Form 3160-3
(March 2012)

HOBBS OCD

FEB 2 8 2018

RECEIVED

F/F

FORM APPROVED
OMB No. 1004-0137
Expires October 31, 2014

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

1a. Type of work: ☑ DRILL ☐ REENTER	5. Lease Serial No. NMLC064149
	6. If Indian, Allotee or Tribe Name
1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other ☑ Single Zone ☐ Multiple Zone	7. If Unit or CA Agreement, Name and No.
2. Name of Operator CONOCOPHILLIPS COMPANY *(2/7817)*	8. Lease Name and Well No. *32 080* PERIDOT 8 FEDERAL 1H

3a. Address 600 N. Dairy Ashford Rd Houston TX 77079	3b. Phone No. *(include area code)* (281)293-1748	9. API Well No. *30-025 - 44528*

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*	10. Field and Pool, or Exploratory *(44500)* MALJAMAR / YESO WEST
At surface SWSE / 615 FSL / 2460 FEL / LAT 32.843608 / LONG -103.788058	11. Sec., T. R. M. or Blk. and Survey or Area
At proposed prod. zone LOT 4 / 330 FSL / 330 FWL / LAT 32.842853 / LONG -103.813431	SEC 8 / T17S / R32E / NMP

14. Distance in miles and direction from nearest town or post office* 1.5 miles	12. County or Parish LEA	13. State NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drlg. unit line, if any) 180 feet	16. No. of acres in lease 320	17. Spacing Unit dedicated to this well 241
18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft. 700 feet	19. Proposed Depth 5485 feet / 13133 feet	20. BLM/BIA Bond No. on file FED: ES0085
21. Elevations (Show whether DF, KDB, RT, GL. etc.) 4045 feet	22. Approximate date work will start* 02/01/2018	23. Estimated duration 21 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No.1, must be attached to this form:

1. Well plat certified by a registered surveyor.
2. A Drilling Plan.
3. A Surface Use Plan (if the location is on National Forest System Lands, the SUPO must be filed with the appropriate Forest Service Office).

4. Bond to cover the operations unless covered by an existing bond on file (see Item 20 above).
5. Operator certification
6. Such other site specific information and/or plans as may be required by the BLM.

25. Signature (Electronic Submission)	Name *(Printed/Typed)* Susan Maunder / Ph: (281)206-5281	Date 01/06/2017
Title Senior Coordinator, Regulatory MCBU		

Approved by *(Signature)* (Electronic Submission)	Name *(Printed/Typed)* Cody Layton / Ph: (575)234-5959	Date 02/23/2018
Title Supervisor Multiple Resources	Office HOBBS	

Application approval does not warrant or certify that the applicant holds legal or equitable title to those rights in the subject lease which would entitle the applicant to conduct operations thereon.
Conditions of approval, if any, are attached.

Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction.

(Continued on page 2) *GCP 02/28/18*

(Instructions on page 2)

APPROVED WITH CONDITIONS
Approval Date: 02/23/2018

Kz 03/01/18

A Double Sided

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.

Approval Date: 02/23/2018

Additional Operator Remarks

Location of Well

1. SHL: SWSE / 615 FSL / 2460 FEL / TWSP: 17S / RANGE: 32E / SECTION: 8 / LAT: 32.843608 / LONG: -103.788058 (TVD: 0 feet, MD: 0 feet)

   PPP: SESW / 405 FSL / 2622 FWL / TWSP: 17S / RANGE: 32E / SECTION: 8 / LAT: 32.843034 / LONG: -103.788706 (TVD: 5460 feet, MD: 5524 feet)

   BHL: LOT 4 / 330 FSL / 330 FWL / TWSP: 17S / RANGE: 32E / SECTION: 7 / LAT: 32.842853 / LONG: -103.813431 (TVD: 5485 feet, MD: 13133 feet)

BLM Point of Contact

Name: Priscilla Perez

Title: Legal Instruments Examiner

Phone: 5752345934

Email: pperez@blm.gov

Approval Date: 02/23/2018

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

▽AFMSS

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

APD ID: 10400008917

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: PERIDOT 8 FEDERAL

Well Type: OIL WELL

Submission Date: 01/06/2017

Well Number: 1H

Well Work Type: Drill

Highlighted data
reflects the most
recent changes

Show Final Text

Section 1 - General

APD ID: 10400008917

BLM Office: HOBBS

Federal/Indian APD: FED

Lease number: NMLC064149

Surface access agreement in place?

Agreement in place? NO

Agreement number:

Agreement name:

Keep application confidential? NO

Permitting Agent? NO

Operator letter of designation:

Tie to previous NOS?

User: Susan Maunder

Is the first lease penetrated for production Federal or Indian? FED

Lease Acres: 320

Allotted?   **Reservation:**

Federal or Indian agreement:

Submission Date: 01/06/2017

Title: Senior Coordinator, Regulatory MCBU

APD Operator: CONOCOPHILLIPS COMPANY

Peridot 8 Fed 1H_JOA Certif Ltr_12-14-2016.pdf

Peridot 8 Fed 1H_Leases w-wellsMap_01-06-2017.pdf

Peridot_8_Fed_SerialRegisterPgs_08-04-2017.pdf

Operator Info

Operator Organization Name: CONOCOPHILLIPS COMPANY

Operator Address: 600 N. Dairy Ashford Rd

Operator PO Box:

Operator City: Houston   **State:** TX

Operator Phone: (281)293-1748

Operator Internet Address:

Zip: 77079

Section 2 - Well Information

Well in Master Development Plan? NO

Well in Master SUPO? NO

Well in Master Drilling Plan? NO

Well Name: PERIDOT 8 FEDERAL

Field/Pool or Exploratory? Field and Pool

Mater Development Plan name:

Master SUPO name:

Master Drilling Plan name:

Well Number: 1H   **Well API Number:**

Field Name: MALJAMAR   **Pool Name:** YESO WEST

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

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: 1H
                                               PERIDOT 8 FEDERAL
Well Class: HORIZONTAL   Number of Legs:

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: INFILL

Describe sub-type:

Distance to town: 1.5 Miles   Distance to nearest well: 700 FT   Distance to lease line: 180 FT

Reservoir well spacing assigned acres Measurement: 241 Acres

Well plat: PERIDOT 8 FED 1H C-102 REV 2016-11-09 _12-12-2016.pdf

                Peridot 8 Fed 1H_SubSurface_01-06-2017.pdf

Well work start Date: 02/01/2018   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	615	FSL	2460	FEL	17S	32E	8	Aliquot SWSE	32.843608	-103.788058	LEA	NEW MEXICO	NEW MEXICO	F	NMLC064149	4045	0	0
KOP Leg #1	406	FSL	2460	FEL	17S	32E	8	Aliquot SWSE	32.843033	-103.788063	LEA	NEW MEXICO	NEW MEXICO	F	NMLC064149	-979	5034	5024
PPP Leg #1	405	FSL	2622	FWL	17S	32E	8	Aliquot SESW	32.843034	-103.788706	LEA	NEW MEXICO	NEW MEXICO	F	NMLC029406B	-1415	5524	5460

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: PERIDOT 8 FEDERAL   **Well Number:** 1H

	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
EXIT Leg #1	330	FSL	330	FWL	17S	32E	7	Lot 4	32.842853	-103.813431	LEA	NEW MEXICO	NEW MEXICO	F	NMLCO 29406B	-1440	13133	5485
BHL Leg #1	330	FSL	330	FWL	17S	32E	7	Lot 4	32.842853	-103.813431	LEA	NEW MEXICO	NEW MEXICO	F	NMLCO 29406B	-1440	13133	5485

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

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

December 13, 2016

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 1H
        Section 8, T17S, R32E
        Lease Numbers – NMLC 064149, NMLC 029406B

Dear Sir or Madam,

ConocoPhillips Company has negotiated a Joint Operating Agreement ("JOA") with COG Operating LLC, evidenced by the enclosed Memorandum of Operating Agreement, which covers approximately 480 acres in Township 17 South, Range 32 East. The JOA, along with an associated settlement letter, 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 certification our two companies agree on operating rights within the Peridot 8 Federal area. In regards to Peridot development, COP respectfully requests the 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 B. Maunder

Susan B. Maunder
Senior Coordinator, Regulatory
ConocoPhillips Company

Peridot Section 7 and 8 Lease Map
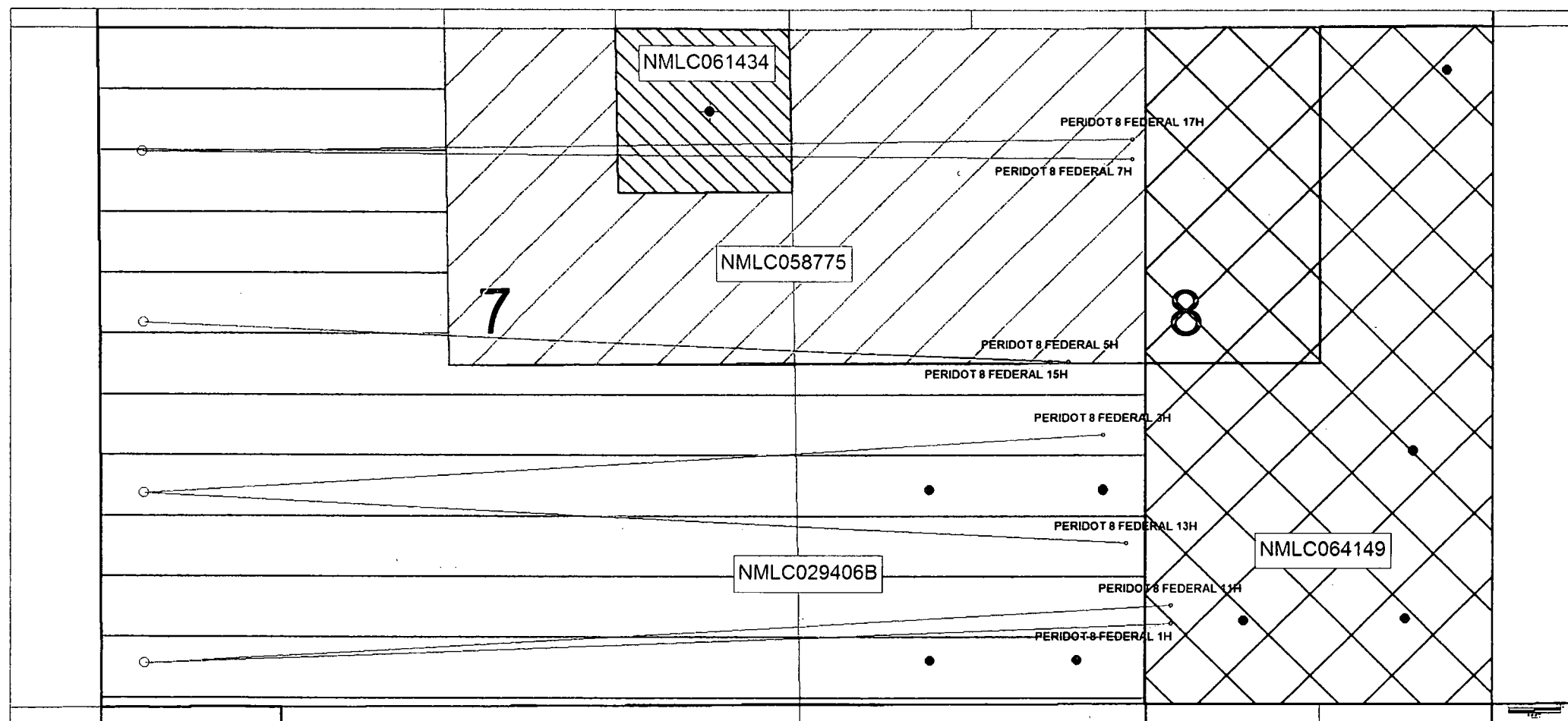
NMLC061434

PERIDOT 8 FEDERAL 17H

PERIDOT 8 FEDERAL 7H

NMLC058775

7

8

PERIDOT 8 FEDERAL 5H

PERIDOT 8 FEDERAL 15H

PERIDOT 8 FEDERAL 3H

PERIDOT 8 FEDERAL 13H

NMLC029406B

NMLC064149

PERIDOT 8 FEDERAL 11H

PERIDOT 8 FEDERAL 1H

ConocoPhillips

Serial Register Page ∨ Go ↩ ⇒ 🔳 | 🔳 < ↕ > | ⟨⟩ 🔳 🔳 🔳 🔳 | ⊠

DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
CASE RECORDATION
(MASS) Serial Register Page

Run Time: 04:06 PM
Page 1 of ?

