on the rig prior to commencing drilling operations.

String Section	Depth MD	Depth TVD	Csg length ft	Wt	MIY	Co	1	Pipe Str	Jt Str	Drill Fluid						
Surface Casing	885	885	885	_ 54	.5 2	730	1130	853000	514000	8.5	.'					
Intermediate 1 Casing	2250	2250	2250	4	10 3	950	2570	630000	520000	10						
Production 1 Casing	5200	5200	5200		29 8	160	7020	676000	587000	9 :						
Production 2 Casing	12874	5988	7674		20 9	190	8830	466000	524000	9				•		
Collapse Design (Safe	tu) Eastara	DIMO	· ritaria							Rurat Da	cian (Cal	and East	ors - BLM Cr	itoria		
Collapse Design (Safety) Fac			Allena							Burst Desig			UIS - DEMICI	iteria		
SFc = Pc / (MW x .052 x Ls)										SFb = Pi / B						
Where										Where						
	ated pipe Collap	se Pressu	ire in pounds ;	per squ	are inch (p	i)					• Piis	the rated pi	pe Burst (Minimu	m Internal	Yield) Pressure in	n pounds per squ
MW is mut	d weight in pour	nds per gal	llon (ppg)								. BHP	is bottom h	ole pressure in po	ounds per	square inch (psi)	
Ls is the le	ngth of the strip	ng in feet (ft)							The Minimu	m Acceptat	ole Burst De	sign (Safety) Faci	or SFb =	1.0	
The Minimum Acceptable Col	llapse Design (S	Safety) Fai	ctor SFc = 1,1	25												
•• · · ·																
Surface Casing										Surface Casir	- .					
_ SFc =	1130	1	391	=	2.89					SFb =	2730	/	391	=	6.98	
Intermediate & Casian										Internet	1 Carlo					÷
Intermediate 1 Casing SFc =	2570	1	1170	=	2.20					Intermediate SFb =	1 Casing 3950	,	1170	-	3.38	
. SPC -	2570	'	1170	-	2.20					5-0-	3950	'	1170	-	3.30	
Production 1 Casing										Production 1	Casino					
SFc =	7020	1	2434	=	2.88					SFb = 1		1.	2434	· =	3,35	
			-													
											• • • • • •					
Production 2 Casing										Production 2	Casing					
Production 2 Casing SFc =	8830	1	2802	=	3.15					SFb =	.9190	1	2802	=	3.28	
SFc = <u>Pipe Strength Design</u>	(Safety) Fac				3.15					SFb =	.9190		2802 (ety) Factors			
<u>Pipe Strength Design</u> Pipe Strength Design (Safety	(Safety) Fac				3.15					SFb = <u>Joint Stra</u> Joint Strang	9190 ength De	sign (Sat	fety) Factors			
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(Minimum Internal Yield) Pressure in pounds per square inch (ps

