Form 3160-3
(June 2015)

OCD – HOBBS
07/28/2020
RECEIVED

FORM APPROVED
OMB No. 1004-0137
Expires: January 31, 2018

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

APPLICATION FOR PERMIT TO DRILL OR REENTER

5. Lease Serial No.
NMLC0064149

6. If Indian, Allotee or Tribe Name

1a. Type of work: ☑ DRILL ☐ REENTER

1b. Type of Well: ☑ Oil Well ☐ Gas Well ☐ Other

1c. Type of Completion: ☐ Hydraulic Fracturing ☑ Single Zone ☐ Multiple Zone

7. If Unit or CA Agreement, Name and No.
NMNM138364

8. Lease Name and Well No.
PERIDOT 8 FEDERAL
16H [320830]

2. Name of Operator
CONOCOPHILLIPS COMPANY [217817]

9. API Well No. 30-025-47494

3a. Address
PO Box 2197 Houston TX 77252

3b. Phone No. *(include area code)*
(281)293-1748

10. Field and Pool, or Exploratory
MALJAMAR / YESO WEST [44500]

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface SWNE / 1485 FNL / 2538 FEL / LAT 32.852347 / LONG -103.788308
At proposed prod. zone SWNW / 1650 FNL / 330 FWL / LAT 32.851925 / LONG -103.813442

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 8 / T17S / R32E / NMP

14. Distance in miles and direction from nearest town or post office*
1.3 miles

12. County or Parish
LEA

13. State
NM

15. Distance from proposed* location to nearest property or lease line, ft. (Also to nearest drig. unit line, if any)
102 feet

16. No of acres in lease
320

17. Spacing Unit dedicated to this well
280.95

18. Distance from proposed location* to nearest well, drilling, completed, applied for, on this lease, ft.
140 feet

19. Proposed Depth
5986 feet / 13586 feet

20. BLM/BIA Bond No. in file
FED: ES0085

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
4054 feet

22. Approximate date work will start*
08/01/2020

23. Estimated duration
21 days

24. Attachments

The following, completed in accordance with the requirements of Onshore Oil and Gas Order No. 1, and the Hydraulic Fracturing rule per 43 CFR 3162.3-3 (as applicable)

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 requested by the BLM.

25. Signature
(Electronic Submission)

Name *(Printed/Typed)*
Susan Maunder / Ph: (281)206-5281

Date
12/08/2018

Title
Senior Coordinator, Regulatory MCBU

Approved by *(Signature)*
(Electronic Submission)

Name *(Printed/Typed)*
Cody Layton / Ph: (575)234-5959

Date
06/30/2020

Title
Assistant Field Manager Lands & Minerals

Office
CARLSBAD

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.

GCP Rec 07/28/2020

KZ
08/07/2020

SL

APPROVED WITH CONDITIONS

Approval Date: 06/30/2020

(Continued on page 2)

*(Instructions on page 2)

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 I: 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 wen, 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 directionany 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.

ITEM 24: If the proposal will involve hydraulic fracturing operations, you must comply with 43 CFR 3162.3-3, including providing information about the protection of usable water. Operators should provide the best available information about all formations containing water and their depths. This information could include data and interpretation of resistivity logs run on nearby wells. Information may also be obtained from state or tribal regulatory agencies and from local BLM offices.

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 wen 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 win 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 conects this information to anow 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 Conection Clearance Officer (WO-630), 1849 C Street, N.W., Mail Stop 401 LS, Washington, D.C. 20240.