Run Date: 07/24/2017

01 02-25-1920;041STAT0437;30USC226	Total Acres	Serial Number
Case Type 310781: O&G RENEWAL LEASE - PD	320.000	NMLC– 0 064149
Commodity 459: OIL & GAS		
Case Disposition: AUTHORIZED		

Serial Number: NMLC-- 0 064149

Name & Address			Int Rel	% Intere
CHEVRON USA INC	6301 DEAUVILLE	MIDLAND TX 797062964	OPERATING RIGHTS	0.000000000
CHEVRON USA INC	6301 DEAUVILLE	MIDLAND TX 797062964	LESSEE	100.000000000
COG OPERATING LLC	600 W ILLINOIS AVE	MIDLAND TX 797014882	OPERATING RIGHTS	0.000000000
CONOCOPHILLIPS CO	PO BOX 7500	BARTLESVILLE OK 740057500	OPERATING RIGHTS	0.000000000
LINN ENERGY HOLDINGS LLC	600 TRAVIS ST STE 5100	HOUSTON TX 770023092	OPERATING RIGHTS	0.000000000
MALJAMAR DEV PRTNSHP	8115 PRESTON RD #400	DALLAS TX 75225	OPERATING RIGHTS	0.000000000
SABINE OIL & GAS CORP	707 17TH ST STE 3600	DENVER CO 802023406	OPERATING RIGHTS	0.000000000
SANDRIDGE EXPL & PROD LLC	123 ROBERT S KERR AVE	OKLAHOMA CITY OK 731026406	OPERATING RIGHTS	0.000000000

Serial Number: NMLC– 0 064149

Mer Twp Rng Sec	STyp	SNr Suff Subdivision	District/Field Office	County	Mgmt Agency
23 0170S 0320E 008	ALIQ	E2;	CARLSBAD FIELD OFFICE	LEA	BUREAU OF LAND MGMT

Serial Number: NMLC– 0 064149

Act Date	Code	Action	Action Remar	Pending Offic
06/08/1934	387	CASE ESTABLISHED		
06/08/1934	496	FUND CODE	05;145003	
06/08/1934	868	EFFECTIVE DATE		
09/14/1945	553	CASE CREATED BY ASGN	OUT OF NMLC029406-B;	
11/20/1956	102	NOTICE SENT-PROD STATUS		
11/01/1961	242	LEASE RENEWED	THRU 10/31/71;	
11/01/1961	534	RLTY RATE-SLIDING-SCH D		
11/01/1961	868	EFFECTIVE DATE	LAST RENEWAL;	
05/01/1967	232	LEASE COMMITTED TO UNIT	NMNM70998X;MALJAMAR G	
05/01/1967	651	HELD BY PROD - ALLOCATED	MALJAMAR GRAYBURG UA	
05/01/1967	660	MEMO OF 1ST PROD-ALLOC	MALJAMAR GRAYBURG UA	
04/03/1987	963	CASE MICROFILMED/SCANNED	CNUM 102,962 RW	
01/05/1988	974	AUTOMATED RECORD VERIF	AR/EC	
10/11/1990	974	AUTOMATED RECORD VERIF	GG	
06/22/1992	932	TRF OPER RGTS FILED	CHEVRON/WISER OIL CO	
06/20/1992	933	TRF OPER RGTS APPROVED	EFF 07/01/92;	
06/20/1992	974	AUTOMATED RECORD VERIF	SSP/JS	
10/01/1992	621	RLTY RED-STRIPPER WELL	2.1%;/1/8910088480	
01/15/1993	621	RLTY REDUCTION APPV	/1/	
03/21/1994	974	AUTOMATED RECORD VERIF	ANU	
12/04/1995	932	TRF OPER RGTS FILED	THE WISER/MALJAMAR	
03/28/1996	933	TRF OPER RGTS APPROVED	EFF 01/01/96;	
03/28/1996	974	AUTOMATED RECORD VERIF	MV/MV	
06/01/1996	932	TRF OPER RGTS FILED	CHEVRON/CONOCO	
11/05/1996	933	TRF OPER RGTS APPROVED	EFF 09/01/96;	
11/05/1996	974	AUTOMATED RECORD VERIF	JLV	
05/22/1997	932	TRF OPER RGTS FILED	MALJAMAR/WISER OIL	
06/25/1997	933	TRF OPER RGTS APPROVED	EFF 06/01/97;	
06/25/1997	974	AUTOMATED RECORD VERIF	MV/MV	
01/16/2003	617	MERGER RECOGNIZED	CONOCO/CONOCOPHILLIPS	

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

▽AFMSS

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

Drilling Plan Data Report
02/26/2018

APD ID: 10400008917	**Submission Date:** 01/06/2017
Operator Name: CONOCOPHILLIPS COMPANY	
Well Name: PERIDOT 8 FEDERAL	**Well Number:** 1H
Well Type: OIL WELL	**Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Geologic Formations

Formation ID	Formation Name	Elevation	True Vertical Depth	Measured Depth	Lithologies	Mineral Resources	Producing Formation
1	RUSTLER	3242	820	820	DOLOMITE,ANHYDRITE	NONE	No
2	SALADO	2265	960	960	SALT,ANHYDRITE	NONE	No
3	TANSILL	1185	2040	2043	DOLOMITE,ANHYDRITE	NONE	No
4	YATES	1050	2175	2178	DOLOMITE,ANHYDRITE	NATURAL GAS,OIL	No
5	SEVEN RIVERS	740	2485	2489	SANDSTONE,ANHYDRITE	NATURAL GAS,OIL	No
6	QUEEN	115	3110	3116	SANDSTONE,DOLOMITE,ANHYDRITE	NATURAL GAS,OIL	No
7	GRAYBURG	-300	3525	3533	SANDSTONE,DOLOMITE,ANHYDRITE	OIL	No
8	SAN ANDRES	-625	3850	3859	SANDSTONE,DOLOMITE,ANHYDRITE	NATURAL GAS,OIL	No
9	GLORIETA	-2150	5375	5404	SANDSTONE,DOLOMITE,SILTSTONE	NATURAL GAS,OIL	No
10	PADDOCK	-2235	5460	5524	DOLOMITE,ANHYDRITE,SILTSTONE	NATURAL GAS,OIL	Yes

Section 2 - Blowout Prevention

Pressure Rating (PSI): 3M   **Rating Depth:** 13146

Equipment: Rotating Head, Annular Preventer, Pipe/Blind Rams, Kill Lines, Choke Lines, Adapter Spool.

Requesting Variance? YES

Variance request: We request variance to use flexible choke line(s) from the BOP to Choke Manifold. We also request approval to have the option of using a 13" 3M BOP (diagram attached).
Testing Procedure: BOP/BOPE tested by independent company to 250 psi low and the high of 50% working psi, as required by Onshore Order 2. See also attached "Drill Plan".

Choke Diagram Attachment:

Peridot_8_Fed_1H_3M_ChokeDiagram_08-01-2017.pdf

Peridot_8_Fed_1H_FlexhoseVarianceData_08-01-2017.pdf

Proposed
Access Road

Existing
Road

Existing
Flow Line
(Mack
Energy)

1/4 Section Line

130'

100'   175'

PERIDOT 8 FEDERAL 11H

76'

140'

100'   175'

PERIDOT 8 FEDERAL 1H

130'

SW 1/4 SE 1/4, SECTION 8, T17S, R32E, N.M.P.M.	2.838 ACRES

NOTES:

ConocoPhillips Company

PERIDOT 8 FEDERAL 11H & 1H
SW 1/4 SE 1/4, SECTION 8, T17S, R32E, N.M.P.M.
LEA COUNTY, NEW MEXICO

UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

UINTAH
ENGINEERING & LAND SURVEYING
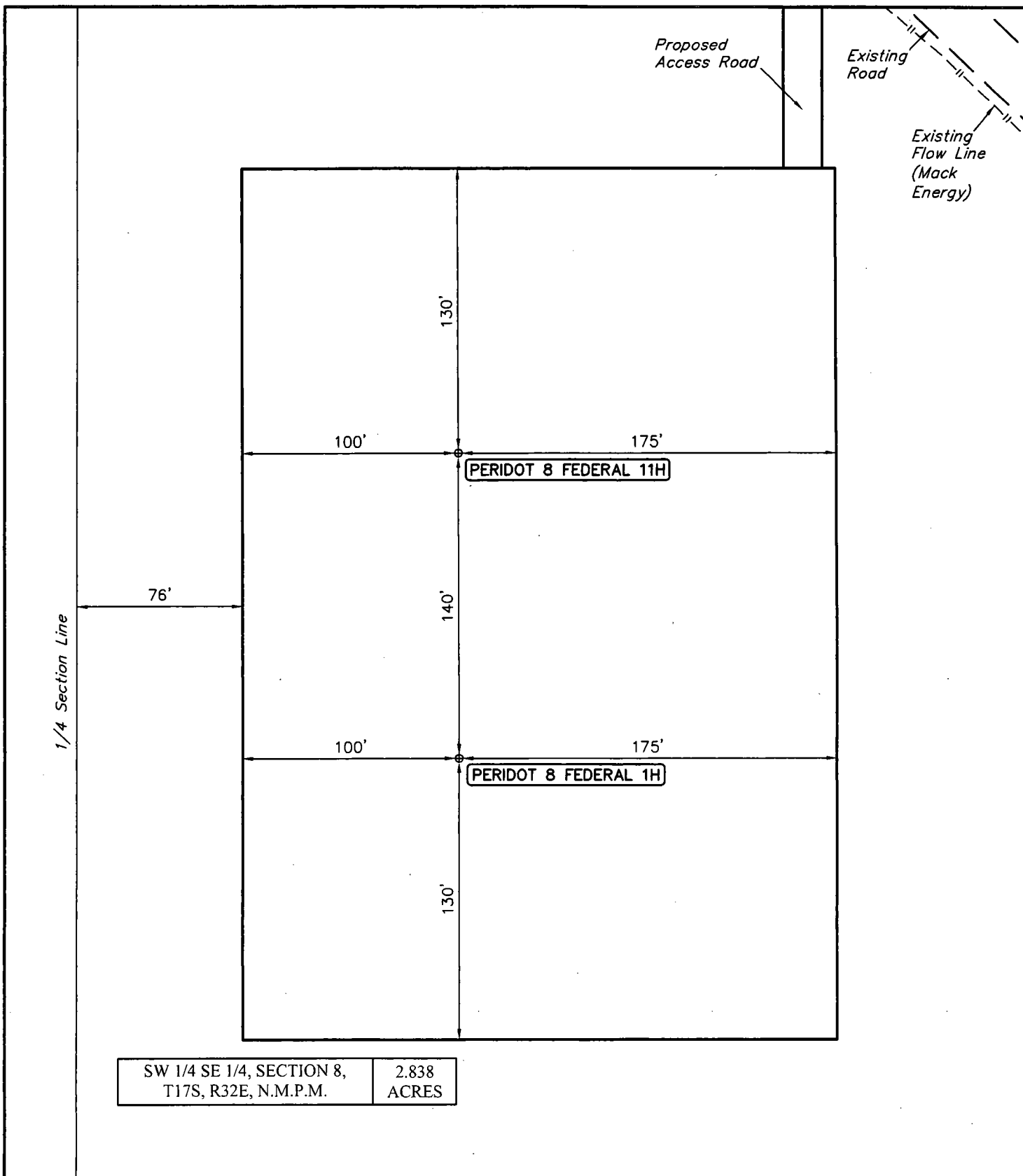
SURVEYED BY	A.H., J.J.	08-26-16	SCALE
DRAWN BY	C.D.	11-28-16	1" = 60'
	SITE PLAN		

NW Cor. Sec. 8,
1" Iron Pipe

S89°54'22"E – 5280.20' (Meas.)

NE Cor. Sec. 8,
PK Nail in Road

N00°00'35"W – 2640.31' (Meas.)

S00°14'03"W – 2640.04' (Meas.)

NAD 83 (11H SURFACE HOLE LOCATION)
LATITUDE = 32°50'38.37" (32.843992)
LONGITUDE = 103°47'17.02" (103.788061)
NAD 27 (11H SURFACE HOLE LOCATION)
LATITUDE = 32°50'37.95" (32.843875)
LONGITUDE = 103°47'15.20" (103.787556)
STATE PLANE NAD 83 (N.M. EAST)
N: 671209.97 E: 708800.15
STATE PLANE NAD 27 (N.M. EAST)
N: 671145.63 E: 667621.83
NAD 83 (11H FIRST TAKE POINT)
LATITUDE = 32°50'38.08" (32.843911)
LONGITUDE = 103°47'22.95" (103.789708)
NAD 27 (11H FIRST TAKE POINT)
LATITUDE = 32°50'37.65" (32.843792)
LONGITUDE = 103°47'21.13" (103.789203)
STATE PLANE NAD 83 (N.M. EAST)
N: 671177.64 E: 708294.33
STATE PLANE NAD 27 (N.M. EAST)
N: 671113.31 E: 667116.01

NAD 83 (1H SURFACE HOLE LOCATION)
LATITUDE = 32°50'36.99" (32.843608)
LONGITUDE = 103°47'17.01" (103.788058)
NAD 27 (1H SURFACE HOLE LOCATION)
LATITUDE = 32°50'36.56" (32.843489)
LONGITUDE = 103°47'15.19" (103.787553)
STATE PLANE NAD 83 (N.M. EAST)
N: 671070.03 E: 708801.09
STATE PLANE NAD 27 (N.M. EAST)
N: 671005.70 E: 667622.76
NAD 83 (1H FIRST TAKE POINT)
LATITUDE = 32°50'36.78" (32.843550)
LONGITUDE = 103°47'22.95" (103.789708)
NAD 27 (1H FIRST TAKE POINT)
LATITUDE = 32°50'36.36" (32.843433)
LONGITUDE = 103°47'21.13" (103.789203)
STATE PLANE NAD 83 (N.M. EAST)
N: 671046.67 E: 708294.90
STATE PLANE NAD 27 (N.M. EAST)
N: 670982.34 E: 667116.57

W 1/4 Cor. Sec. 8,
1" Iron Pipe
w/Brass Cap

E 1/4 Cor.
Sec. 8,
1" Iron Pipe
w/Brass Cap

8

N00°00'35"E – 2635.30' (Meas.)
Section Line

1/16 Section Line

1/4 Section Line

S00°14'03"W – 2638.82' (Meas.)

330' REGULATORY SETBACK

LEASE BOUNDARY

330'

See Detail "A"
@ Below Left

N00°03'50"E

FTP

11H SHL

2460'

FTP

1H SHL

2460'

615'

755'

S00°05'28"E – 2638.82' (Meas.)

SW Cor. Sec. 8,
2" Iron Pipe w/Brass Cap

N89°49'18"W – 2638.20' (Meas.)

S 1/4 Cor. Sec. 8,
1" Iron Pipe
w/Brass Cap

N89°55'15"W – 2637.91' (Meas.)