) = 12.2

) = 6.82

)= 4.51

) = 3.96

- sure in pounds per square inch (psi)
- fety) Factor SFb = 1.0

Peridot 8 Fed 15H

	Depth MD	Depth TVD	Csg length ft	Wt I	MIY	Col	Pipe Str	Jt Str	Drill Fluid
Surface Casing	885		885	54.5	2730	1130	853000	514000	8.5
ntermediate 1 Casing	2250	2250	2250	40	3950	2570	630000	520000	10
Production 1 Casing	5200	5200	5200	29	8160	7020	676000	587000	9
Production 2 Casing	12874	5988	7674	20	9190	8830	466000	524000	9
Collapse Design		s – BLM	Criteria						<u>Burst Desi</u>
Collapse Design (Safet									Burst Design (
SFc = Pc / (MW x .052	xLs)								SFb = Pi / BHI
Where Prois	s the rated pipe Coll	aneo Proce	ure in nounds n	or F O U370	Inch (pri)				Where
	is mud weight in po			er square	non (pai)				
	the length of the st								The Minimum
The Minimum Acceptat		-		5					
Surface Casing									Surface Casing
SF	c = 1130) /	391	=	2.89				SFb =
intermediate 1 Casing									Intermediate 1
SF	c= 257() /	1170	=	2.20				SFb =
Production 1 Casing									Production 1 C
	c = 7020) /	2434	=	2.88				SFb =
									Production 2 C
Production 2 Casing									Production 2 G
•	c = 8830) /	2802	=	3.15				SFb =
SF <u>Pipe Strength De:</u> Pipe Strength Design (; SFlp = Fp / WI;	sign (Safety) Fr	actors – I			3.15				SFb ≍ <u>Joint Strer</u> Joint Strength SFtj = F] / Wt;
SF <u>Pipe Strength Des</u> Pipe Strength Design (; SFUp = Fp / WI; Where	sign (Safety) Fr	actors – I	BLM Criteria		3.15				SFb ≈ <u>Joint Strer</u> Joint Strength
SF Pipe Strength Design (SFtp = Fp / Wt; Where • Fp is • Wt is	s ign (Safety) F: Safely) Factor: SFtp s the rated pipe Bod s the weight of the c	sctors — y Strength asing string	BLM Criteria n pounds (Ibs) g in pounds (Ibs	<u>a</u>		ni			SFb ≕ Joint Strear Joint Strength SFij = Fj / Wt; Where
SF Pipe Strength Des Pipe Strength Design (i SFtp = Fp / Wt; Where • Fp is	s ign (Safety) F: Safely) Factor: SFtp s the rated pipe Bod s the weight of the c	sctors — y Strength asing string	BLM Criteria n pounds (Ibs) g in pounds (Ibs	<u>a</u>		nt			SFb ≍ <u>Joint Strer</u> Joint Strength SFtj = F] / Wt;
Pipe Strength De: Pipe Strength Design (SFtp = Fp / Wt; Where - Fp is Wt is The Minimum Acceptat	sign (Safety) Fa Safely) Factor: SFtp s the rated pipe Bod s the weight of the c ble Pipe Strength Di	y Strength I asing string asign (Safel	BLM Criteria n pounds (lbs) g in pounds (lbs y) Factor SFTp	a) = 1.6 dry	or 1.8 buoya	nt		·	SFb = Joint Strength SFtj = Fj / Wt; Where The Minimum Surface Casing
SF Pipe Strength Design (SFtp = Fp / Wt; Where Fp is Wt is The Minimum Acceptat Surface Casing SFi Dr	sign (Safety) Fa Safely) Factor: SFtp s the rated pipe Bod s the weight of the c ble Pipe Strength Di ble Pipe Strength Di y = 853000	y Strength I asing string ssign (Safel) /	BLM Criteria n pounds (lbs) g in pounds (lbs y) Factor SFTp 48232.5	a) = 1.6 dry =	or 1.8 buoya 17.7				SFb = Joint Strength SFI = FI / Wt; Where The Minimum Surface Casing SFi Dry = 5
SF Pipe Strength Design (SFtp = Fp / Wt; Where Fp is Wt is The Minimum Acceptat Surface Casing	sign (Safety) Fa Safely) Factor: SFtp s the rated pipe Bod s the weight of the c ble Pipe Strength Di ble Pipe Strength Di y = 853000	y Strength I asing string ssign (Safel) /	BLM Criteria n pounds (lbs) g in pounds (lbs y) Factor SFTp 48232.5	a) = 1.6 dry	or 1.8 buoya	nt) =	20.3	SF	SFb = Joint Strength SFtj = Fj / Wt; Where The Minimum Surface Casing
SF Pipe Strength Design () SFtp = Fp / Wt; Where Fp is Wt it The Minimum Acceptat Surface Casing SFi Dr SFi Bouyar Intermediate 1 Casing	sign (Safety) Fr Safely) Factor: SFtp s the rated pipe Bod s the weight of the o ble Pipe Strength Do ble Pipe Strength Do y = 853000 ht = 853000	y Strength asing string ssign (Safe) /) / (n pounds (lbs) g in pounds (lbs) g in pounds (lbs y) Factor SFTp 48232.5 48232.5	a) = 1.6 dry = X	or 1.8 buoya 17.7 0.870		20.3	SF	SFb = <u>Joint Streer</u> Joint Strength SFij = Fj / Vit: Where The Minimum Surface Casing SFi Dry = 5 Bouyant = 5 Intermediate 1
SF Pipe Strength Design (SFtp = Fp / Wt; Where Fp is Wt is The Minimum Acceptat Surface Casing SFi Dr SFi Bouyar Intermediate 1 Casing SFi Dr	sign (Safety) Fr Safety) Factor: SFtp s the rated pipe Bod s the weight of the o ble Pipe Strength Do ble Pipe Strength Do y = 853000 y = 630000	y Strength asing string bsign (Safet) /) / () /	BLM Criteria n pounds (lbs) g in pounds (lbs y) Factor SFTp 48232.5 48232.5 90000	a .) = 1.6 dry = x =	or 1.8 buoya 17.7 0.870 7.00) =			SFb = Joint Strength SFij = Fj / Wt; Where The Minimum Surface Casing SFi Dry = 5 Bouyant = 5 Intermediate 1 (SFi Dry = 5)
SF Pipe Strength Design (SFtp = Fp / Wt; Where Fp is Wt it The Minimum Acceptat Surface Casing SFi Dr SFi Bouyar Intermediate 1 Casing	sign (Safety) Fr Safety) Factor: SFtp s the rated pipe Bod s the weight of the o ble Pipe Strength Do ble Pipe Strength Do y = 853000 y = 630000	y Strength asing string bsign (Safet) /) / () /	BLM Criteria n pounds (lbs) g in pounds (lbs y) Factor SFTp 48232.5 48232.5 90000	a) = 1.6 dry = X	or 1.8 buoya 17.7 0.870		20.3 8.26		SFb = <u>Joint Streer</u> Joint Strength SFij = Fj / Vit: Where The Minimum Surface Casing SFi Dry = 5 Bouyant = 5 Intermediate 1
SF Pipe Strength Design (SFtp = Fp / Wt; Where Fp is Wt is The Minimum Acceptat Surface Casing SFi Bouyan Intermediate 1 Casing SFi Dr SFi Bouyan	sign (Safety) Fr Safety) Factor: SFtp s the rated pipe Bod s the weight of the o ble Pipe Strength Do ble Pipe Strength Do y = 853000 y = 630000	y Strength asing string bsign (Safet) /) / () /	BLM Criteria n pounds (lbs) g in pounds (lbs y) Factor SFTp 48232.5 48232.5 90000	a .) = 1.6 dry = x =	or 1.8 buoya 17.7 0.870 7.00) =			SFb = Joint Strength SFij = Fj / Wt; Where The Minimum Surface Casing SFi Dry = 5 Bouyant = 5 Intermediate 1 (SFi Dry = 5)
SF Pipe Strength Design (SFtp = Fp / Wt; Where The Minimum Acceptat Surface Casing SFi Bouyan Intermediate 1 Casing SFi Dr SFi Bouyan	sign (Safety) Fa Safely) Factor: SFtp is the rated pipe Bod is the weight of the of ble Pipe Strength Di p = 853000 t1 = 853000 by = 630000 t1 = 630000	y Strength asing string ssign (Safef) /) / () / (BLM Criteria n pounds (lbs) g in pounds (lbs y) Factor SFTp 48232.5 48232.5 90000	a = 1.6 dry = x = x x	or 1.8 buoya 17.7 0.870 7.00) =			SFb = Joint Strengt Joint Strengt SFij = Fj / Wt; Where The Minimum Surface Casing SFi Dry = 5 Bouyant = 5 Intermediate 1 SFi Dry = 5 SFi Dry = 5
SF Pipe Strength Design (SFtp = Fp / Wt; Where Fp is Wt it The Minimum Acceptat Surface Casing SFi Bouyar Intermediate 1 Casing SFi Dr SFi Bouyar Production 1 Casing	sign (Safety) F: Safety) Factor: SFtp s the rated pipe Bod s the weight of the c ble Pipe Strength Di ble Pipe Strength Di y = 853000 t = 853000 t = 630000 t = 630000 t = 630000	y Strength asing string asign (Safet) / () / () / () / (BLM Criteria n pounds (lbs) g in pounds (lbs y) Factor SFTp 48232.5 48232.5 90000 90000 150800	a = 1.6 dry = x = x x	or 1.8 buoya 17.7 0.870 7.00 0.847) =		SF	SFb = <u>Joint Streng</u> Joint Strength SFij = Fj / Wi: Where The Minimum Surface Casing SFi Dry = 5 Douyant = 5 Intermediate 1 SFi Dry = 5 i Bouyant = 5 Production 1 C
SF Pipe Strength Design (SFtp = Fp / Wt; Where The Minimum Acceptat Surface Casing SFi Bouyar Intermediate 1 Casing SFi Bro SFi Bouyar Production 1 Casing SFi Dr SFi Bouyar	sign (Safety) F: Safety) Factor: SFtp s the rated pipe Bod s the weight of the c ble Pipe Strength Di ble Pipe Strength Di y = 853000 t = 853000 t = 630000 t = 630000 t = 630000	y Strength asing string asign (Safet) / () / () / () / (BLM Criteria n pounds (lbs) g in pounds (lbs y) Factor SFTp 48232.5 48232.5 90000 90000 150800	a = 1.6 dry = x = x = x	or 1.8 buoya 17.7 0.870 7.00 0.847 4.48) =) =	8.26	SF	SFb = <u>Joint Stren</u> Joint Strength SFij = Fj / Wt; Where The Minimum Surface Casing SFi Dry = 5 Bouyant = 5 Intermediate 1 SFi Dry = 5; Production 1 C. SFi Dry = 5;
SF Pipe Strength Design (SFtp = Fp / Wt; Where Fp is The Minimum Acceptat Surface Casing SFi Bouyar Intermediate 1 Casing SFi Bouyar SFi Bouyar Production 1 Casing SFi Dr	sign (Safety) Fr Safety) Factor: SFtp s the rated pipe Bod s the weight of the or ble Pipe Strength Dr y = 853000 y = 630000 y = 630000 y = 630000 y = 676000	y Strength asing string ssign (Safel) / () / () / () / (BLM Criteria n pounds (lbs) g in pounds (lbs y) Factor SFTp 48232.5 48232.5 90000 90000 150800	a = 1.6 dry = x = x = x	or 1.8 buoya 17.7 0.870 7.00 0.847 4.48) =) =	8.26	SF	SFb = <u>Joint Strent</u> Joint Strent SFij = Fj / Wt; Where