(Continued on page 3)

Additional Operator Remarks

Location of Well

1. SHL: SWNE / 1485 FNL / 2538 FEL / TWSP: 17S / RANGE: 32E / SECTION: 8 / LAT: 32.852347 / LONG: -103.788308 (TVD: 0 feet, MD: 0 feet)
   PPP: SENW / 1650 FNL / 2640 FWL / TWSP: 17S / RANGE: 32E / SECTION: 7 / LAT: 32.851925 / LONG: -103.805837 (TVD: 6026 feet, MD: 11250 feet)
   PPP: SENW / 1650 FNL / 2640 FEL / TWSP: 17S / RANGE: 32E / SECTION: 8 / LAT: 32.851984 / LONG: -103.78864 (TVD: 5863 feet, MD: 5887 feet)
   PPP: SWNE / 1650 FNL / 2620 FEL / TWSP: 17S / RANGE: 32E / SECTION: 8 / LAT: 32.852055 / LONG: -103.788575 (TVD: 5832 feet, MD: 5850 feet)
   BHL: SWNW / 1650 FNL / 330 FWL / TWSP: 17S / RANGE: 32E / SECTION: 7 / LAT: 32.851925 / LONG: -103.813442 (TVD: 5986 feet, MD: 13586 feet)

BLM Point of Contact

Name: Candy Vigil
Title: LIE
Phone: 5752345982
Email: cvigil@blm.gov

Review and Appeal Rights

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

AFMSS

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

Operator Certification Data Report

06/30/2020

Operator Certification

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

NAME: Susan Maunder **Signed on:** 12/06/2018

Title: Senior Coordinator, Regulatory MCBU

Street Address: PO Box 2197, Office SP2-12th Floor

City: Houston **State:** TX **Zip:** 77252

Phone: (281)206-5281

Email address: Susan.B.Maunder@conocophillips.com

Field Representative

Representative Name:

Street Address:

City: **State:** **Zip:**

Phone:

Email address:

APD ID: 10400032588 **Submission Date:** 12/08/2018

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: PERIDOT 8 FEDERAL **Well Number:** 16H

Well Type: OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - General

APD ID: 10400032588 **Tie to previous NOS?** N **Submission Date:** 12/08/2018

BLM Office: CARLSBAD **User:** Susan Maunder **Title:** Senior Coordinator, Regulatory MCBU

Federal/Indian APD: FED **Is the first lease penetrated for production Federal or Indian?** FED

Lease number: NMLC0064149 **Lease Acres:** 320

Surface access agreement in place? **Allotted?** **Reservation:**

Agreement in place? YES **Federal or Indian agreement:** FEDERAL

Agreement number: NMNM138364

Agreement name:

Keep application confidential? NO

Permitting Agent? NO **APD Operator:** CONOCOPHILLIPS COMPANY

Operator letter of designation: Peridot_8_Fed_16H_JOA_Certif_Ltr_20180730143412.pdf

Operator Info

Operator Organization Name: CONOCOPHILLIPS COMPANY

Operator Address: PO Box 2197 **Zip:** 77252

Operator PO Box:

Operator City: Houston **State:** TX

Operator Phone: (281)293-1748

Operator Internet Address:

Section 2 - Well Information

Well in Master Development Plan? NO **Master Development Plan name:**

Well in Master SUPO? NO **Master SUPO name:**

Well in Master Drilling Plan? NO **Master Drilling Plan name:**

Well Name: PERIDOT 8 FEDERAL **Well Number:** 16H **Well API Number:**

Field/Pool or Exploratory? Field and Pool **Field Name:** MALJAMAR **Pool Name:** YESO WEST

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

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: PERIDOT 8 FEDERAL **Well Number:** 16H

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

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:** PERIDOT 8 FED **Number:** 6H

Well Class: HORIZONTAL **Number of Legs:** 1

Well Work Type: Drill

Well Type: OIL WELL

Describe Well Type:

Well sub-Type: INFILL

Describe sub-type:

Distance to town: 1.3 Miles **Distance to nearest well:** 140 FT **Distance to lease line:** 102 FT

Reservoir well spacing assigned acres Measurement: 280.95 Acres

Well plat: Peridot_8_Fed_16H_C102_20180730144618.pdf

Peridot_8_Fed_16H_Leases_w_wellsMap_20180730144637.pdf

Well work start Date: 08/01/2020 **Duration:** 21 DAYS

Section 3 - Well Location Table

Survey Type: RECTANGULAR

Describe Survey Type:

Datum: NAD83 **Vertical Datum:** NAVD88

Survey number: **Reference Datum:**

Wellbore	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	Will this well produce from this lease?
SHL Leg #1	1485	FNL	2538	FEL	17S	32E	8	Aliquot SWNE	32.852347	-103.788308	LEA	NEW MEXICO	NEW MEXICO	F	NMLC0064149	4054	0	0	
KOP Leg #1	1650	FNL	2538	FEL	17S	32E	8	Aliquot SWNE	32.851893	-103.788312	LEA	NEW MEXICO	NEW MEXICO	F	NMLC0064149	-1493	5550	5547	

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: PERIDOT 8 FEDERAL **Well Number:** 16H

Wellbore	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	Will this well produce from this lease?
PPP Leg #1-1	1650	FNL	2620	FEL	17S	32E	8	Aliquot SWNE	32.852055	-103.788575	LEA	NEW MEXICO	NEW MEXICO	F	NMLC0064149	-1778	5850	5832	
PPP Leg #1-2	1650	FNL	2640	FEL	17S	32E	8	Aliquot SENW	32.851984	-103.78864	LEA	NEW MEXICO	NEW MEXICO	F	NMLC0058775	-1809	5887	5863	
PPP Leg #1-3	1650	FNL	2640	FWL	17S	32E	7	Aliquot SENW	32.851925	-103.805837	LEA	NEW MEXICO	NEW MEXICO	F	NMLC0029406B	-1972	11250	6026	
EXIT Leg #1	1650	FNL	2640	FEL	17S	32E	7	Aliquot SWNE	32.851925	-103.805837	LEA	NEW MEXICO	NEW MEXICO	F	NMLC0058775	-1972	11250	6026	
BHL Leg #1	1650	FNL	330	FWL	17S	32E	7	Aliquot SWNW	32.851925	-103.813442	LEA	NEW MEXICO	NEW MEXICO	F	NMLC0029406B	-1932	13586	5986	

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

July 22, 2018

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 16H
Section 8, T17S, R32E
Lease Numbers – NMLC 064149

Dear Sir or Madam,

ConocoPhillips Company has negotiated a Joint Operating Agreement with COG Operating LLC which covers approximately 480 acres in Section 8, Township 17 South, Range 32 East. The agreement, along with other terms, provides access to surface, operated by the other party. This mutual access will allow more oil and gas resource recovery by maximizing horizontal wellbore, formation contact.

Please accept this letter as our certification our two companies are, in agreement of operating rights within the Peridot 8 Federal area. In regard to Peridot development, COP respectfully requests BLM to process the referenced APD to afford the maintenance of our leases 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
Senior Coordinator, Regulatory
ConocoPhillips Company

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720
District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to appropriate District Office

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

[1] API Number	[2] Pool Code	[3] Pool Name
	44500	Maljamar; Yeso West

[4] Property Code	[5] Property Name	[6] Well Number
	PERIDOT 8 FEDERAL	16H

[7] OGRID No.	[8] Operator Name	[9] Elevation
217817	ConocoPhillips Company	4054.4'