SE Cor. Sec. 8,
2" Iron Pipe
w/Brass Cap

Detail "A"
No Scale

LEASE BOUNDARY

FIRST TAKE POINT

11H 2460'

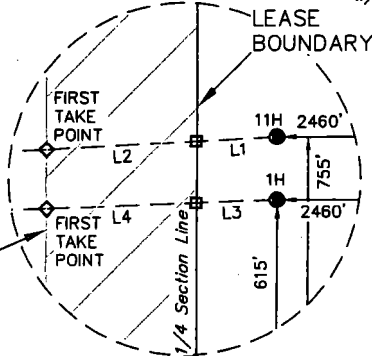L2   L1

1H 2460'

FIRST TAKE POINT

L4   L3

755'

615'

1/4 Section Line

330' REGULATORY SETBACK

LINE TABLE

LINE	DIRECTION	LENGTH
L1	S86°38'22"W	176.39'
L2	S86°38'22"W	330.58'
L3	S87°39'15"W	176.56'
L4	S87°39'15"W	330.29'

● = SURFACE HOLE LOCATION
□ = POINT ON LEASE BOUNDARY
◇ = FIRST TAKE POINT
▲ = SECTION CORNER LOCATED

PAUL BUCHELE
NEW MEXICO
23782
11-29-16
PROFESSIONAL SURVEYOR

N

ConocoPhillips Company

PERIDOT 8 FEDERAL 11H & 1H
SW 1/4 SE 1/4, SECTION 8, T17S, R32E, N.M.P.M.
LEA COUNTY, NEW MEXICO

UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

UINTAH
ENGINEERING & LAND SURVEYING

SURVEYED BY	A.H., J.J.	08-26-16	SCALE
DRAWN BY	C.D.	11-28-16	1" = 1000'

SUB SURFACE PLAT

DATE:	DESCRIPTION:
11/29/2016	SUB SURFACE PLAT AND SITE PLAN

UINTAH
ENGINEERING & LAND SURVEYING

Peridot_8_Fed_1H_3M_ChokeDiagram_08-01-2017.pdf

Peridot_8_Fed_1H_FlexhoseVarianceData_08-01-2017.pdf

BOP Diagram Attachment:

Peridot_8_Fed_1H_BOPDiagrams_08-01-2017.pdf

Peridot_8_Fed_1H_Generic5MWellhead_08-01-2017.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	-1440	-2325	885	J-55	54.5	STC	2.89	6.98	DRY	10.7	DRY	17.7
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	2250	0	2250	-1440	-3640	2250	J-55	40	LTC	2.2	3.38	DRY	5.78	DRY	7
3	PRODUCTION	8.75	7.0	NEW	API	Y	0	5200	0	5186	-1440	-6626	5200	L-80	29	LTC	2.88	3.35	DRY	3.89	DRY	4.48
4	PRODUCTION	8.75	5.5	NEW	API	Y	5200	13146	5186	5600	-6626	-7040	7946	L-80	17	LTC	2.4	2.95	DRY	2.5	DRY	2.94

Casing Attachments

Casing ID: 1   **String Type:** SURFACE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Peridot_8_Fed_1H_Csg_Worksheetv5_08-05-2017.pdf

Casing Attachments

Casing ID: 2   **String Type:** INTERMEDIATE

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

    Peridot_8_Fed_1H_Csg_Worksheetv5_08-05-2017.pdf

Casing ID: 3   **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

    Peridot_8_Fed_1H_Csg_Worksheetv5_08-05-2017.pdf

Casing Design Assumptions and Worksheet(s):

    Peridot_8_Fed_1H_Csg_Worksheet_08-01-2017.pdf

Casing ID: 4   **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

    Peridot_8_Fed_1H_Csg_Worksheetv5_08-05-2017.pdf

Casing Design Assumptions and Worksheet(s):

    Peridot_8_Fed_1H_Csg_Worksheetv5_08-05-2017.pdf

Section 4 - Cement

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	100	Lead: 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	100	Tail: Class C	0.2% Anti-Foam + 0.1% Lost Circ Control + 2 lbs/bbl CemNET (losses Control)
INTERMEDIATE	Lead		0	1750	450	2.29	11.5	1031	100	Lead: 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	100	Tail: 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	30	Lead: 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

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
PRODUCTION	Lead		5200	13146	1900	1.37	14	2603	30	Class C	3lb/sk LCM + 1.5% Fluid Loss + 0.1% + 1% Sodium Metasilicate (dry) + 1.5% Fluid Loss Control

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 (lbs/gal)	Max Weight (lbs/gal)	Density (lbs/cu ft)	Gel Strength (lbs/100 sqft)	PH	Viscosity (CP)	Salinity (ppm)	Filtration (cc)	Additional Characteristics
0	885	WATER-BASED MUD	8.5	9							Please see attached "Drill Plan" for additional information.
885	2250	SALT SATURATED	10	10							Please see attached "Drill Plan" for additional information.
2250	5600	OTHER : Cut Brine	8.6	10							Please see attached "Drill Plan" for additional information.

Section 6 - Test, Logging, Coring

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

Production tests will be conducted multiple times per week, through a test separator, during first months following completion. Thereafter, tests will be less frequently. 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.

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 2815   **Anticipated Surface Pressure:** 1608.3

Anticipated Bottom Hole Temperature(F): 100

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 1H_H2S C Plan_01-04-2017.pdf
>
> Peridot_8_Fed_1H_RigLayoutPlat_08-02-2017.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

> Peridot_8_Fed_1H_DirectionalPlan_08-05-2017.pdf
>
> Peridot_8_Fed_1H_WellBoreSchematic5_08-05-2017.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. We request approval of the option to run open hole sleeve in the lateral section according to the attached plan with file title, "Peridot 8 Fed 1H OH Sleeve Option". We request variance to use multi-bowl wellhead. See also attached "Drill Plan".

Other proposed operations facets attachment:

> Peridot 8 Fed 1H_Drill Waste Containment_01-04-2017.pdf
>
> Peridot_8_Fed_1H_Drill_Planv5_08-05-2017.pdf
>
> Peridot_8_Fed_1H_OH_Sleeve_Option_20180103085923.pdf
>
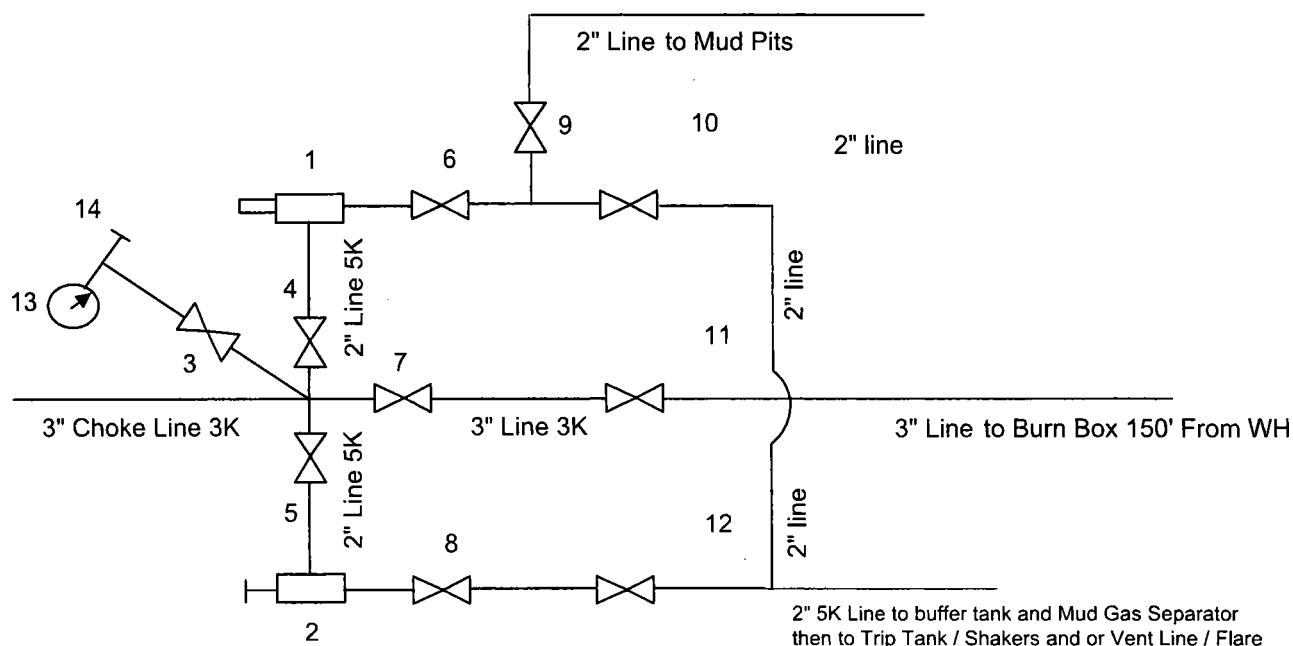> Peridot_8_Fed_Gas_Capture_Plan_20180108105207.pdf

Other Variance attachment:

> Peridot_8_Fed_5M_Wellhead_08-05-2017.pdf

CHOKE MANIFOLD ARRANGEMENT - 3M Choke
per Onshore Oil and Gas Order No. 2 utilizing 3M/5M Equipment

2" Line to Mud Pits

2" line

14

13

1

6

9

10

4

2" Line 5K

11

2" line

3

7

3" Choke Line 3K

3" Line 3K

3" Line to Burn Box 150' From WH

2" Line 5K

5

12

2" line

8

2

2" 5K Line to buffer tank and Mud Gas Separator
then to Trip Tank / Shakers and or Vent Line / Flare

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
8	Gate Valve, 2-1/16" 5M
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.

RELIANCE
Industrial Products USA, Ltd.

Wellhead / Fire Guarded System

Choke & Kill
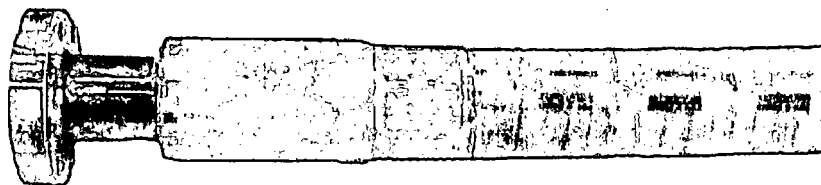
Reliance Eliminator Choke & Kill

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 °36 fq70⑤ minutes)

Nom. ID		Nom OD		Weight		Min Bend Radius		Max WP	
in.	mm.	in.	mm	lb/ft	kg/m	in.	mm.	psi	Mpa
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

Fittings	Flanges	Hammer Unions	Other
RC4X5055	R35 - 3-1/8 5000# API Type 6B	All Union Configurations	LP Threaded (
RC3X5055	R31 - 3-1/8 3000# API Type 6B		Graylock
RC4X5575			Custom Ends

RELIANCE

Industrial Products USA, Ltd.

Please remit payment to:
606 - 19 Avenue, Nisku, AB
Canada T9E 7W1

WORK ORDER

Greeley, CO 80631	Bossier City, LA 71111	San Antonio, TX 78217	Williston, ND 58801	Midland, TX 79706	Houston, TX 77388
Ph 970-346-3751	Ph 318-687-5486	Ph: 210-650-3636	Ph: 701-572-7035	Ph: 432-689-0102	Ph: 281-288-9720
Fax 970-353-3168	Fax 318-687-5491	Fax: 210-650-3133	Fax 701-572-7030	Fax: 432-699-4898	4115 Kronhop Rd Suite B
2030E 8th Street, Suite B	1001 M&O Drive	4327 Contergate Street	4970 Hwy 85	2904 SCR 1250	

BILL TO	CUSTOMER NO.	SALESMAN NO.	SHIP TO	CUSTOMER NO.	SALESMAN NO.	
	003054	HSE		003054	HSE	PG 1 OF 1

TRINIDAD DRILLING LP
15015 VICKERY DR
HOUSTON, TX 77032

TRINIDAD DRILLING
RIGH 435

(713)439-1670

003054013482
001013
ORDER STATUS
OPEN ORDER

BRANCH	BUD	BOX	BAG	COIL	PC	TOTAL	TAX ID #26-0174221	REFERENCE NUMBER
Reliance - Midland								105-013482

MO. DAY YR.	WRITTEN BY	YOUR ORDER NO	TERMS	SHIP VIA	C	PP
11/04/16	RWB	11/04/16 5709 PO22132	NET 30 DAYS	DELIVERY RWB		

QTY. ORDERED	QTY. SHIPPED	BACK ORDERED	PART NUMBER AND DESCRIPTION	CODE	LIST PRICE	NET PRICE	UNIT	NET AMOUNT
			•••••••••••••••••••••••••••SHIPPING DETAIL••••••••••••••••••••••••••					
			11/4/16 ....ORDER TO BE COMPLETED BY					
			DELIVER TO YARD ....SHIPPING INSTRUCTIONS					
			.........................SPECIAL INSTRUCTIONS					
			ATTN: IAN RIGH 435 ....CUSTOMER CONTACT					
			PARTS[ ] API HOSE[ ] HYD HOSE[ ] IND HOSE[ ] ...ORDER COMPONENTS					
			•••					
1	1		KIT MATERIALS MATERIALS	T	4806.980		EA	4806.98
			•••••••••••••••••• Components for above item are listed below •••••••••••••••••••					
	2.00		LAB RKSWAGE GRADE C & D SWAGE				EA	
	1.00		LAB T-100 TESTING CHARGES				EA	
	1		PTC P930012 ID TAG 2.5X1.5 SS	J 2C			EA	
	2		PTC P930022 CABLE TIE SS 20.50L	J 2C			EA	
	9		HBD RFG500056 3 1/2"FIREGUARD CHOKE HOSE				EA	
	1		RSK 7K-FR35X5KRCD56 FLOATING FLANGE COUPLING	M 1E			EA	
	1		RSK 7K-R35X5KRCD56 GRADE C/D R35 FLANGE COUPL	M 1E			EA	
	2		API OVERFERRULE96 6" SS OVERFERRULE	M 2F			EA	
	15		HDW 3X116 3" X 1/16" FIBERGLASS TAPE	Q 1C			FT	
			1 - 3.5" X 8'6" 5K F/G CHOKE HOSE W/ R35 FIXED X FLOATING FLANGE					
			TESTED TO 10000 PSI FOR 10 MINUTES					
			HYDRO-TEST AND NACE CERTIFICATIONS PROVIDED					

IF ORDERED TODAY BUY 2PM WE CAN HAVE THIS BUILT TOMORROW
IF ORDERED LATER THAN 2PM IT WILL BE MONDAY DELIVERY

Sign: _____

Print Name: _____

Date: 11-22-16

PICKED BY	ASSEM'D BY	TESTED BY	TERMS: NET 30 DAYS FROM DATE OF INVOICE. Interest of 2% PER MONTH (24% PER ANNUM) charged on overdue accounts. The terms of the contract between Reliance Industrial Products Ltd. ("Reliance") and the customer are on the reverse of this document.	GOODS RECEIVED BY (PLEASE PRINT)	SUB-TOTAL	4806.98
INSPEC BY	INSPEC BY	INSPEC BY		INITIAL 11:25	TAX	0.00
					TOTAL	4806.98

RELIANCE
Industrial Products Ltd.