Burst Design (Safety)	Factors	BLM.	<u>Criteria</u>	
Burst Design (Safety) Factor;	SFb			

	gn (00.01)/ . u				
SFb = Pi /	внр				
Where					
	 Plisth 	e rated pi	pe Burst (Minimu	ım Internal	Yield) Pressure in pounds per square inch
	 BHP is 	bottom h	ole pressure in p	ounds per	square inch (psi)
The Minim			sign (Safety) Fac		
Surface Casi	ng				
SFb =	2730	1	391	=	6.98
Intermediate	1 Casing				
SFb =	3950	1	1170	=	3.38
	•	1	1170	=	3.38

SFb =	8160	1	2434	=	3.35
Production 2 SFb =	Casing 9190	1.	2802	=	3.28

Joint Strength Design (Safety) Factors – BLM Criteria
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nt Strength Design (Safely) Factor: SFtj

Fj/Wi;

Fj is the rated pipe Joint Strength in pounds (lbs)

Wt is the weight of the casing string in pounds (lbs)

The Minimum Acceptable Joint Strength Design (Safety) Factor SFTj = 1.6 dry or 1.8 buoyant

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Surface Cas	ing						
SFi Dry =	514000	1	48232.5	=	10.7		
SFi Bouyant =	514000	/ (48232.5	x	0.870) =	12.2
Intermediate	• 1 Casing						
SFi Dry =	520000	1	90000	=	5.78		
SFi Bouyant =	520000	/ (90000	×	0.847) =	6.82
Production	1 Casing						
SFi Dry =	587000	1	150800	=	3.89		
SFi Bouyant ≂	587000	/ (150800	×	0.863) =	4.51
Production 3	2 Casing						
SFi Dry =	524000	1	153480	=	3.41		
SFi Bouyant =	524000	/ (153480	x	0.863) =	3.96

Peridot 8 Fed 15H

	Depth MD	Depth TVD	Csg length ft	Wt	MIY	Col	Pipe Str	Jt Str	Drill Fluid							
urface Casing	885	885	885	54.	5 2730	1130	853000	514000	8.5							
termediate 1 Casing	2250	2250	2250	4(2570	630000	520000								
oduction 1 Casing	5200	5200	5200					587000								
oduction 2 Casing	12874	5988	7674	20	0 9190	8830	466000	524000	9							
			-							· .		•				
<u>Collapse Design (Sa</u>		<u>- BLM (</u>	<u>Criteria</u>									rs - BLM C	<u>riteria</u>			
Collapse Design (Safety) F										gn (Safety) Fa	ictor: SFb					
SFc = Pc / (MW x .052 x L)						•		SFb = Pi/	внр						
Where	rated pipe Collap	Co Droco.			vo inch (nai)				Where	Dilet	he rated ain	- Rust (Minimu	m Internal	Yield) Pressure in	nounde ne	r causio joch
	ud weight in pour			per squa	ire inch (psi)									square inch (psi)	i pourius pe	r square mor
	length of the strin								The Minim							
The Minimum Acceptable (26					ine winim	um Acceptabl	e Burst Des	ign (Safety) Fac	10f 5F0 =	1.0		
The Minimum Acceptable (Johapse Design (a	alety) Fat	Clor 3+C = 1.1.	25												
urface Casing									Surface Casi	00						
SFc =	1130	,	391	=	2.89				SFb =	2730	1	391	=	6.98		
510-	1130	'	391	-	2.09				310-	2/ 30	'		-	0.90		
ntermediate 1 Casing									Intermediate	1 Casino						
SFc =	2570	1	1170	=	2.20				SFb =	3950	1	1170	· _	3.38		
0.0-	2010	,	1170		L.LU				0.0	0000.	• •			0.00		
roduction 1 Casing									Production 1	Casing	· .					
SFc =	7020	· /	2434	=	2.88				SFb'=	8160	· /	2434	= .	3.35		
									D							
roduction 2 Casing	0020	,	2002	=	2.45				Production 2 SFb =	9190	1	2802	=	3.28		
SFc =	8830	1	2802	=	3.15				560 -	9190	/	2002	-	3.20		
			•													
. •																
Pipe Strength Desig		tors – E	3LM Criteri	<u>a</u>								ty) Factors		riteria		
Pipe Strength Design (Safe	ty) Factor: SFtp									igth Design (S	alety) Facto	r: SFtj				
SFtp = Fp / Wt;									SFtj = Fj /	Wt;						
Where .									Where	1 7 (4.4		- Iniot Streeth	in navada	(1)		
	rated pipe Body S									•		e Joint Strength				
Wt is the The Minimum Acceptable I	-				In. or 1.9 busie	-			The Minim		-	if the casing stri	-	or SFTj=1.6 dry o		-
The Williaman Acceptable I	ripe Strength Desi	ign (Salet)	y) Factor Shirt	p'- 1.00	iry 0/ 1.6 000ya	ni				un Acceptab	e John She	igin design (Sa	nety) Facto	a ar ij – ro ury u		•••
. .															-	
urface Casing								,	Surface Casi	ng						
SFi Dry =	853000	1.	48232.5	=	17.7				SFi Dry =	514000	1	48232.5	=	10.7		
	853000	1.(x	0,870) =	20.3	SF	i Bouyant =	514000	1'(48232.5	×	0.870) =	12.2
		·	•			. '					•					
SFi Bouyant =									Intermediate	1 Casing		-				
SFi Bouyant =		1	90000	=	7.00				SFi Dry =	520000	1	90000	=	5.78		
SFi Bouyant =	630000		90000	x	0.847) =	8.26	SF	i Bouyant =	520000	1 (90000	x	0.847) =	6.82
SFi Bouyant =	630000 630000	1 (
SFi Bouyant = stermediate 1 Casing SFi Dry =		/ (1. j. j. j.				
SFi Bouyant = ntermediate 1 Casing SFi Dry =		/ (
SFi Bouyant = ntermediate 1 Casing SFi Dry = SFi Bouyant =		/ (Production 1	Casing		-				
SFi Bouyant = ntermediate 1 Casing SFi Dry = SFi Bouyant =	630000	· / (150800	=	4.48				Production 1 SFi Dry =	587000	1	150800	×	3.89		
SFi Bouyant = ntermediate 1 Casing SFi Dry = SFi Bouyant = roduction 1 Casing	630000		150800	= x	4.48 0.863) =	5.20	SF		-	, , (3.89 0.863) = .	4.51
SFi Bouyant = ntermediate 1 Casing SFi Dry = SFi Bouyant = roduction 1 Casing SFi Dry =	630000		150800) =	5.20	SF	SFi Dry = i Bouyant =	587000 587000	, , (150800	=) =	4.51
SFi Bouyant = ntermediate 1 Casing SFi Dry = SFi Bouyant = roduction 1 Casing SFi Dry =	630000 676000 676000		150800 150800) =	5.20	SF	SFi Dry = i Bouyant = Production 2	587000 587000 Casing	, , (150800 150800	=	0.863) = '	4.51
SFi Bouyant = ntermediate 1 Casing SFi Dry = SFi Bouyant = roduction 1 Casing SFi Dry = SFi Bouyant = roduction 2 Casing SFi Dry =	630000 676000 676000 466000	/ / (/	150800 150800 153480	x			•		SFi Dry = i Bouyant = Production 2 SFi Dry =	587000 587000 2 Casing 524000	,	150800 150800 153480	=	0.863 3.41	ŗ	
SFi Bouyant = stermediate 1 Casing SFi Dry = SFi Bouyant = roduction 1 Casing SFi Dry = SFi Bouyant = roduction 2 Casing	630000 676000 676000	/ / (150800 150800 153480	x	0.863) =	•		SFi Dry = i Bouyant = Production 2	587000 587000 Casing	/ / (/ / (150800 150800 153480	± X	0.863) = '	4.51 3.96