2904 SCR 1250
MIDLAND, TX
79706

TEST CERTIFICATE

Customer Information

Customer:	TRINIDAD DRILLING
P.O. #:	PO22132
Rig #	RIG# 435
Cust Tracking #	

Material Information

Hose Type	3.1/2" FIREGUARD H
Hose ID	3.1/2"
Assembly Length	8' 6"
Fireguard Yes/No	YES

Test Information

Cert No.:	105-013482/001	H-01
Date: (YYYY-MM-DD)	#2016-11-11#	
Working Pressure :	5000 PSI	
Test Pressure:	10000 PSI	
Duration (mins):	20	

Material Tracking - Coupling #1

Coupling #1:	R35 FIXD FLANGE
MTR# - Stem	
MTR# - Shell	
NACE#	

Material Tracking - Coupling #2

Coupling #2:	R35 FLOATING FLAN
MTR# - Stem	
MTR# - Shell	
NACE#	

Traceability

☑ NEW

☐ RECERT | 13482 | H-01

Previous Reference #

Comments

TESTED AND CERTIFIED @ 10000 PSI FOR 10 MINUTES CERT TAG SN# 13482-H01
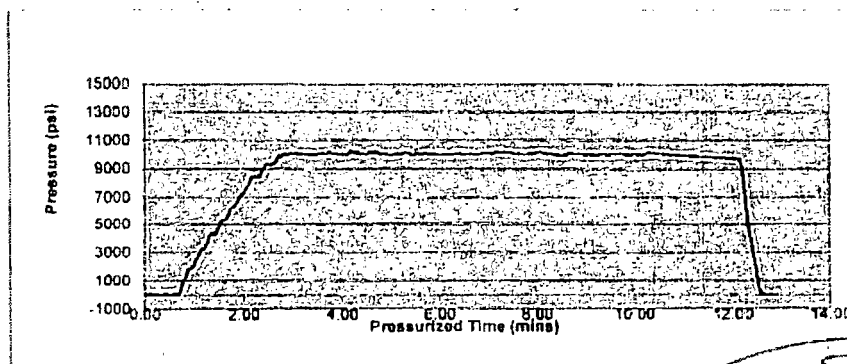
☑ Acceptable

☐ Not Acceptable

ISIDRO SANCHEZ
Test Technician (Print Name)

Test Technician Signature

Supervisor Signature

RIP-HAFM 006
VER II

BLOWOUT PREVENTER ARRANGEMENT - 11" 3M BOPE
per Onshore Oil and Gas Order No. 2 utilizing 3M Rated Equipment
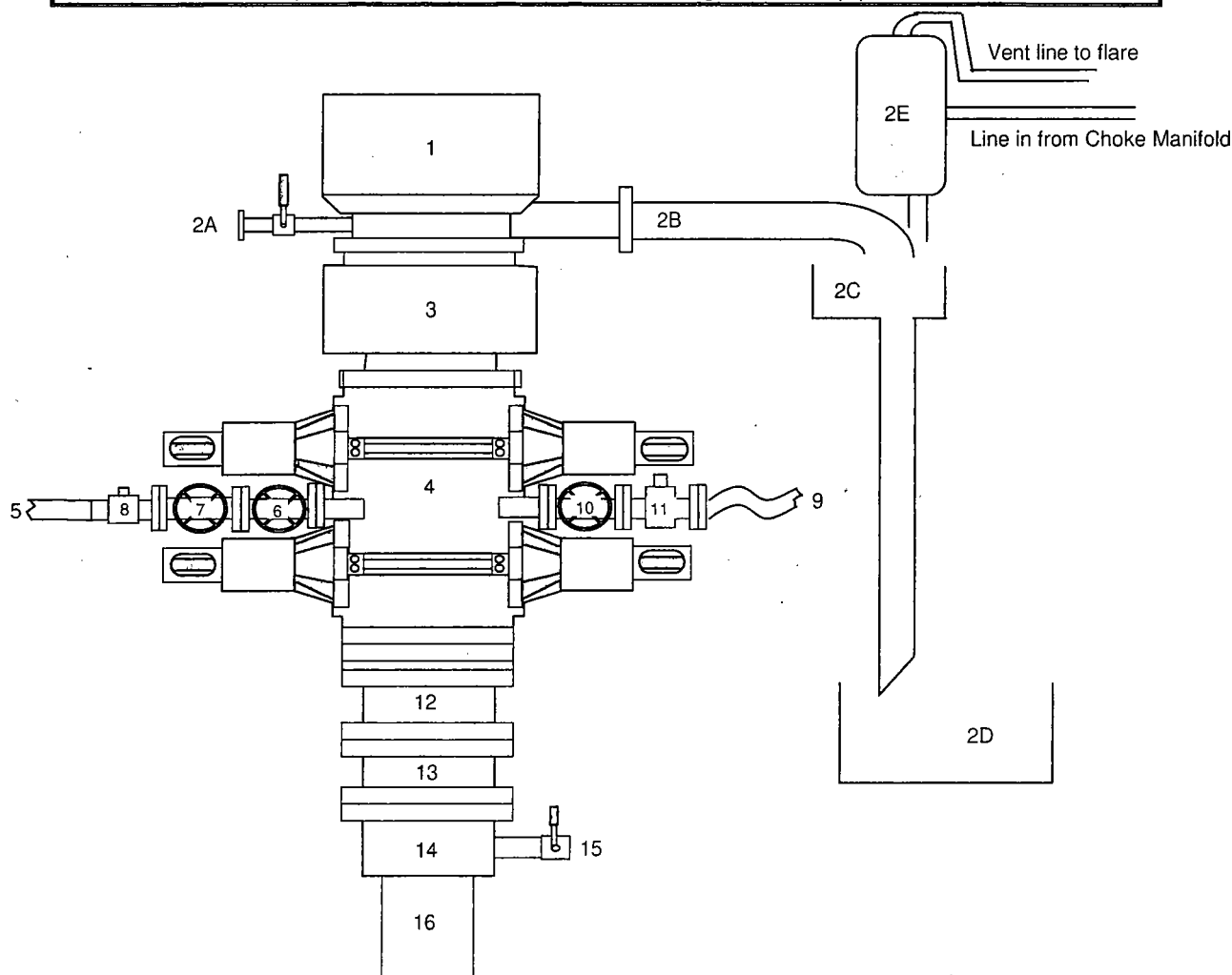
Item	Description
1	Rotating Head, 11"
2A	Fill up Line and Valve
2B	Flow Line (10")
2C	Shale Shakers and Solids Settling Tank
2D	Cuttings Bins for Zero Discharge
2E	Rental Mud Gas Separator with vent line to flare and return line to mud system
3	Annular BOP (11", 3M)
4	Double Ram (11", 3M, Blind Ram top 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.

BLOWOUT PREVENTER ARRANGEMENT - 13-5/8" 3M BOPE
per Onshore Oil and Gas Order No. 2 utilizing 5M Rated Equipment
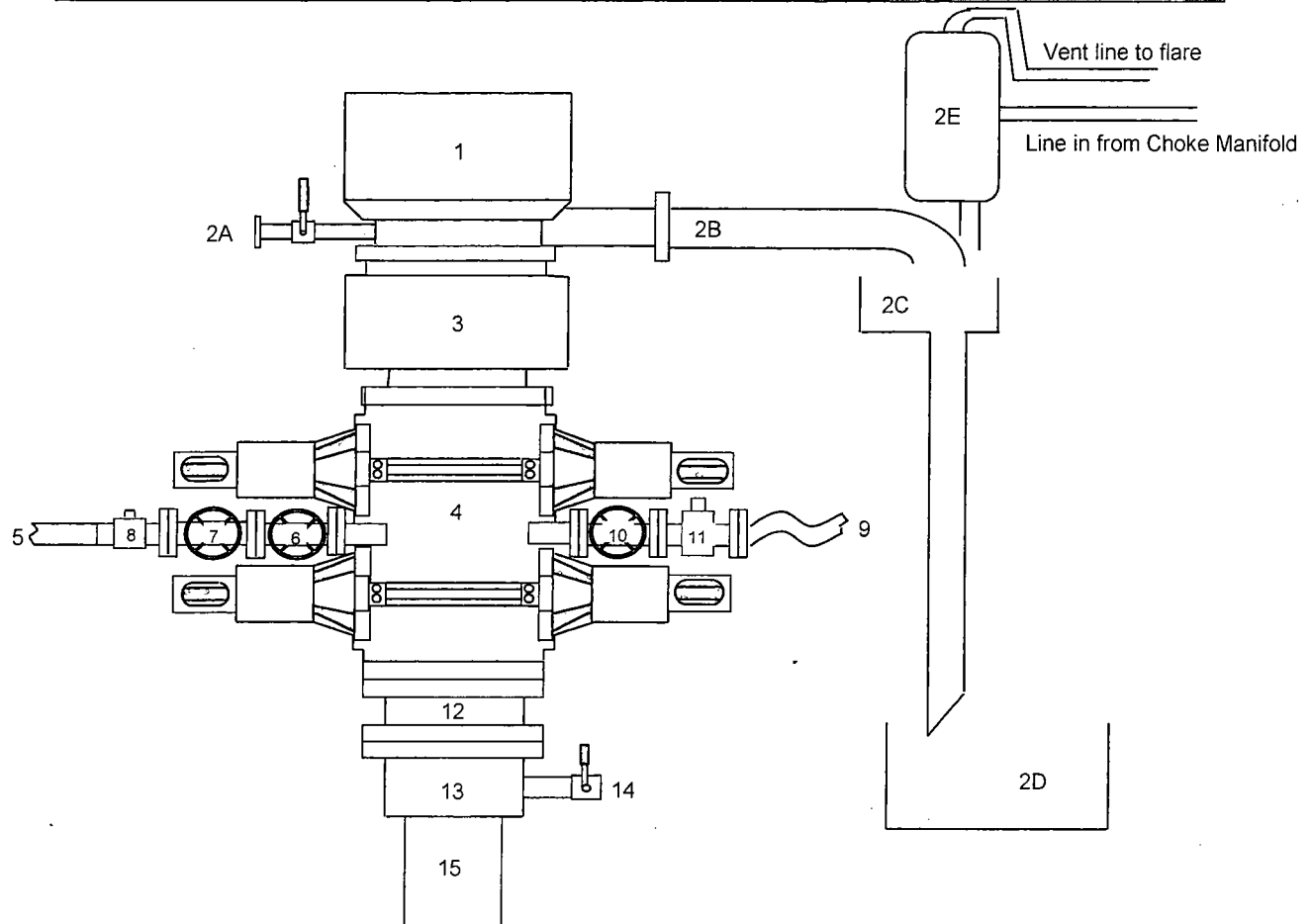
Item	Description
1	Rotating Head, 13-5/8"
2A	Fill up Line and Valve
2B	Flow Line (10")
2C	Shale Shakers and Solids Settling Tank
2D	Cuttings Bins for Zero Discharge
2E	Rental Mud Gas Separator with vent line to flare and return line to mud system
3	Annular BOP (13-5/8", 5M)
4	Double Ram (13-5/8", 5M, 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.
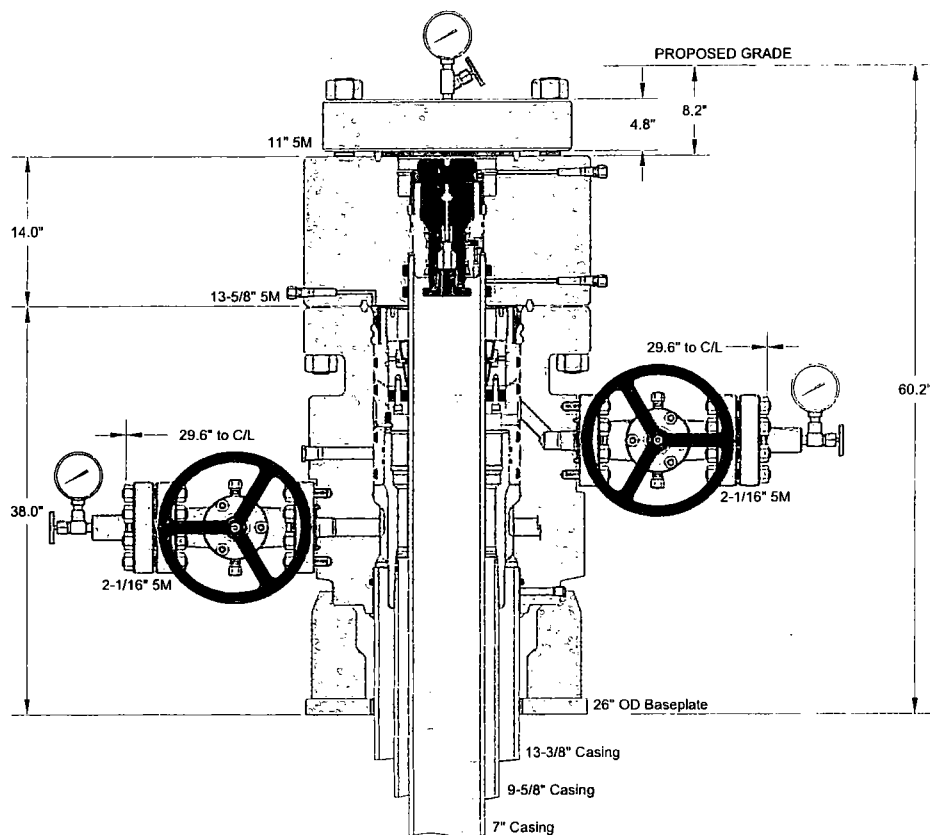
DRILL AND SKID CONFIGURATION
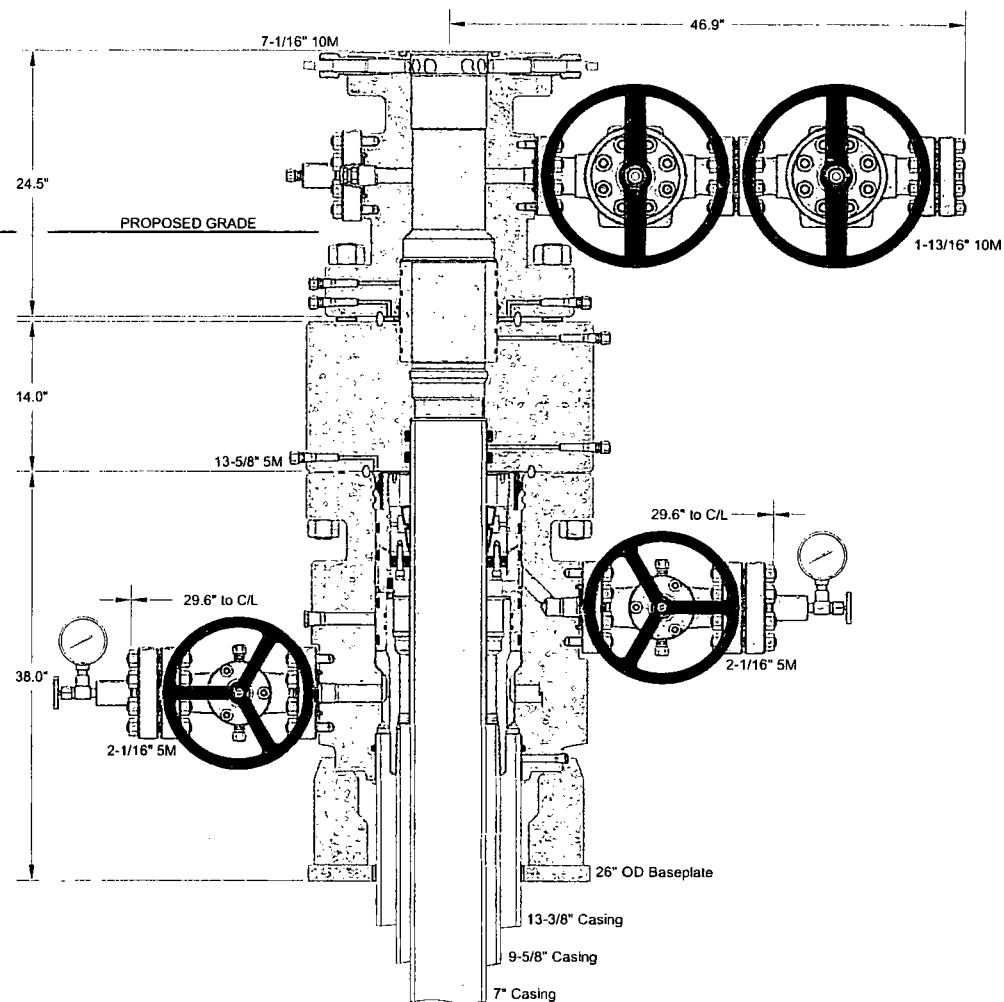
PRODUCTION CONFIGURATION

Peridot 8 Federal 1H

CACTUS WELLHEAD LLC

Permian Basin

13-3/8" x 9-5/8" x 7" 5M MBU-2LR Wellhead Assembly With
13-5/8" 5M x 11" 5M DBLHPS DSPA With 6-3/4" Type LR BPV
Profile and 11" 5M x 7-1/16" 10M CTH-HPS-F Tubing Head

DRAWN	THH	26JUL15
APPRV		
DRAWING NO.	ODE0000716	

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	2730	1130	853000	514000	8.5
Intermediate 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	13146	5600	7946	17	7740	6290	397000	338000	9

Collapse Design (Safety) Factors – BLM Criteria

Collapse Design (Safety) Factor: SFc

$SFc = Pc / (MW \times .052 \times Ls)$

Where

- Pc is the rated pipe Collapse Pressure in pounds per square inch (psi)
- MW is mud weight in pounds per gallon (ppg)
- Ls is the length of the string in feet (ft)

The Minimum Acceptable Collapse Design (Safety) Factor SFc = 1.125

Surface Casing

SFc = 1130 / 391 = 2.89

Intermediate 1 Casing

SFc = 2570 / 1170 = 2.20

Production 1 Casing

SFc = 7020 / 2434 = 2.88

Production 2 Casing

SFc = 6290 / 2621 = 2.40

Burst Design (Safety) Factors – BLM Criteria

Burst Design (Safety) Factor: SFb

$SFb = Pi / BHP$

Where

- 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 (psi)

The Minimum Acceptable Burst Design (Safety) Factor SFb = 1.0

Surface Casing

SFb = 2730 / 391 = 6.98

Intermediate 1 Casing

SFb = 3950 / 1170 = 3.38

Production 1 Casing

SFb = 8160 / 2434 = 3.35

Production 2 Casing

SFb = 7740 / 2621 = 2.95

Pipe Strength Design (Safety) Factors – BLM Criteria

Pipe Strength Design (Safety) Factor: SFtp

$SFtp = Fp / Wt$

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 = 853000 / 48232.5 = 17.7

SFi Bouyant = 853000 / (48232.5 x 0.870) = 20.3

Intermediate 1 Casing

SFi Dry = 630000 / 90000 = 7.00

SFi Bouyant = 630000 / (90000 x 0.847) = 8.26

Production 1 Casing

SFi Dry = 676000 / 150800 = 4.48

SFi Bouyant = 676000 / (150800 x 0.863) = 5.20

Production 2 Casing

SFi Dry = 397000 / 135082 = 2.94

SFi Bouyant = 397000 / (135082 x 0.863) = 3.41

Joint Strength Design (Safety) Factors – BLM Criteria

Joint Strength Design (Safety) Factor: SFtj

$SFtj = Fj / Wt$

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 Casing

SFi Dry = 514000 / 48232.5 = 10.7

SFi Bouyant = 514000 / (48232.5 x 0.870) = 12.2

Intermediate 1 Casing

SFi Dry = 520000 / 90000 = 5.78

SFi Bouyant = 520000 / (90000 x 0.847) = 6.82

Production 1 Casing

SFi Dry = 587000 / 150800 = 3.89

SFi Bouyant = 587000 / (150800 x 0.863) = 4.51

Production 2 Casing

SFi Dry = 338000 / 135082 = 2.50

SFi Bouyant = 338000 / (135082 x 0.863) = 2.90

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	2730	1130	853000	514000	8.5
Intermediate 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	13146	5600	7946	17	7740	6290	397000	338000	9

Collapse Design (Safety) Factors – BLM Criteria

Collapse Design (Safety) Factor: SFc

$SFc = Pc / (MW \times .052 \times Ls)$

Where
- Pc is the rated pipe Collapse Pressure in pounds per square inch (psi)
- MW is mud weight in pounds per gallon (ppg)
- Ls is the length of the string in feet (ft)

The Minimum Acceptable Collapse Design (Safety) Factor SFc = 1.125

Surface Casing

$SFc = 1130 \ / \ 391 \ = \ 2.89$

Intermediate 1 Casing

$SFc = 2570 \ / \ 1170 \ = \ 2.20$

Production 1 Casing

$SFc = 7020 \ / \ 2434 \ = \ 2.88$

Production 2 Casing

$SFc = 6290 \ / \ 2621 \ = \ 2.40$

Burst Design (Safety) Factors – BLM Criteria

Burst Design (Safety) Factor: SFb

$SFb = PI / BHP$

Where
- 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 (psi)

The Minimum Acceptable Burst Design (Safety) Factor SFb = 1.0

Surface Casing

$SFb = 2730 \ / \ 391 \ = \ 6.98$

Intermediate 1 Casing

$SFb = 3950 \ / \ 1170 \ = \ 3.38$

Production 1 Casing

$SFb = 8160 \ / \ 2434 \ = \ 3.35$

Production 2 Casing

$SFb = 7740 \ / \ 2621 \ = \ 2.95$

Pipe Strength Design (Safety) Factors – BLM Criteria

Pipe Strength Design (Safety) Factor: SFtp

$SFtp = Fp / Wt;$

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

$SFi \ Dry = 853000 \ / \ 48232.5 \ = \ 17.7$
$SFi \ Bouyant = 853000 \ / \ (\ 48232.5 \ x \ 0.870 \ ) = \ 20.3$

Intermediate 1 Casing

$SFi \ Dry = 630000 \ / \ 90000 \ = \ 7.00$
$SFi \ Bouyant = 630000 \ / \ (\ 90000 \ x \ 0.847 \ ) = \ 8.26$

Production 1 Casing

$SFi \ Dry = 676000 \ / \ 150800 \ = \ 4.48$
$SFi \ Bouyant = 676000 \ / \ (\ 150800 \ x \ 0.863 \ ) = \ 5.20$

Production 2 Casing

$SFi \ Dry = 397000 \ / \ 135082 \ = \ 2.94$
$SFi \ Bouyant = 397000 \ / \ (\ 135082 \ x \ 0.863 \ ) = \ 3.41$

Joint Strength Design (Safety) Factors – BLM Criteria

Joint Strength Design (Safety) Factor: SFtj

$SFtj = Fj / Wt;$

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 Casing

$SFi \ Dry = 514000 \ / \ 48232.5 \ = \ 10.7$
$SFi \ Bouyant = 514000 \ / \ (\ 48232.5 \ x \ 0.870 \ ) = \ 12.2$

Intermediate 1 Casing

$SFi \ Dry = 520000 \ / \ 90000 \ = \ 5.78$
$SFi \ Bouyant = 520000 \ / \ (\ 90000 \ x \ 0.847 \ ) = \ 6.82$

Production 1 Casing

$SFi \ Dry = 587000 \ / \ 150800 \ = \ 3.89$
$SFi \ Bouyant = 587000 \ / \ (\ 150800 \ x \ 0.863 \ ) = \ 4.51$

Production 2 Casing

$SFi \ Dry = 338000 \ / \ 135082 \ = \ 2.50$
$SFi \ Bouyant = 338000 \ / \ (\ 135082 \ x \ 0.863 \ ) = \ 2.90$

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	2730	1130	853000	514000	8.5
Intermediate 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	13146	5600	7946	17	7740	6290	397000	338000	9

Collapse Design (Safety) Factors – BLM Criteria

Collapse Design (Safety) Factor: SFc

SFc = Pc / (MW x .052 x Ls)

Where

- Pc is the rated pipe Collapse Pressure in pounds per square inch (psi)
- MW is mud weight in pounds per gallon (ppg)
- Ls is the length of the string in feet (ft)

The Minimum Acceptable Collapse Design (Safety) Factor SFc = 1.125

Surface Casing

SFc = 1130 / 391 = 2.89

Intermediate 1 Casing

SFc = 2570 / 1170 = 2.20

Production 1 Casing

SFc = 7020 / 2434 = 2.88

Production 2 Casing

SFc = 6290 / 2621 = 2.40

Burst Design (Safety) Factors – BLM Criteria

Burst Design (Safety) Factor: SFb

SFb = Pi / BHP

Where

- 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 (psi)

The Minimum Acceptable Burst Design (Safety) Factor SFb = 1.0

Surface Casing

SFb = 2730 / 391 = 6.98

Intermediate 1 Casing

SFb = 3950 / 1170 = 3.38

Production 1 Casing

SFb = 8160 / 2434 = 3.35

Production 2 Casing

SFb = 7740 / 2621 = 2.95

Pipe Strength Design (Safety) Factors – BLM Criteria

Pipe Strength Design (Safety) Factor: SFtp

SFtp = Fp / Wt

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 = 853000 / 48232.5 = 17.7

SFi Bouyant = 853000 / (48232.5 x 0.870) = 20.3

Intermediate 1 Casing

SFi Dry = 630000 / 90000 = 7.00

SFi Bouyant = 630000 / (90000 x 0.847) = 8.26

Production 1 Casing

SFi Dry = 676000 / 150800 = 4.48

SFi Bouyant = 676000 / (150800 x 0.863) = 5.20

Production 2 Casing

SFi Dry = 397000 / 135082 = 2.94

SFi Bouyant = 397000 / (135082 x 0.863) = 3.41

Joint Strength Design (Safety) Factors – BLM Criteria

Joint Strength Design (Safety) Factor: SFtj

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 Casing

SFi Dry = 514000 / 48232.5 = 10.7

SFi Bouyant = 514000 / (48232.5 x 0.870) = 12.2

Intermediate 1 Casing

SFi Dry = 520000 / 90000 = 5.78

SFi Bouyant = 520000 / (90000 x 0.847) = 6.82

Production 1 Casing

SFi Dry = 587000 / 150800 = 3.89

SFi Bouyant = 587000 / (150800 x 0.863) = 4.51

Production 2 Casing

SFi Dry = 338000 / 135082 = 2.50

SFi Bouyant = 338000 / (135082 x 0.863) = 2.90

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	2730	1130	853000	514000	8.5
Intermediate 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	13146	5600	7946	17	7740	6290	397000	338000	9

Collapse Design (Safety) Factors – BLM Criteria

Collapse Design (Safety) Factor: SFc

$SFc = Pc / (MW \times .052 \times Ls)$

Where
- Pc is the rated pipe Collapse Pressure in pounds per square inch (psi)
- MW is mud weight in pounds per gallon (ppg)
- Ls is the length of the string in feet (ft)

The Minimum Acceptable Collapse Design (Safety) Factor SFc = 1.125

Surface Casing

$SFc =$ 1130   /   391   =   **2.89**

Intermediate 1 Casing

$SFc =$ 2570   /   1170   =   **2.20**

Production 1 Casing

$SFc =$ 7020   /   2434   =   **2.88**

Production 2 Casing

$SFc =$ 6290   /   2621   =   **2.40**

Burst Design (Safety) Factors – BLM Criteria

Burst Design (Safety) Factor: SFb

$SFb = Pi / BHP$

Where
- 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 (psi)

The Minimum Acceptable Burst Design (Safety) Factor SFb = 1.0

Surface Casing

$SFb =$ 2730   /   391   =   **6.98**

Intermediate 1 Casing

$SFb =$ 3950   /   1170   =   **3.38**

Production 1 Casing

$SFb =$ 8160   /   2434   =   **3.35**

Production 2 Casing

$SFb =$ 7740   /   2621   =   **2.95**

Pipe Strength Design (Safety) Factors – BLM Criteria

Pipe Strength Design (Safety) Factor: SFtp

$SFtp = Fp / Wt;$

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 =   853000   /   48232.5   =   **17.7**