						-	
Surface Cas	ing						
SFi Dry ≃	514000	1	48232.5	=	10.7		
i Bouyant =	514000	1	(48232.5	×	0.870) =	12.2
Intermediate	e 1 Casing				· ·		
SFi Dry =	520000	1	90000	=	5.78		
Fi Bouyant =	520000	1	(90000	x	0.847) =	6.82

Peridot 8 Fed 15H

String Section	Depth	Depth	•	Wt	MIY	Col	Pipe Str	Jt Str	Drill Fluid			
Surface Casing	<u>MD</u> 885	TVD 885	length ft 885	54.5	2730	1130	853000	514000	8.5			
Intermediate 1 Casing	2250	2250	2250	40		2570		520000				
Production 1 Casing	5200	5200	5200	29	8160	7020	676000	587000	9			
Production 2 Casing	12874	5988	7674	20	9190	8830	466000	524000	9			
<u>Collapse Design (Sat</u> Collapse Design (Satety) Fi		- BLM (<u>Criteria</u>							i <mark>sign (Safe</mark> in (Safety) Fac		<u>rs - B</u>
SFc = Pc / (MW x .052 x Ls Where									SFb = Pi / E Where			
 Pc is the 	rated pipe Collar	ose Pressu	ute in pounds p	er squar	e inch (psi)					 Pils th 	e rated pipe	a Burst (
	ud weight in pou									 BHP is 	boltom hol	e pressu
Ls is the The Minimum Acceptable C	length of the stri ollapse Design (25					The Minimu	im Acceptable	Burst Des	gn (Safe
Surface Casing									Surface Casir	ng		
SFc ≃	1130	1	391	=	2.89				SFb =	2730	/	39
Intermediate 1 Casing									Intermediate	1 Casing		
SFc =	2570	1	1170	=	2.20				SFb =	3950	/	117
Production 1 Casing									Production 1	Casing		
SFc =	7020	1	2434	=	2.88				SFb =	8160	1	243
SFc =	8830	1	2802	=	3.15				Production 2 SFb =	Casing 9190	1	280
SFc =				=	3.15	·			SFb =	9190	/	
Production 2 Casing SFc = <u>Pipe Strength Design</u> Pipe Strength Design (Safe	<u>(Safety) Fac</u>			= <u>a</u>	3.15				SFb = <u>Joint Str</u>			ty) Fa
SFc = <u>Pipe Strength Desig</u>	<u>(Safety) Fac</u>			= <u>a</u>	3.15	·	·		SFb ≕ <u>Joint Str</u> Joint Streng SFtj = Fj / V	9190 ength Des gth Design (Se		ty) Fac
SFc = <u>Pipe Strength Design</u> Pipe Strength Design (Sefe SFip = Fp / Wt; Where	<u>(Safety) Fac</u>	<u>ctors – E</u>	BLM Criteria	= <u>a</u>	3.15				SFb = <u>Joint Str</u> Joint Streng	9190 ength Des gth Design (Sa VI;	afety) Facto	ty) Fac r: SFIj
SFc = <u>Pipe Strength Design</u> Pipe Strength Design (Safe SFtp = Fp / Wt; Where • Fp is the • Wt is the	ty) Factor: SFtp rated pipe Body weight of the cas	<mark>strength in strength in stren</mark>	3LM Criteria n pounds (lbs) in pounds (lbs))			·		SFb = Joint Streng SFij = Fj / V Where	9190 ength Des gih Design (Se Vi; • Fj is th • Wi is li	afety) Facto e rated pipe he weight o	r: SFIj e Joint S f the cas
SFc = <u>Pipe Strength Design</u> Pipe Strength Design (Safe SFtp = Fp / Wt: Whore • Fp is the	ty) Factor: SFtp rated pipe Body weight of the cas	<mark>strength in strength in stren</mark>	3LM Criteria n pounds (lbs) in pounds (lbs))					SFb = Joint Streng SFij = Fj / V Where	9190 ength Des glh Design (Se VI; • Fj is th	afety) Facto e rated pipe he weight o	r: SFIj e Joint S f the cas
SFc = <u>Pipe Strength Design</u> Pipe Strength Design (Safe SFtp = Fp / Wt; Where • Fp is the • Wt is the The Minimum Acceptable P Surface Casing	t (Safety) Fac by Factor: SFtp rated pipe Body weight of the ca ipe Strength Des	strength ii Strength ii sing string ign (Safet	BLM Criteri; n pounds (lbs) in pounds (lbs y) Factor SFTp) = 1.6 dr	y or 1.8 buoyani				SFb = <u>Joint Strang</u> Joint Strang SFij = Fj / V Where The Minimu Surface Casin	9190 ength Des jih Design (Sa VI; • Fj is th • Wi is ti m Acceptable	afety) Facto e rated pipe he weight o e Joint Strer	ety) Fac r: SFIj e Joint S f lhe cas ngth Des
SFc = <u>Pipe Strength Design</u> Pipe Strength Design (Safe SFip = Fp / Wi: Whore • Fp is the • Wi is the The Minimum Acceptable P	ty) Factor: SFtp rated pipe Body weight of the cas	<mark>strength in strength in stren</mark>	BLM Criteri: n pounds (lbs) in pounds (lbs y) Factor SFTp 48232.5)			20.3	SF	SFb = Joint Strang Joint Strang SFij = Fj / V Where The Minimu	9190 ength Des th Design (Se VI; • F) is th • W1 is ti m Acceptable	afety) Facto e rated pipe he weight o	ty) Fa r: SFIj e Joint S f the cas ngth Des 4823
SFc = <u>Pipe Strength Design</u> Pipe Strength Design (Safe SFtp = Fp / Wt; Where • Fp is the • Wt is the The Minimum Acceptable P Surface Casing SFi Bouyant = Intermediate 1 Casing	t (Safety) Fac ty) Factor: SFtp rated pipe Body weight of the ca ipe Strength Des 853000	Strength ii Sing string lign (Safet	BLM Criteri: n pounds (lbs) in pounds (lbs y) Factor SFTp 48232.5) = 1.6 dr =	y or 1.8 buoyan 17.7		20.3	SF	SFb = Joint Streng SFij = Fj / V Where The Minhmu Surface Cashr SFi Dry =	9190 ength Des gh Design (Se VI; • Fj is th • Wi is I im Acceptable 514000 514000	afety) Facto e rated pipe he weight o b Joint Stree /	ty) Fai r: SFIj e Joint S f lhe cas ngth Des 4823
SFc = <u>Pipe Strength Design</u> Pipe Strength Design (Safe SFtp = Fp / Wt; Where • Fp is the • Wt is the The Minimum Acceptable P Surface Casing SFi Bouyant = Intermediate 1 Casing SFi Dry =	t (Safety) Fac ty) Factor: SFtp rated pipe Body weight of the ca- ipe Strength Des 853000 853000 630000	Strength in Sing string lign (Safet / / / (BLM Criteri: n pounds (lbs) in pounds (lbs y) Factor SFTp 48232.5 48232.5 90000) = 1.6 dr =	y or 1.8 buoyan 17.7		20.3	SF	SFb = Joint Stra Joint Stran SFij = Fj / V Where The Minimu SFi Dry = i Bouyant =	9190 ength Des gh Design (Se VI; • Fj is th • Wi is I im Acceptable 514000 514000	afety) Facto e rated pipe he weight o b Joint Strer / / / (ty) Far r: SFIJ a Joint S f the cas ngth Des 4823 4823 900
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SFc = <u>Pipe Strength Design</u> Pipe Strength Design (Sele SFip = Fp / WL; Where • Fp is the • WL is the The Minimum Acceptable P Surface Casing SFi Bouyant = Intermediate 1 Casing SFi Bouyant = Production 1 Casing SFi Dry =	t (Safety) Fac by Factor: SFtp rated pipe Body weight of the car ipe Strength Des 853000 853000 630000 630000 630000	Strength in sing string ign (Safet / / (/ / (BLM Criteri: n pounds (lbs) in pounds (lbs y) Factor SFTp 48232.5 48232.5 90000 90000 150800	- = 1.6 dr = x = x	y or 1.8 buoyant 17.7 0.870 7.00 0.847 4.48) =) =	8.26	SF	SFb = <u>Joint Strang</u> SFij = Fj / V Where The Minimu SFi Dry = i Bouyant = Intermediate SFi Dry = i Bouyant = Production 1 SFi Dry = i Bouyant =	9190 ength Des gh Design (Se VI; Fj is th WI is U im Acceptable 514000 514000 1 Casing 520000 520000 Casing 587000 587000	afety) Facto e rated pipu he weight o b Joint Strer / / / / (/	r: SFIj e Joint S f the cas

BLM Criteria

(Minimum Internal Yield) Pressure in pounds per square Inch (ps sure in pounds per square inch (psi) afety) Factor SFb = 1.0 391 = 6.98 170 = 3.38 434 = 3.35 802 = 3.28

actors – BLM Criteria Strength in pounds (lbs)

asing string in pounds (lbs)

esign (Safety) Factor SFTj = 1.6 dry or 1.8 buoyant

Surface Cas	•	_					
SFi Dry =	514000	/	48232.5	=	10.7		
SFi Bouyant =	514000	/ (48232.5	x	0,870) =	12.2
Intermediate	1 Casing						
SFi Dry =	520000	1	90000	×	5.78		
SFi Bouyant ≈	520000	/ (90000	x	0.847) =	6.82
Production 1	l Casing						
SFi Dry =	587000	1	150800	=	3.89		
SFi Bouyant =	587000	/ (150800	x	0.863) =	4.51
Production 2	2 Casing						
SFi Dry =	524000	1	153480	=	3.41		
SFi Bouyant =	524000	1 (153480	x	0.863) =	3.96

String Section	Depth MD	Depth TVD	Csg length ft	Wt	MIY	Col	Pipe Str	Jt Str	Drill Fluid
Surface Casing	885	8851	885	54.5	2730	1130	853000	514000	8,5
Intermediate 1 Casing	2250	2250	2250	40					
Production 1 Casing	5200	5200	5200	29					
Production 2 Casing	12874	5988	7674	20	9190	8830	466000		
MW is	Factor: SFc Ls) ne rated pipe Colla mud weight in pou	pse Pressu nds per ga	ire in pounds llon (ppg)	per squar	e inch (psi)				Burst Des Burst Des SFb = Pi Where
• LS is the Minimum Acceptable	ie length of the stri Collapse Design (•	•	25 ·					The Minir
Surface Casing									Surface Cas
SFc	= 1130	1	391	=	2.89				SFb =
Intermediate 1 Casing									Intermediate
SFc	= 2570	1	1170	=	2.20				SFb =
Production 1 Casing									Production *
SFc	= 7020	1	2434	=	2.88				SFb =
Production 2 Casing									Production 2
SFc	= 8830	1	2802	=	3.15				SFb =
<u>Pipe Strength Desi</u> Pipe Strength Design (Se		ctors – E	BLM Criteri	a					Joint Str
SFtp ≃ Fp / Wt; Where									SFtj = Fj Where

- Fp is the rated pipe Body Strength in pounds (lbs)
- Wt is the weight of the casing string in pounds (lbs) The Minimum Acceptable Pipe Strength Design (Safety) Factor SFTp = 1.6 dry or 1.8 buoyant

Surface Casing SFi Dry = SFi Bouyant =	853000 853000	/ 4823 / (4823	 870)=	20.3
Intermediate 1 Casing SFi Dry = SFi Bouyant =	630000 630000	/ 900 / (900	 847) =	8.26
Production 1 Casing SFi Dry = SFi Bouyant =	676000 676000	/ 150 / (150	 863) =	5.20
Production 2 Casing SFi Dry = SFi Bouyant =	466000 466000	/ 153 / (153	 863) =	3.52

esign (Safety) Factors - BLM Criteria

- sign (Safety) Factor: SFb
- BHP
- - · Pi is the rated pipe Burst (Minimum Internal Yield) Pressure in pounds per square inch (ps

.

- BHP is bottom hole pressure in pounds per square inch (psl)
- num Acceptable Burst Design (Safety) Factor SFb = 1.0

Surface Casin SFb =	9 2730	1	391	=	6.98
Intermediate 1 SFb =	I Casing 3950	1	1170	=	3.38
Production 1 (SFb =	Casing 8160	1	2434	=	3.35
Production 2 (SFb =	Casing 9190	1	2802	=	3.28

Joint Stren	<u>gth Design (Safety) Factors – BLM Criteria</u>
Joint Strength	Design (Safety) Factor: SFIJ
SFtj = Fj / Wt;	
Where	
•	Fj is the rated pipe Joint Strength in pounds (lbs)
•	Wt is the weight of the casing string in pounds (lbs)
The Minimum	Acceptable Joint Strength Design (Safety) Factor SFTj = 1.6 dry or 1.8 buoyant

Surface Cas	ing						
SFi Dry =	514000	1	48232.5	=	10.7		
SFi Bouyant =	514000	/ (48232.5	x	0.870) =	12.2
Intermediate							
SFi Dry =	520000	1	90000	=	5.78		
SFi Bouyant =	520000	/ (90000	x	0.847) =	6.82
Production 1	l Casino		,				
SFi Dry =	587000	1	150800	=	3.89		
SFi Bouyant =	587000	/ (150800	×	0.863) =	4.51
Production 2	2 Casing						
SFi Dry =	524000	1	153480	=	3.41		
SFi Bouyant =	524000	/ (153480	×	0.863) =	3.96