SFi Bouyant =   853000   / (48232.5   x   0.870   ) =   **20.3**

Intermediate 1 Casing

SFi Dry =   630000   /   90000   =   **7.00**

SFi Bouyant =   630000   / (90000   x   0.847   ) =   **8.26**

Production 1 Casing

SFi Dry =   676000   /   150800   =   **4.48**

SFi Bouyant =   676000   / (150800   x   0.863   ) =   **5.20**

Production 2 Casing

SFi Dry =   397000   /   135082   =   **2.94**

SFi Bouyant =   397000   / (135082   x   0.863   ) =   **3.41**

Joint Strength Design (Safety) Factors – BLM Criteria

Joint Strength Design (Safety) Factor: SFtj

$SFtj = Fj / Wt;$

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 Casing

SFi Dry =   514000   /   48232.5   =   **10.7**

SFi Bouyant =   514000   / (48232.5   x   0.870   ) =   **12.2**

Intermediate 1 Casing

SFi Dry =   520000   /   90000   =   **5.78**

SFi Bouyant =   520000   / (90000   x   0.847   ) =   **6.82**

Production 1 Casing

SFi Dry =   587000   /   150800   =   **3.89**

SFi Bouyant =   587000   / (150800   x   0.863   ) =   **4.51**

Production 2 Casing

SFi Dry =   338000   /   135082   =   **2.50**

SFi Bouyant =   338000   / (135082   x   0.863   ) =   **2.90**

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	2730	1130	853000	514000	8.5
Intermediate 1 Casing	2000	2000	2000	40	3950	2570	630000	520000	10
Intermediate 2 Casing	0	0	0	0	0	0	0	0	0
Production 1 Casing	5200	5200	5200	29	8160	7020	676000	587000	9
Production 2 Casing	13132	5583	7932	17	7740	6290	397000	338000	9

Collapse Design (Safety) Factors – BLM Criteria

Collapse Design (Safety) Factor: SFc

SFc = Pc / (MW x .052 x Ls)

Where

- Pc is the rated pipe Collapse Pressure in pounds per square inch (psi)
- MW is mud weight in pounds per gallon (ppg)
- Ls is the length of the string in feet (ft)

The Minimum Acceptable Collapse Design (Safety) Factor SFc = 1.125

Surface Casing

SFc = 1130 / 391 = 2.89

Intermediate 1 Casing

SFc = 2570 / 1040 = 2.47

Intermediate 2 Casing

SFc = 0 / 0 = #DIV/0!

Production 1 Casing

SFc = 7020 / 2434 = 2.88

Production 2 Casing

SFc = 6290 / 2613 = 2.41

Burst Design (Safety) Factors – BLM Criteria

Burst Design (Safety) Factor: SFb

SFb = Pi / BHP

Where

- Pi is the rated pipe Burst (Minimum Internal Yield) Pressure in pounds per square inch (psi)
- BHP is bottom hole pressure in pounds per square inch (psi)

The Minimum Acceptable Burst Design (Safety) Factor SFb = 1.0

Surface Casing

SFb = 2730 / 391 = 6.98

Intermediate 1 Casing

SFb = 3950 / 1040 = 3.80

Intermediate 2 Casing

SFb = 0 / 0 = #DIV/0!

Production 1 Casing

SFb = 8160 / 2434 = 3.35

Production 2 Casing

SFb = 7740 / 2613 = 2.96

Pipe Strength Design (Safety) Factors – BLM Criteria

Pipe Strength Design (Safety) Factor: SFp

SFp = Fp / Wt

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 = 853000 / 48232.5 = 17.7

SFi Bouyant = 853000 / (48232.5 x 0.870) = 20.3

Intermediate 1 Casing

SFi Dry = 630000 / 80000 = 7.88

SFi Bouyant = 630000 / (80000 x 0.847) = 9.29

Intermediate 2 Casing

SFi Dry = 0 / 0 = #DIV/0!

SFi Bouyant = 0 / (0 x 1.000) = #DIV/0!

Production 1 Casing

SFi Dry = 676000 / 150800 = 4.48

SFi Bouyant = 676000 / (150800 x 0.863) = 5.20

Production 2 Casing

SFi Dry = 397000 / 134844 = 2.94

SFi Bouyant = 397000 / (134844 x 0.863) = 3.41

Joint Strength Design (Safety) Factors – BLM Criteria

Joint Strength Design (Safety) Factor: SFj

SFj = 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 Casing

SFi Dry = 514000 / 48232.5 = 10.7

SFi Bouyant = 514000 / (48232.5 x 0.870) = 12.2

Intermediate 1 Casing

SFi Dry = 520000 / 80000 = 6.50

SFi Bouyant = 520000 / (80000 x 0.847) = 7.67

Intermediate 2 Casing

SFi Dry = 0 / 0 = #DIV/0!

SFi Bouyant = 0 / (0 x 1.000) = #DIV/0!

Production 1 Casing

SFi Dry = 587000 / 150800 = 3.89

SFi Bouyant = 587000 / (150800 x 0.863) = 4.51

Production 2 Casing

SFi Dry = 338000 / 134844 = 2.51

SFi Bouyant = 338000 / (134844 x 0.863) = 2.91

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	2730	1130	853000	514000	8.5
Intermediate 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	13146	5600	7946	17	7740	6290	397000	338000	9

Collapse Design (Safety) Factors – BLM Criteria

Collapse Design (Safety) Factor: SFc

$SFc = Pc / (MW \times .052 \times Ls)$

Where

- Pc is the rated pipe Collapse Pressure in pounds per square inch (psi)
- MW is mud weight in pounds per gallon (ppg)
- Ls is the length of the string in feet (ft)

The Minimum Acceptable Collapse Design (Safety) Factor SFc = 1.125

Surface Casing

$SFc =$ 1130 / 391 = 2.89

Intermediate 1 Casing

$SFc =$ 2570 / 1170 = 2.20

Production 1 Casing

$SFc =$ 7020 / 2434 = 2.88

Production 2 Casing

$SFc =$ 6290 / 2621 = 2.40

Burst Design (Safety) Factors – BLM Criteria

Burst Design (Safety) Factor: SFb

$SFb = Pi / BHP$

Where

- 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 (psi)

The Minimum Acceptable Burst Design (Safety) Factor SFb = 1.0

Surface Casing

$SFb =$ 2730 / 391 = 6.98

Intermediate 1 Casing

$SFb =$ 3950 / 1170 = 3.38

Production 1 Casing

$SFb =$ 8160 / 2434 = 3.35

Production 2 Casing

$SFb =$ 7740 / 2621 = 2.95

Pipe Strength Design (Safety) Factors – BLM Criteria

Pipe Strength Design (Safety) Factor: SFtp

$SFtp = Fp / Wt;$

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 = 853000 / 48232.5 = 17.7

SFi Bouyant = 853000 / (48232.5 x 0.870) = 20.3

Intermediate 1 Casing

SFi Dry = 630000 / 90000 = 7.00

SFi Bouyant = 630000 / (90000 x 0.847) = 8.26

Production 1 Casing

SFi Dry = 676000 / 150800 = 4.48

SFi Bouyant = 676000 / (150800 x 0.863) = 5.20

Production 2 Casing

SFi Dry = 397000 / 135082 = 2.94

SFi Bouyant = 397000 / (135082 x 0.863) = 3.41

Joint Strength Design (Safety) Factors – BLM Criteria

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 Casing

SFi Dry = 514000 / 48232.5 = 10.7

SFi Bouyant = 514000 / (48232.5 x 0.870) = 12.2

Intermediate 1 Casing

SFi Dry = 520000 / 90000 = 5.78

SFi Bouyant = 520000 / (90000 x 0.847) = 6.82

Production 1 Casing

SFi Dry = 587000 / 150800 = 3.89

SFi Bouyant = 587000 / (150800 x 0.863) = 4.51

Production 2 Casing

SFi Dry = 338000 / 135082 = 2.50

SFi Bouyant = 338000 / (135082 x 0.863) = 2.90

ConocoPhillips, Peridot 8 Federal 1H

1. Geologic Formations

KB TVD of target	5600'	Pilot hole depth	NA
KB MD at TD:	13146'	Deepest expected fresh water:	820'

Basin

Formation	KB TVD (ft)	Elevation KB (ft) KB=17'	Water/Mineral Bearing/Target Zone	Hazards*
Rustler	820	3242	Fresh Water	
Salado	960	3102	Brackish Water	
Tansill	2040	2022	Salt	
Yates	2175	1887	Salt Water	
Seven Rivers	2480	1577	Oil/Gas	
Queen	3110	952	Oil/Gas	
Grayburg	3525	537	Oil/Gas	
San Andres	3850	212	Oil/Gas	
Glorieta	5375	-1308	Oil/Gas	
Paddock	5460	-1398	Target	
Land Pt / TD	5600	-1538	Target	

2. Casing Program

3 strings casing design										
Hole Size	Casing Interval		Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Pipe Tensile	SF Joint Tensile
	From	To								
17.5"	0	885	13.375"	54.5	J55	STC/BTC	2.89	6.98	17.7	10.7
12.25"	0	2250	9.625"	40	J55	LTC/BTC	2.20	3.38	7.00	5.78
8.75"	0	5200	7"	29	L80	LTC/BTC	2.88	3.35	4.48	3.89
8.75"	5200	13146	5.5"	17	L80	LTC/BTC	2.40	2.95	2.94	2.50
			BLM Minimum Safety Factor				1.125	1	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet

- Bring cement from 5-1-2" casing shoe to lap inside 9-5/8" casing shoe.
- XO from 7" to 5-1/2" in 8-3/4" OH for minimum of 0.422in clearance per Onshore Oil and Gas Order #2 III.B.
- Notify BLM if an Annulus Casing Packer and Stage Tool with 2-Stage Cement or Remediate with Bradenhead Squeeze will be necessary.

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

Must have table for contingency casing

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	YES
Does casing meet API specifications? If no, attach casing specification sheet.	YES
Is premium or uncommon casing planned? If yes attach casing specification sheet.	YES
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	YES
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	N/A
Is well located within Capitan Reef?	NO
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-P?	NO
If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	NO
If yes, are the first three strings cemented to surface?	
Is 2nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	NO
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	NO
If yes, are there three strings cemented to surface?	

3. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H₂0 gal/sk	Vol ft3	500# Comp. Strength (hours)	Slurry Description
Surf.	500	13.5	1.68	8.94	840	7	Lead: Class C + 4.0% Bentonite + 0.2% Anti-Foam + 2.0% CaCl2 +0.125lb/sk LCM + 0.1% Dispersant
	400	14.8	1.35	6.38	540	7	Tail: Class C + 0.2% Anti-Foam + 0.1% Lost Circ Control + 2 lbs/bbl CemNET (losses Control)
Inter.	450	11.5	2.29	10.72	1031	17	Lead: Class C + 10.0% Bentonite + 0.2% Anti-Foam + 2.0% Expanding + 0.15% Viscosifier + 1.3% Retarder.
	300	13.5	1.29	4.81	387	7	Tail: 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
Prod.	650	11.0	3.2	19.25	2080	17	Lead: 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
	1900	14.0	1.37	6.48	2603	7	Tail: Class C + 3lb/sk LCM + 1.5% Fluid Loss + 0.1% + 1% Sodium Metasilicate (dry) + 1.5% Fluid Loss Control

DV tool depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. If it cannot be set below the shoe, a CBL shall be run to verify cement coverage.

Lab reports with recipe and the 500 psi compressive strength time for the cement will be onsite for review.

3 strings casing cement design			
Casing String	TOC Lead	TOC Tail	% Excess
Surface	0'	585'	>100%
Intermediate	0'	1750'	>100%
Production	<1700'	5200'	>30%

Cement excess will be adjusted based on actual hole condition like losses or fluid caliper data if have.

4. Pressure Control Equipment

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type		✔	Tested to:
8-3/4"	13-5/8"	3M/5M	Annular		x	50% of working pressure
			Blind Ram			3,000 psi
			Pipe Ram			
			Double Ram		x	
			Other*			

*Specify if additional ram is utilized.
Note: A 13-5/8" BOPE will be utilize in the 8-3/4" hole section depending on availability and Rig Substructure Clearance.

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

Pipe rams will be operationally checked each 24 hour period. Blind rams will be operationally checked on each trip out of the hole. These checks will be noted on the daily tour sheets. Other accessories to the BOP equipment will include a Kelly cock and floor safety valve (inside BOP) and choke lines and choke manifold. See attached schematics.

X	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.
X	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. If yes, specs and hydrostatic test certification will be available in the company man's trailer and on the rig floor.

N	Are anchors required by manufacturer?

X	A multibowl wellhead is being used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. See attached schematic.

5. Mud Program

3 strings casing mud program						
Depth		**Type**	**Weight (ppg)**	**Viscosity**	**Water Loss**	**PH**
From	**To**					
0	Surf. shoe	FW Gel	8.5-9.0	28-40	N/C	N.C.
Surf. Shoe	Inter. shoe	Saturated Brine	10.0	28-32	N/C	9-10.5
Inter. shoe	TD	Cut-Brine	8.6-10.0	28-40	N/C	9-10.5

Sufficient mud materials to maintain mud properties and meet minimum lost circulation and weight increase requirements will be kept on location at all times.

What will be used to monitor the loss or gain of fluid?	PVT/Pason/Visual Monitoring

6. Logging and Testing Procedures

Logging, Coring and Testing.	
X	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.
	No Logs are planned based on well control or offset log information.
	Drill stem test? If yes, explain
	Coring? If yes, explain

Additional logs planned		Interval
	Resistivity	
	Density, GR, BHC	
	CBL	
X	Mud log	
	PEX	

7. Drilling Conditions

Condition	Specify what type and where?
BH Pressure at deepest TVD	2815 psi
Abnormal Temperature	No – 100°

- Mitigation measure for abnormal conditions - Loss of circulation is a possibility in the horizons below the Top of Grayburg. We expect that normal Loss of Circulation Material will be successful in healing any such loss of circulation events.

Gas detection equipment and pit level flow monitoring equipment will be on location. A flow paddle will be installed in the flow line to monitor relative amount of mud flowing in the non-pressurized return line. Mud probes will be installed in the individual tanks to monitor pit volumes of the drilling fluid with a pit volume totalizer. Gas detecting equipment and H2S monitor alarm will be installed in the mud return system and will be monitored. A mud gas separator will be installed and operable before drilling out from the Surface Casing. The gases shall be piped into the flare system. Drilling mud containing H2S shall be degassed in accordance with API RP-49, item 5.14. If Hydrogen Sulfide is encountered, measured values and formations will be provided to the BLM.	
X	H2S is present
X	H2S Plan attached

8. Other facets of operation

Is this a walking operation? If yes, describe. NO.
Will be pre-setting casing? If yes, describe. NO.

Attachments:

Attachment#1:   Directional Plan
Attachment#2:   Wellbore Casing & Cementing Schematic
Attachment#3:   Wellhead Schematic
Attachment #4:   BOP Schematics
Attachment #5:   Choke Schematic
Attachment #6:   Rig Layout
Attachment #7:   H2S Contingency Plan

2. Casing Program – Openhole Sliding Sleeves Completion Option

Hole Size	Casing Interval From	To	Csg. Size	Weight (lbs)	Grade	Conn.	SF Collapse	SF Burst	SF Pipe Tensile	SF Joint Tensile
17.5"	0	885	13.375"	54.5	J55	STC/BTC	2.89	6.98	17.7	10.7
12.25"	0	2250	9.625"	40	J55	LTC/BTC	2.20	3.38	7.00	5.78
8.75"	0	5200	7"	29	L80	LTC/BTC	2.88	3.35	4.48	3.89
8.75"-8.5"	5200	13146	5.5"	20	L80	LTC/BTC	3.37	3.51	2.93	3.30
			BLM Minimum Safety Factor				1.125	1	1.6 Dry 1.8 Wet	1.6 Dry 1.8 Wet

- *Cement 7" production string thru a stage tool below the XO joint and leave 5-1/2" casing string below the Glorieta formation uncemented with packers & sleeves from landing point to TD.*
- *Notify BLM if additional unplanned stages of Cement or Remediation with Bradenhead Squeeze becomes necessary.*

All casing strings will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.h

	Y or N
Is casing new? If used, attach certification as required in Onshore Order #1	YES
Does casing meet API specifications? If no, attach casing specification sheet.	YES
Is premium or uncommon casing planned? If yes attach casing specification sheet.	NO
Does the above casing design meet or exceed BLM's minimum standards? If not provide justification (loading assumptions, casing design criteria).	YES
Will the intermediate pipe be kept at a minimum 1/3 fluid filled to avoid approaching the collapse pressure rating of the casing?	N/A
Is well located within Capitan Reef?	NO
If yes, does production casing cement tie back a minimum of 50' above the Reef?	
Is well within the designated 4 string boundary.	
Is well located in SOPA but not in R-111-P?	NO
If yes, are the first 2 strings cemented to surface and 3rd string cement tied back 500' into previous casing?	
Is well located in R-111-P and SOPA?	NO
If yes, are the first three strings cemented to surface?	
Is 2nd string set 100' to 600' below the base of salt?	
Is well located in high Cave/Karst?	NO
If yes, are there two strings cemented to surface?	
(For 2 string wells) If yes, is there a contingency casing if lost circulation occurs?	
Is well located in critical Cave/Karst?	NO
If yes, are there three strings cemented to surface?	

3. Cementing Program – Openhole Sliding Sleeves Completion Option

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H₂0 gal/sk	Vol ft3	500# Comp. Strength (hours)	Slurry Description
Surf.	500	13.5	1.68	8.94	840	7	Lead: Class C + 4.0% Bentonite + 0.2% Anti-Foam + 2.0% CaCl2 +0.125lb/sk LCM + 0.1% Dispersant
	400	14.8	1.35	6.38	540	7	Tail: Class C + 0.2% Anti-Foam + 0.1% Lost Circ Control + 2 lbs/bbl CemNET (losses Control)
Inter.	450	11.5	2.29	10.72	1031	17	Lead: Class C + 10.0% Bentonite + 0.2% Anti-Foam + 2.0% Expanding + 0.15% Viscosifier + 1.3% Retarder.
	300	13.5	1.29	4.81	387	7	Tail: 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
Prod.	650	11.0	3.2	19.25	2080	17	Lead: 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

If additional unplanned stages of cementing are necessary, the contingency stage tool will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. Stage tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. If it cannot be set below the shoe, a CBL shall be run to verify cement coverage.

Lab reports with recipe and the 500 psi compressive strength time for the cement will be onsite for review.

3 strings casing cement design			
Casing String	TOC Lead	TOC Tail	% Excess
Surface	0'	585'	>100%
Intermediate	0'	1750'	>100%
Production	<1700'	N/A	>30%

Cement excess will be adjusted based on actual hole condition like losses or fluid caliper data if available.

Attachments:

Attachment#1: Wellbore Casing & Cementing Schematic

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	2730	1130	853000	514000	8.5
Intermediate 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	13146	5600	7946	20	9190	8830	466000	524000	9

Collapse Design (Safety) Factors – BLM Criteria

Collapse Design (Safety) Factor: SFc

$SFc = Pc / (MW \times .052 \times Ls)$

Where
- Pc is the rated pipe Collapse Pressure in pounds per square inch (psi)
- MW is mud weight in pounds per gallon (ppg)
- Ls is the length of the string in feet (ft)

The Minimum Acceptable Collapse Design (Safety) Factor SFc = 1.125

Surface Casing

SFc = 1130 / 391 = **2.89**

Intermediate 1 Casing

SFc = 2570 / 1170 = **2.20**

Production 1 Casing

SFc = 7020 / 2434 = **2.88**

Production 2 Casing

SFc = 8830 / 2621 = **3.37**

Burst Design (Safety) Factors – BLM Criteria

Burst Design (Safety) Factor: SFb

$SFb = Pi / BHP$

Where
- 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 (psi)

The Minimum Acceptable Burst Design (Safety) Factor SFb = 1.0

Surface Casing

SFb = 2730 / 391 = **6.98**

Intermediate 1 Casing

SFb = 3950 / 1170 = **3.38**

Production 1 Casing

SFb = 8160 / 2434 = **3.35**

Production 2 Casing

SFb = 9190 / 2621 = **3.51**

Pipe Strength Design (Safety) Factors – BLM Criteria

Pipe Strength Design (Safety) Factor: SFtp

$SFtp = Fp / Wt;$

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 = 853000 / 48232.5 = **17.7**

SFi Bouyant = 853000 / (48232.5 x 0.870) = **20.3**

Intermediate 1 Casing

SFi Dry = 630000 / 90000 = **7.00**

SFi Bouyant = 630000 / (90000 x 0.847) = **8.26**

Production 1 Casing

SFi Dry = 676000 / 150800 = **4.48**

SFi Bouyant = 676000 / (150800 x 0.863) = **5.20**

Production 2 Casing

SFi Dry = 466000 / 158920 = **2.93**

SFi Bouyant = 466000 / (158920 x 0.863) = **3.40**

Joint Strength Design (Safety) Factors – BLM Criteria

Joint Strength Design (Safety) Factor: SFtj

$SFtj = Fj / Wt;$

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 Casing

SFi Dry = 514000 / 48232.5 = **10.7**

SFi Bouyant = 514000 / (48232.5 x 0.870) = **12.2**

Intermediate 1 Casing

SFi Dry = 520000 / 90000 = **5.78**

SFi Bouyant = 520000 / (90000 x 0.847) = **6.82**

Production 1 Casing

SFi Dry = 587000 / 150800 = **3.89**

SFi Bouyant = 587000 / (150800 x 0.863) = **4.51**

Production 2 Casing

SFi Dry = 524000 / 158920 = **3.30**

SFi Bouyant = 524000 / (158920 x 0.863) = **3.82**

Gas Capture Plan
Peridot 8 Federal Wells

	1H	2H	3H	4H	5H	6H	7H	8H	11H	12H	13H	14H	15H	16H	17H	18H
Peridot 8 Federal Wells-Located in Sec. 8, T17S, R32E																
Well Name:	1H	2H	3H	4H	5H	6H	7H	8H	11H	12H	13H	14H	15H	16H	17H	18H
Well Location:	615' FSL	936' FSL	2080' FSL	2237' FSL	2634' FNL	1586' FNL	1065' FNL	775' FNL	755' FSL	1035' FSL	1240' FSL	2237' FSL	2634' FNL	1485' FNL	915' FNL	635' FNL
	2460' FEL	2501' FEL	2350 FWL	2440' FWL	1907' FWL	2635' FEL	2540' FWL	2543' FWL	2460' FEL	2600' FEL	2480' FWL	2580' FWL	2022' FWL	2538' FEL	2540' FWL	2542' FWL
Production Facility Name:	Peridot 8 Federal CF1 Tank Battery															
Production Facility Location:	NWNE, Section 8, T17S, R32E															
Anticipated Completion Date:	60-120 days after drilling completed; dependent upon completion crew availability															
Initial Production Volumes:																
Oil (bopd)	570	570	570	570	570	570	570	570	480	480	480	480	480	480	480	480
Gas (mcfd)	620	620	620	620	620	620	620	620	530	530	530	530	530	530	530	530
Water (bwpd)	2300	2300	2300	2300	2300	2300	2300	2300	1900	1900	1900	1900	1900	1900	1900	1900
Date of First Production:	<45 days following completion operations															
Expected Well Life Expectancy:	25 years	25 years	25 years	25 years	25 years	25 years	25 years	25 years	25 years	25 years	25 years	25 years	25 years	25 years	25 years	25 years

6.2"

7-1/16" 10M

30.8" to C/L

30.8" to C/L

23.7"

1-13/16" 10M

1-13/16" 10M

13-5/8" 5M

28.2" to C/L

28.2" to C/L

2-1/16" 5M

45.0"

2-1/16" 5M

20" Casing

13-3/8" Casing

9-5/8" Casing

7" Casing

2-7/8" Tubing

CACTUS WELLHEAD LLC	CONOCO PHILLIPS WEST TEXAS		
20" x 13-3/8" x 9-5/8" x 7" x 2-7/8" MBU-3T-CFL Wellhead Assembly With 13-5/8" 5M x 7-1/16" 10M CMT-DLBHPS Tubing Head & 7-1/16" 10M x 2-7/8" B5 Tubing Head Adapter	DRAWN	DLE	12JAN17
	APPRV		
	DRAWING NO.	ODE0001428	

▽AFMSS

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

SUPO Data Report
02/26/2018

APD ID: 10400008917

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: PERIDOT 8 FEDERAL

Well Type: OIL WELL

Submission Date: 01/06/2017

Well Number: 1H

Well Work Type: Drill

Highlighted data reflects the most recent changes

<u>Show Final Text</u>

Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

Peridot_8_Fed_1H_AccessRoadTopoB_08-01-2017.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_1H_AccessRoadv2_20180103143817.pdf

New road type: RESOURCE

Length: 5236   Feet   **Width (ft.):** 30

Max slope (%): 2   **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:

Access road engineering design? NO

Access road engineering design attachment:

Access surfacing type: OTHER

Access topsoil source: OFFSITE

Access surfacing type description: Caliche

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. Current plans include sources: 1) Maljamar, NM, Sec. 9, T17S, R32E; 2) Hwy 529, NM, Sec. 25, T17S, R31E; and 3) Olan Caswell Ranch, Sec. 3, T17S, R32E. These are current options. However, additional sources within area may be used depending on availability at time of construction. We intend to use different source(s) if necessary.
Onsite topsoil removal process:

Access other construction information: 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 resource road access to include future Peridot wells.
Access miscellaneous information: Length of road includes about 15' for facility access and approximately 382' for Frac Pond access. About 5056' of access road to be shared by other Peridot wells. The approximately 90' of road leading to Peridot 8 Fed 3H and about 88' of road to Peridot 8 Fed 5H well locations will not be constructed until the well location is built.
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 route 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_1H_Offset_Well_Map_07-06-2017.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: 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 of 400'x 250' are planned to allow for expansion as wells are drilled. A 15' access road is planned and depicted on plat. Preliminary plot plan is attached.
Production Facilities map:

Peridot 8 Fed CF1 Tank Battery_12-20-2016.pdf

Peridot 8 Fed 1H_Preliminary Plot Plan_01-05-2017.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 longitude:**

Source datum:

Water source permit type: PRIVATE CONTRACT,WATER WELL

Source land ownership: FEDERAL

Water source transport method: PIPELINE,TRUCKING

Source transportation land ownership: FEDERAL

Water source volume (barrels): 165000   **Source volume (acre-feet):** 21.26736

Source volume (gal): 6930000

Water source and transportation map:

Peridot 8 Fed 1H_Access Road Topo A_12-20-2016.pdf

Peridot_8_Fed_1H_WaterSourceMap_08-02-2017.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.
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 length (ft.):   **Casing top depth (ft.):**

Well Production type: **Completion Method:**

Water well additional information:

State appropriation permit:

Additional information attachment:

Section 6 - Construction Materials

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. Material to meet BLM requirements and standards. Current plans include sources: 1) Maljamar, NM, Sec. 9, T17S, R32E; 2) Hwy 529, NM, Sec. 25, T17S, R31E; and 3) Olan Caswell Ranch, Sec. 3, T17S, R32E. These are current options. However, additional sources within area may be used depending on availability at time of construction. We intend to use different source(s) if necessary. 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, drill 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:

Peridot 8 Fed 1H_Drill Waste Containment_01-04-2017.pdf

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?

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? YES

Description of cuttings location Cuttings will be held in a closed-loop system and trucked to an approved disposal facility.

Cuttings area length (ft.)   **Cuttings area width (ft.)**

Cuttings area depth (ft.)   **Cuttings area volume (cu. yd.)**

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_1H_FracPondPlat_08-17-2017.pdf

Comments: ConocoPhillips Company proposes to build a 600' x 600' frac pond to support our horizontal well completions in the area. It is to be located in the NENW of Section 8, T17S, R32E. Frac pond will contain fresh water. A 382' road will provide access and is depicted on plat. Plats are attached, indicating 8.52 acres to be used. Area will be reclaimed upon completion of unit development according to BLM guidelines at the time.

Section 9 - Well Site Layout

Well Site Layout Diagram:

Peridot_8_Fed_1H_Site_Plan_08-01-2017.pdf
Peridot_8_Fed_1H_LocationLayout_08-02-2017.pdf
Peridot_8_Fed_1H__ArchBoundary_08-02-2017.pdf
Comments:

Section 10 - Plans for Surface Reclamation

Type of disturbance: New Surface Disturbance   **Multiple Well Pad Name:** PERIDOT 8 FEDERAL

Multiple Well Pad Number: 1H

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 re-contoured 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.