String Section	Depth MD	Depth TVD	Csg length ft	Wt	MIY	Col	Pipe Str	Jt Str	Drill Fluid		
Surface Casing	885	885	885	54.5							
Intermediate 1 Casing	2250	2250	2250	40							
Production 1 Casing	5200	5200	5200	29							
Production 2 Casing Collapse Design (Sa	12874	5988	7674	20	9190	8830	466000	524000	9 Burst Des	ign (Safe	ty) Facto
Collapse Design (Safety) F SFc = Pc / (MW x .052 x Ls	actor: SFc								Burst Design SFb = Pi / BH	(Safety) Fac	
Where	rated pipe Collar	ose Pressi	ure in pounds p	er srua	e inch (osi)				Where		e rated pipe
	ud weight in pour										boltom hol
	length of the strin								The Minimum	Acceptable	Burst Desi
The Minimum Acceptable (Collapse Design (Salety) Fa	clor SFc = 1.12	25						·	
Surface Casing SFc =	1130	1	391	=	2.89				Surface Casing SFb =	9 2730	1
Intermediate 1 Casing SFc =	2570	1	1170	=	2.20				Intermediate 1 SFb =	Casing 3950	1
Production 1 Casing SFc =	7020	1	2434	=	2.88				Production 1 C SFb =	asing '8160	I
Production 2 Casing									Production 2 C	Casing	
SFc =	8830	1	2802	=	3.15				SFb =	9190	1
	ety) Factor: SFtp e rated pipe Body	Strength is	n pounds (lbs)	-					Joint Strengt Joint Strengt SFIj = Fj / W Where	h Design (Sa t: • F) is th	afety) Facto e rated pipe
The Minimum Acceptable F	e weight of the ca Pipe Strength Des				ry or 1.8 buoya	Int			The Minimun		he weight o Joint Strer
Surface Casing									Surface Casing	-	
SFi Dry =	853000	<u> </u>	48232.5	=	17.7	,				514000	·
SFi Bouyant =	853000	/ (48232.5	x	0.870) =	20.3	SI	Fi Bouyant = 5	514000	/ (
Intermediate 1 Casing									Intermediate 1	-	
SFi Dry =	630000	<u> </u>	90000	=	7.00					520000	·
SFi Bouyant =	630000	/ (90000	x	0.847) =	8.26	SE	Fi Bouyant = 5	520000	/ (
Production 1 Casing									Production 1 (asing	
SFi Dry =		1	150800	=	4.48					587000	1
SFi Bouyant =	676000	/ (150800	x	0.863) =	5,20	SF		587000	/ (
Braduation 2 Casing									Deadweller 1 (Sector.	

Production 2 Casing

SFi Dry =	466000	1	153480	=	3.04	
SFi Bouyant =	466000	/ (153480	x	0.863) = 3.52

y) Factors - BLM Criteria

rated pipe Burst (Minimum Internal Yield) Pressure in pounds per square Inch (ps boltom hole pressure in pounds per square inch (psi) Burst Design (Safety) Factor SFb = 1.0 391 6.98 1 = 1170 3.38 1 = 2434 3.35 1 =

Production 2	Casing				
SFb =	9190	1	2802	=	3.28

gn (Safety) Factors – BLM Criteria

fety) Factor: SFtj

rated pipe Joint Strength in pounds (lbs)

e weight of the casing string in pounds (lbs)

Joint Strength Design (Safety) Factor SFTj = 1.6 dry or 1.8 buoyant

Surface Cas	ing						
SFi Dry =	514000	1	48232.5	=	10.7		
SFi Bouyant =	514000	/ (48232.5	x	0.870) =	12.2
Intermediate							
SFi Dry =	520000	1	90000	=	5.78		
SFi Bouyant =	520000	/ (90000	x	0.847) =	6.82
Production	1 Casing						
SFi Dry =	587000	1	150800	=	3.89		
SFi Bouyant =	587000	/ (150800	x	0.863) =	4.51
Production	2 Casing						
SFi Dry =	524000	1	153480	=	3.41		
SFi Bouyant =	524000	/ (153480	x	0.863) =	3.96

AFMSS

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

Submission Date: 04/05/2017

Well Number: 15H Well Work Type: Drill Highlighted data reflects the most recent changes

02/26/2018

SUPO Data Report

Show Final Text

Operator Name: CONOCOPHILLIPS COMPANY

APD ID: 10400006350

Well Name: PERIDOT 8 FEDERAL

Well Type: OIL WELL

Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

PERIDOT_8_FED_15H_AccessRoadMapTOPO_B_04-03-2017.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:

Peridot_8_Fed_15H_AccessRoadv2_20180123102048.pdf Peridot_8_Fed_15H_AccessRoadTopoA_20180123124530.pdf

New road type: RESOURCE

Length: 5236 Feet Width (ft.): 30

Max slope (%): 0

Max grade (%): 4

Army Corp of Engineers (ACOE) permit required? NO

ACOE Permit Number(s):

New road travel width: 17

New road access erosion control: The inside slope of the side ditches shall be 3:1. Any topsoil removed from the access road will be conserved as appropriate and with low profile. This access road is on fairly level ground. No additional erosion control is planned.

New road access plan or profile prepared? NO

New road access plan attachment:

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: PERIDOT 8 FEDERAL

Well Number: 15H

Access road engineering design? NO

Access road engineering design attachment:

Access surfacing type: OTHER

Access topsoil source: OFFSITE

Access surfacing type description: Clean caliche will be used.

Access onsite topsoil source depth:

Offsite topsoil source description: Caliche will be from a BLM approved source or third-party commercial location. Material meets BLM requirements and standards.

Onsite topsoil removal process:

Access other construction information:

Access miscellaneous information: Majority of access road to be shared with other Peridot wells. Access road length includes 15' for facility access and 382' for frac pond access. Wider travel surface is needed to accommodate larger rig wheelbase.Road is needed to reach facility near NM Highway 82. Cattle guard to be installed between facility access road and NM Highway 82. Turnouts will be installed using dimensions recommended by BLM, standard for this area. Right of ways will be obtained for highway access and lease road access to include future Peridot wells.

Number of access turnouts: 1

Access turnout map:

Drainage Control

New road drainage crossing: OTHER

Drainage Control comments: The proposed road to the location is surveyed and staked with stations set along the centerline at specific intervals. The road will be centerline crowned with a 2% crown for appropriate drainage. The inside slope of the side ditches shall be 3:1. Any topsoil removed from the access road will be conserved as appropriate. This access road is on fairly level ground.

Road Drainage Control Structures (DCS) description: No additional road drainage is needed other than standard BLM requirements for this area and those discussed in the BLM "Gold Book". This access road is on level ground. **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:

Peridot_8_Fed_15H_OneMileRadiusMap_20180123103035.pdf

Existing Wells description:

Page 2 of 10

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: PERIDOT 8 FEDERAL

Well Number: 15H

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

Submit or defer a Proposed Production Facilities plan? SUBMIT

Production Facilities description: Peridot 8 Federal CF1 Tank Battery location NWNE, Section 8, T17S, R32E was sited during 6/26/16 onsite. Location is south of NM Highway 82. Dimensions planned are 400'x 250' to allow for expansion as wells are drilled. 15' access road is depicted in plats. Preliminary Plot Plan is attached. **Production Facilities map:**

Peridot_8_Fed_CF1_Tank_Battery_04-03-2017.pdf Peridot 8 Fed 15H PreliminaryPlotPlan 04-03-2017.pdf

Section 5 - Location and Types of Water Supply

Water Source Table

Water source use type: CAMP USE, INTERMEDIATE/PRODUCTION Water source type: GW WELL CASING, STIMULATION, SURFACE CASING Describe type:

Source latitude:

Source lonaitude:

Describe land ownership:

Well datum:

Source volume (acre-feet): 21,26736

Source datum:

Water source permit type: PRIVATE CONTRACT, WATER WELL

Source land ownership: OTHER

Water source transport method: PIPELINE, TRUCKING

Source transportation land ownership: FEDERAL

Water source volume (barrels): 165000

Source volume (gal): 6930000

Water source and transportation map:

PERIDOT 8 FED 15H AccessRoadMapTOPO_A_04-03-2017.pdf

Peridot_8_Fed_15H_WaterSourceMap_20180123103439.pdf

Water source comments: Current water sources include: 1) Rockhouse Ranch; Section 13, T17S, R33E; and 2) Morewest Corporation, New Mexico; Section 16 & 26, T16S, R32E. Water sources specified within this application are current options for purchase. However, additional source(s) in the vicinity may be used depending on availability at the time water is needed We intend to use different source(s) if necessary.

Well Longitude:

New water well? NO

New Water Well Info

Well latitude:

Well target aquifer:

Est. depth to top of aquifer(ft):

Est thickness of aquifer:

Aquifer comments:

Page 3 of 10

Operator Name: CONOCOPHILLIPS COMPANY Well Name: PERIDOT 8 FEDERAL

Well Number: 15H

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 length (ft.):	Casing top depth (ft.):
Well Production type:	Completion Method:
Water well additional information:	
State appropriation permit:	

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Additional information attachment:

Section 6 - Construction Materials

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Construction Materials description: Clean caliche will be used to construct well pad, road, and facility pad. Caliche will be from a BLM approved source or third-party commercial location. Current plans include: 1) Maljamar, New Mexico; Section 9, T17S, R32E; off Maljamar Road; 2) Hwy 529, New Mexico; Section 25, T17S, R31E; 3) Olane Caswell Ranch; Section 3, 17S, R32E. Caliche sources specified within this application are current options for mineral purchase. However, additional source(s) in the vicinity may be used depending on availability at the time of location construction. We intend to use different source(s) if necessary.Material to meet BLM requirements and standards. Trucking of source material will utilize authorized roads as per Access Road Topo A attached.

Construction Materials source location attachment:

Section 7 - Methods for Handling Waste

Waste type: DRILLING

Waste content description: Drilling fluid, drilling cuttings, and rig water

Amount of waste: 8000 barrels

Waste disposal frequency : Daily

Safe containment description: Drilling fluid and cuttings will be held in a closed-loop system and trucked to an approved disposal facility.

Safe containmant attachment:

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

Disposal type description:

Disposal location description: Permitted disposal facility off Hwy 62.

Reserve Pit

Reserve Pit being used? NO

Temporary disposal of produced water into reserve pit?

Well Name: PERIDOT 8 FEDERAL

Well Number: 15H

Reserve pit volume (cu. yd.)

Reserve pit length (ft.) Re	eserve pit width (ft.)
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Reserve pit depth (ft.)

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

Cuttings area length (ft.)

Cuttings area width (ft.)

Cuttings area volume (cu. yd.)

Cuttings area depth (ft.)

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

WCuttings area liner

Cuttings area liner specifications and installation description

Section 8 - Ancillary Facilities

Are you requesting any Ancillary Facilities?: YES

Ancillary Facilities attachment:

Peridot_8_Fed_FracPondPlat_20180123104621.pdf

Comments: ConocoPhillips anticipates needing a 600' x 600' freshwater frac pond to aid in completion operations. It is to be located in the NENW of Sec.8, 17S, 32E. Access to be via a 382' road. The disturbance is included in overall disturbance "other" calculations. We plan on reclaiming the frac pond surface upon completion of the full Peridot development. Reclamation activities will be conducted in accordance to BLM standards at the time of reclamation.

Section 9 - Well Site Layout

Well Site Layout Diagram:

Peridot_8_Fed_15H_SiteLayoutArchBound_20180123105044.pdf Peridot_8_Fed_15H_SiteLayoutCutFill_20180123105056.pdf Comments:

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: PERIDOT 8 FEDERAL

Well Number: 15H

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance

Multiple Well Pad Name: PERIDOT 8 FEDERAL

Multiple Well Pad Number: 5H

Recontouring attachment:

Drainage/Erosion control construction: Topsoil will be stripped and set along designated side of the wellsite. The next layer of dirt (stockpile) is done with the cut and fill method whereby the highest portion of the wellsite is pushed to lower portion(s) to balance the pad. The access road is done in a similar manner. To the greatest extent practicable, the location is placed so that the least amount of dirt is to be cut and disturbed, and so a good balance can be maintained during project. Topsoil stockpile will have lowest practicable profile to reduce wind erosion. For more detail please see attached Surface Use Plan of Operations.

Drainage/Erosion control reclamation: Upon project completion, if this well is a producer, excess caliche is removed from the interim reclamation portion of pad. Topsoil stockpile is balanced back onto the unused portion of the well pad and recontoured as appropriate. Any drainage ditches will not be blocked with topsoil and/or organic material. Lowering the profile of the topsoil stockpile will reduce wind erosion. Erosion controls will be maintained per BLM guidelines and conditions. For more detail please see attached Surface Use Plan of Operations. Reclamation activities are planned to be accomplished within six months of project completion, contingent upon weather. A site specific "Reclamation Diagram" interim plan is attached. At such time as well is permanently abandoned, ConocoPhillips Company will contact the BLM for development of final rehabilitation plan. Upon abandonment, a dry hole marker will be installed as directed by Authorized BLM Officer at the time, in accordance with 43 CFR 3162.6. An above ground dry hole marker sealing the casing will have a weep hole which will allow pressure to dissipate and make detection of any fluid seepage easier. If below ground "well marker" is directed, ConocoPhillips Company will follow BLM requirements and standards for that method of abandonment. During final reclamation erosion is to be minimized through lower profile of any soil piles. Please see attached Surface Use Plan of Operations for more information.

Weilpad long term disturbance (acres): 1.572	Wellpad short term disturbance (acres): 1.3
Access road long term disturbance (acres): 3.61	Access road short term disturbance (acres): 0
Pipeline long term disturbance (acres): 0.52571166	Pipeline short term disturbance (acres): 0
Other long term disturbance (acres): 35.97	Other short term disturbance (acres): 1.72
Total long term disturbance: 41 67771	Total short term disturbance: 3.02

Reconstruction method: If this well is a producer site rehabilitation will be completed within six months, weather permitting. Excess caliche will be removed, as appropriate and either disposed of in a permitted facility or, if clean, stored for future use. Topsoil from the stockpile will be spread along areas to be interim reclaimed. Any drainage ditches will not be blocked with topsoil. Under normal weather conditions, the timetable for rehabilitation will allow two to three months to complete any recontouring and top-soiling necessary. At such time as well is permanently abandoned, ConocoPhillips Company will contact BLM for development of final rehabilitation plan. Upon abandonment, a dry hole marker will be installed as directed by Authorized BLM Officer at the time, in accordance with 43 CFR 3162.6. An above ground dry hole marker sealing the casing will have a weep hole which will allow pressure to dissipate and make detection of any fluid seepage easier. If below ground "well marker" is directed, ConocoPhillips Company will follow BLM requirements and standards for that method of abandonment. Excess caliche will be removed, as appropriate and either disposed of in a permitted facility. Location soil may be "flipped" with BLM concurrence, clean topsoil spread and re-contoured to blend with surrounding area. This method will be accomplished in accordance to BLM standards set forth by the Authorized Officer.