Wellpad long term disturbance (acres): 1.59	**Wellpad short term disturbance (acres):** 1.84
Access road long term disturbance (acres): 3.61	**Access road short term disturbance (acres):** 0
Pipeline long term disturbance (acres): 1.1932966	**Pipeline short term disturbance (acres):** 0
Other long term disturbance (acres): 35.97	**Other short term disturbance (acres):** 1.72
Total long term disturbance: 42.363297	**Total short term disturbance:** 3.56

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 re-contouring 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 re-contoured to the extent feasible. Topsoil will be evenly re-spread and re-vegetated 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

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 1H_LocationPhotos_01-05-2017.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 source:**

Seed name:

Source name: **Source address:**

Source phone:

Seed cultivar:

Seed use location:

PLS pounds per acre: **Proposed seeding season:**

Seed Summary	
Seed Type	Pounds/Acre

Total pounds/Acre:

Seed reclamation attachment:

Operator Contact/Responsible Official Contact Info

First Name: Susan   **Last Name:** Maunder

Phone: (281)206-5281   **Email:** Susan.B.Maunder@conocophillips.com

Seedbed prep:

Seed BMP:

Seed method:

Existing invasive species? NO

Existing invasive species treatment description:

Existing invasive species treatment attachment:

Weed treatment plan description: Two Class B noxious weed species, African rue and Malta starthistle are of concern. ConocoPhillips Company will consult with BLM for acceptable weed control methods, if the need arises. Any weed control would follow USEPA and BLM requirements and standards.
Weed treatment plan attachment:

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 guidelines 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:

Section 11 - Surface Ownership

Disturbance type: OTHER

Describe: well pad, access road, flow lines, pipelines, power lines

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:

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? YES   Use APD as ROW? YES

ROW Type(s): 281001 ROW - ROADS,285003 ROW – POWER TRANS,288100 ROW – O&G Pipeline,288101 ROW – O&G Facility Sites,288103 ROW – Salt Water Disposal Pipeline/Facility,FLPMA (Powerline)

ROW Applications

SUPO Additional Information: For multi-well pad we request deferral of interim reclamation requirements until all wells noted on location have been drilled. Gas Sales Line ROW may be used by third-party gas processor, depending on agreements reached. Three key mitigation strategies are to be used for Peridot development; horizontal wells, interim reclamation and participation in conservation agreement. Development of these minerals could have been via vertical wells; approximately 12 wells. After re-evaluation of options, two key actions are planned horizontal wells and multi-well pads where possible. This minimizes surface use, while improving project economics and results in significant surface use reduction. Interim reclamation is a component of our surface use mitigation. COPC intends to maximize interim reclamation to the greatest extent feasible for each location drilled. Current interim reclamation plans are included in survey plat packages for individual wells. COPC is a participant in the Candidate Conservation Agreement. Among mitigation measures are observing timing stipulations for Lesser-Prairie Chickens, as indicated by BLM, at the beginning of each breeding season. Also, well locations have been moved, in consultation with BLM biologists to avoid habitat of interest.
Use a previously conducted onsite? YES

Previous Onsite information: Onsites conducted 6/28/16 and 10/18/16. Onsite for this well pad was completed 0/18/16. 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. Archaeological survey requirements have been met by block survey 2151, well pad survey 2262, and gas line and SWD line survey 2276. Well location is off-lease, so subsurface plat is also included. Please review this application with Peridot 8 Federal 11H, 3H, 13H, 5H, 15H, 7H and 17H well applications.

Other SUPO Attachment

Peridot 8 Fed 1H_OilFlowLine_01-06-2017.pdf

Peridot_8_Fed_1H_DevelopmentImage_08-01-2017.pdf

Peridot_8_Fed_1H_FracPondPlat_08-17-2017.pdf

Peridot_8_Fed_1H_Power_Line_Plat_08-17-2017.pdf

Peridot_8_Fed_Gas_Sales_Line_08-17-2017.pdf

Peridot_8_Fed_1H_Reclamation_Plat_20180103110441.pdf

Peridot_8_Fed_1H_SWD_Buried_Pipeline_20180103110622.pdf

Peridot_8_Fed_1H_SWD_FlowLineToElvis_20180103144050.pdf

Peridot_8_Fed_1H_SUPOviaAccess_20180108104941.pdf

Peridot_8_Fed_1H_Surf_SummaryComments_20180108104954.pdf

Peridot_8_Fed_1H_BuriedGasLinetoDCP_20180108105009.pdf

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?

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:

Injection well type: EXISTING

Injection well number: **Injection well name:**

Assigned injection well API number?   **Injection well API number:**

Injection well new surface disturbance (acres):

Minerals protection information:

Mineral protection attachment:

Underground Injection Control (UIC) Permit? YES

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: **PWD disturbance (acres):**

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: **PWD disturbance (acres):**

Other PWD discharge volume (bbl/day):

Other PWD type description:

Other PWD type attachment:

Have other regulatory requirements been met?

Other regulatory requirements attachment:

Section 3 - Unlined Pits

Would you like to utilize Unlined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: PWD disturbance (acres):

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: OFFLEASE

PWD surface owner: BLM   PWD disturbance (acres):

Injection PWD discharge volume (bbl/day):

Injection well mineral owner: FED

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: **PWD disturbance (acres):**

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:
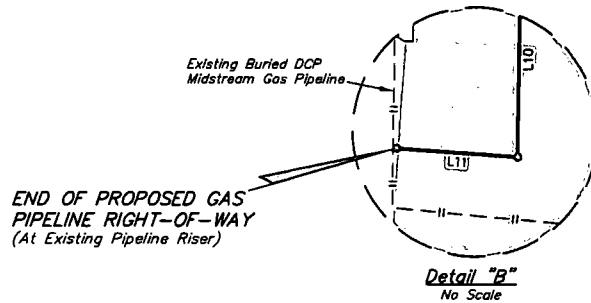
Lined pit bond amount:

Additional bond information attachment:

GAS PIPELINE RIGHT-OF-WAY DESCRIPTION ON BLM LANDS IN SEC. 9

A 30' WIDE PERMANENT RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE WITH A 10' WIDE TEMPORARY RIGHT-OF-WAY ON THE RIGHT SIDE OF SAID PERMANENT RIGHT-OF-WAY FOR A TOTAL WIDTH OF 40' DURING CONSTRUCTION.

BEGINNING AT A POINT ON THE WEST LINE OF THE NW 1/4 SW 1/4 OF SECTION 9, T17S, R32E, N.M.P.M., WHICH BEARS S00°08'37"E 17.99' FROM THE WEST 1/4 CORNER OF SAID SECTION 9, THENCE N84°13'50"E 29.38'; THENCE S89°56'13"E 301.54'; THENCE S01°44'41"E 788.81'; THENCE S89°30'59"E 162.10'; THENCE S01°09'10"W 178.94'; THENCE N85°57'24"W 17.06' TO A POINT IN THE NW 1/4 SW 1/4 OF SAID SECTION 9, WHICH BEARS S26°47'32"E 1101.08' FROM THE WEST 1/4 CORNER OF SAID SECTION 9. THE SIDE LINES OF SAID DESCRIBED RIGHT-OF-WAY BEING SHORTENED OR ELONGATED TO MEET THE GRANTOR'S PROPERTY LINES. BASIS OF BEARINGS IS A TRANSVERSE MERCATOR PROJECTION WITH A CENTRAL MERIDIAN OF W103°53'00". PERMANENT RIGHT-OF-WAY CONTAINS 1.018 ACRES MORE OR LESS. TEMPORARY RIGHT-OF-WAY CONTAINS 0.339 ACRES MORE OR LESS.

Existing Buried DCP
Midstream Gas Pipeline

L10

L11

END OF PROPOSED GAS
PIPELINE RIGHT-OF-WAY
(At Existing Pipeline Riser)

Detail "B"
No Scale

CERTIFICATE
THIS IS TO CERTIFY THAT THIS EASEMENT PLAT AND
THE ACTUAL SURVEY ON THE GROUND UPON WHICH IT
IS BASED WERE PERFORMED BY ME OR UNDER MY
DIRECT SUPERVISION: THAT I AM RESPONSIBLE FOR
THIS SURVEY; THAT THIS SURVEY MEETS THE
MINIMUM STANDARDS FOR SURVEYING IN NEW
MEXICO. AND THAT IT IS TRUE AND CORRECT TO THE
BEST OF MY KNOWLEDGE AND BELIEF.

23582
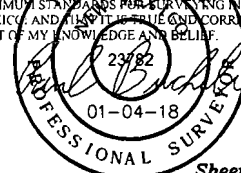
01-04-18

Sheet 2 of 2

| FILE: 62464-B2 | REV: 2 01-04-18 L.K. (PIPELINE RE-ROUTE) |

ConocoPhillips Company

PERIDOT GAS PIPELINE
SECTION 9, T17S, R32E, N.M.P.M.
LEA COUNTY, NEW MEXICO

UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

UINTAH
ENGINEERING & LAND SURVEYING

SURVEYED BY	J.A.V., R.D.	02-02-17	SCALE
DRAWN BY	B.D.H.	02-07-17	N/A

GAS PIPELINE R-O-W

| Serial Register Page ▾ | Go | ⤺ ⤻ ▦ | | ▤ ‹ ◇ › | ↻ | ⭃ ⭎ ⭏ ⮍ | ☒ |

DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
CASE RECORDATION
(MASS) Serial Register Page

Run Time:　04:01 PM
Page 1 of ?

Click here to see on map

Run Date:　07/24/2017

01 02-25-1920;041STAT0437;30USC226
Case Type 310771: O&G EXCHANGE LEASE - PD
Commodity 459:　OIL & GAS
Case Disposition: AUTHORIZED

Total Acres 1,606.800　Serial Number NMLC– 0 029406B

Serial Number: NMLC– 0 029406B

Name & Address			Int Rel	% Intere
CHASE FERGUSON GERENE D	PO BOX 693	ARTESIA NM 88211	OPERATING RIGHTS	0.000000000
CHASE OIL CORP	PO BOX 1767	ARTESIA NM 882111767	OPERATING RIGHTS	0.000000000
CHASE OIL CORP	PO BOX 1767	ARTESIA NM 882111767	LESSEE	0.000000000
CHASE RICHARD L	PO BOX 359	ARTESIA NM 882110359	OPERATING RIGHTS	0.000000000
CHASE ROBERT C	PO BOX 297	ARTESIA NM 882111297	OPERATING RIGHTS	0.000000000
COG OPERATING LLC	600 W ILLINOIS AVE	MIDLAND TX 797014882	OPERATING RIGHTS	0.000000000
CONOCOPHILLIPS CO	PO BOX 7500	BARTLESVILLE OK 740057500	OPERATING RIGHTS	0.000000000
CONOCOPHILLIPS CO	PO BOX 7500	BARTLESVILLE OK 740057500	LESSEE	0.000000000

Serial Number: NMLC– 0 029406B

Mer Twp Rng Sec	STyp	SNr Suff Subdivision	District/Field Office	County	Mgmt Agency
23 0170S 0320E 005	ALIQ	S2N2,SE;	CARLSBAD FIELD OFFICE	LEA	BUREAU OF LAND MGMT
23 0170S 0320E 005	LOTS	1-4;	CARLSBAD FIELD OFFICE	LEA	BUREAU OF LAND MGMT
23 0170S 0320E 006	ALIQ	S2NE,SENW,E2SW;	CARLSBAD FIELD OFFICE	LEA	BUREAU OF LAND MGMT
23 0170S 0320E 006	LOTS	1-7;	CARLSBAD FIELD OFFICE	LEA	BUREAU OF LAND MGMT
23 0170S 0320E 007	ALIQ	E2W2,SE;	CARLSBAD FIELD OFFICE	LEA	BUREAU OF LAND MGMT
23 0170S 0320E 007	LOTS	1-4;	CARLSBAD FIELD OFFICE	LEA	BUREAU OF LAND MGMT
23 0170S 0320E 008	ALIQ	SW;	CARLSBAD FIELD OFFICE	LEA	BUREAU OF LAND MGMT

Relinquished/Withdrawn Lands　　**Serial Number: NMLC– 0 029406B**

| 23 0170S 0320E 708 | FF | E2,ASGN; | CARLSBAD FIELD OFFICE | LEA | BUREAU OF LAND MGMT |

Serial Number: NMLC– 0 029406B

Act Date	Code	Action	Action Remar	Pending Offic
11/25/1933	124	APLN RECD		
06/08/1934	237	LEASE ISSUED		
06/08/1934	496	FUND CODE	05;145003	
06/08/1934	534	RLTY RATE-SLIDING-SCH D		
06/08/1934	668	EFFECTIVE DATE		
09/14/1945	570	CASE SEGREGATED BY ASGN	INTO NMNM064149;	
01/06/1953	650	HELD BY PROD - ACTUAL		
01/06/1953	658	MEMO OF 1ST PROD-ACTUAL		
10/24/1979	940	NAME CHANGE RECOGNIZED	CONTL OIL/CONOCO INC	
01/11/1983	140	ASGN FILED	(1)CONOCO/PETRO LEWIS	
01/11/1983	140	ASGN FILED	(1)CONOCO/PTNRSHP PRO	
01/11/1983	140	ASGN FILED	(2)CONOCO/PETRO LEWIS	
01/11/1983	140	ASGN FILED	(2)CONOCO PTNRSHP PRO	
02/11/1983	140	ASGN FILED	PETRO/PTNRSHP PROP	
01/25/1985	139	ASGN APPROVED	(1)EFF 02/01/83;	
01/25/1985	139	ASGN APPROVED	(2)EFF 02 01/83;	
01/25/1985	139	ASGN APPROVED	(3)EFF 02/01/83;	
01/25/1985	139	ASGN APPROVED	(4)EFF 02,01/83;	
01/25/1985	139	ASGN APPROVED	EFF 03/01/83;	
02/05/1985	963	CASE MICROFILMED/SCANNED	CNUM 100,429 GLC	
11/03/1987	974	AUTOMATED RECORD VERIF	JAM/DCE	
07/26/1988	140	ASGN FILED	PTNRSHP PROP/FMP OPER	
08/16/1988	139	ASGN APPROVED	EFF 08/01/88;	

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