Topsoil redistribution: Areas planned for interim reclamation will be recontoured to the extent feasible. Topsoil will be evenly re-spread and revegetated over the disturbed area not needed for continuing production operations. At such time as well is abandoned, disturbed areas will be re-contoured to a contour that blends with surrounding landscape. Topsoil will be redistributed evenly over the entire disturbed site to depth of 4-6 inches.

Soil treatment: The topsoil will be stripped and set along the designated perimeter of the wellsite. The next layer of dirt is moved with the cut and fill method whereby the highest point of the wellsite is cut into and then pushed to a lower side in

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: PERIDOT 8 FEDERAL

Well Number: 15H

order to balance the well pad. Upon well completion, the soil will be balanced back onto portions of the pad not needed for long-term operations. Erosion will be minimized by maintaining a lower stockpile profile. For additional information, please see attached Surface Use Plan of Operation.

Existing Vegetation at the well pad: The project area is located in a region of southeast New Mexico know as the Mescalero Plain. No named tributaries, streams or wetlands are in the near vicinity. Elevation is around 4045'. It is a broad, low relief area characterized by Mescalero sand (eolian) soil. Maljamar and Palomas fine sands occur throughout the area. Soil is well drained and has low water storage potential. This determines vegetation present on location. Vegetation in the project area can be classified as transitional between the Plains-Mesa Sand Scrub and Chihuahuan Desert Scrub plant communities. The area surrounding the location is grazing grassland, which supports grasses and forbs. Frequently observed species include: honey mesquite, shinnery oak, perennial three-awn, sand bluestem, sand dropseed, giant dropseed, prince's plume, threadleaf groundsel, spectacle pod, sunflower, and plains flax. See attached Location Photos for visual example of vegetation existing onsite.

Existing Vegetation at the well pad attachment:

PERIDOT_8_FED_15H_LocationPhotos_04-03-2017.pdf

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 name:

Source name:

Seed source:

Source address:

Operator Name: CONOCO	PHILLIPS COMPANY	
Well Name: PERIDOT 8 FE	DERAL	Well Number: 15H
Source phone:	A	
Seed cultivar:		
Seed use location:		
PLS pounds per acre:		Proposed seeding season:
PLS pounds per acre.		Flohosed seeding season.
Seed Summary		Total pounds/Acre:
	Pounds/Acre	≈. : ,
Operator Contact/ First Name:	Responsible Offic	Last Name:
Phone:		Email:
Seedbed prep:		
Seed BMP:		
Seed method:		
Existing invasive species?	NO	
Existing invasive species tr	eatment description:	
Existing invasive species tr	eatment attachment:	
		ous weed species, African rue and Malta star-thistle are of concern entable weed control methods, if the need arises. Any weed control

Monitoring plan description: Weeds will be controlled on disturbed areas within the exterior limits of the well pad. Monitoring will be in accordance with Best Management Practices and regulations established by BLM. **Monitoring plan attachment:**

Success standards: Success standards will utilize BLM approved methods, such as those described in the BLM "Gold Book" and those established by the Authorized Officer. **Pit closure description:** No pits will be used, a closed-loop system will be in place.

Pit closure attachment:

Weed treatment plan attachment:

Section 11 - Surface Ownership

would follow USEPA and BLM requirements and standards.

Operator Name: CONOCOPHILLIPS COMPANY

Weil Name: PERIDOT 8 FEDERAL

Well Number: 15H

Disturbance type: OTHER Describe: Well pad, access roads, flow lines, power line, and gas line Surface Owner: BUREAU OF LAND MANAGEMENT Other surface owner description: BIA Local Office: BOR Local Office: COE Local Office: DOD Local Office: NPS Local Office: State Local Office: USFWS Local Office: USFWS Local Office: USFS Region: USFS Forest/Grassland: USFS Region:

USFS Ranger District:

Section 12 - Other Information

Right of Way needed? YES

Use APD as ROW? YES

ROW Type(s): 281001 ROW - ROADS,288100 ROW – O&G Pipeline,288103 ROW – Salt Water Disposal Pipeline/Facility,FLPMA (Powerline)

ROW Applications

SUPO Additional Information: Archaeological survey requirements have been met by block survey 2151, well pad survey 2262, and gas line and SWD line survey 2276 and survey 2435. For multi-well pad we request deferral of interim reclamation requirements until wells have been drilled. The following disturbance will be shared by all Peridot 8 Federal wells. Peridot 8 Federal CF1 Tank Battery will be constructed concurrent with the first well(s) drilled for this development. Long term disturbance for the facility pad will use 2.52 acres. Power line to be installed will be 5766'. The Right of Way will be submitted separately. A gas sales line will be installed from the facility to an existing gas sales line. Amount of line to be installed is about 1397' (0.321 temporary and 0.962 permanent disturbance). Up to four produced water surface lines will be installed from Peridot 8 Federal CF1 Tank Battery to either Elvis SWD well (16,695' = 3.833 acres). Please see attached Surface Use Plan of Operations for additional information.

Use a previously conducted onsite? YES

Previous Onsite information: Surface Use Plan of Operation was finalized during onsites with the following attendees: Mr. Ballard, Mr. Wolf, Ms. Brooks, Mr. Wasson, and Ms. Maunder, along with survey crew.

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: PERIDOT 8 FEDERAL

Well Number: 15H

Other SUPO Attachment

PERIDOT_8_FED_15H_FlowLineROW_04-05-2017.pdf PERIDOT_8_FED_15H_FlowLineMapTOPO_D_04-05-2017.pdf Peridot_8_Fed_GAS_PIPELINE_ROW_04-05-2017.pdf Peridot_8_Fed_15H_BuriedGasLinetoDCP_20180123123657.pdf Peridot_8_Fed_15H_SWD_FlowLineToElvis_20180123123723.pdf Peridot_8_Fed_SWD_BuriedPipeline_20180123123741.pdf Peridot_8_Fed_15H_Power_Line_Plat_20180123124018.pdf Peridot_8_Fed_15H_ReclamationDiagram_20180123124040.pdf Peridot_8_Fed_15H_SUPO_via_AccessV2_20180123124106.pdf Peridot_8_Fed_15H_Surf_SummaryComments_20180123124126.pdf



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

PWD Data Report

02/26/2018

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: Injection well name:

Injection well API number:

PWD disturbance (acres):

PWD disturbance (acres):

AFMSS

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

Bond Information

Federal/Indian APD: FED

BLM Bond number: ES0085

BIA Bond number:

Do you have a reclamation bond? NO

Is the reclamation bond a rider under the BLM bond?

Bond Info Data Report

02/26/2018

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:

Peridot Section 7 and 8 Lease Map



ConocoPhillips