[10] Surface Location

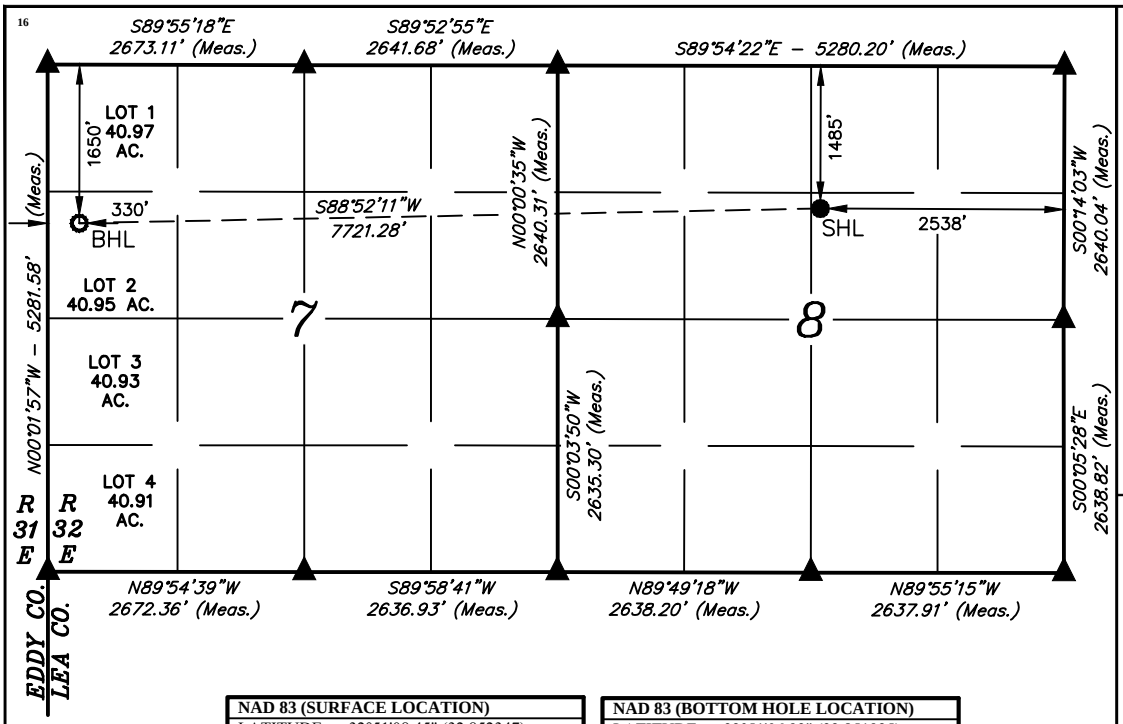
UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
G	8	17S	32E		1485	NORTH	2538	EAST	LEA

[11] Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
LOT 2	7	17S	32E		1650	NORTH	330	WEST	LEA

[12] Dedicated Acres	[13] Joint or Infill	[14] Consolidation Code	[15] Order No.
280.95			

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.



NAD 83 (SURFACE LOCATION)
LATITUDE = 32°51'08.45" (32.852347)
LONGITUDE = 103°47'17.91" (103.788308)
NAD 27 (SURFACE LOCATION)
LATITUDE = 32°51'08.02" (32.852228)
LONGITUDE = 103°47'16.09" (103.787803)
STATE PLANE NAD 83 (N.M. EAST)
N: 674248.83 E: 708707.97
STATE PLANE NAD 27 (N.M. EAST)
N: 674184.43 E: 667529.67

NAD 83 (BOTTOM HOLE LOCATION)
LATITUDE = 32°51'06.93" (32.851925)
LONGITUDE = 103°48'48.39" (103.813442)
NAD 27 (BOTTOM HOLE LOCATION)
LATITUDE = 32°51'06.50" (32.851806)
LONGITUDE = 103°48'46.56" (103.812933)
STATE PLANE NAD 83 (N.M. EAST)
N: 674056.59 E: 700990.98
STATE PLANE NAD 27 (N.M. EAST)
N: 673992.29 E: 659812.60

● = SURFACE HOLE LOCATION
○ = BOTTOM HOLE LOCATION
▲ = SECTION CORNER LOCATED

NOTE:
- Distances referenced on plat to section lines are perpendicular.
- Basis of Bearing is a Transverse Mercator Projection with a Central Meridian of W103.786335

2000' 1000' 0' 2000'
SCALE

DRAWN BY: S.S. 07-13-17

[17] OPERATOR CERTIFICATION

I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Susan B Maunder 1/23/18
Signature Date

Susan B. Maunder
Printed Name

Susan.B.Maunder@conocophillips.com
E-mail Address

[18] SURVEYOR CERTIFICATION

I hereby certify that the well location shown on this plat was plotted from field notes of actual surveys made by me or under my supervision, and that the same is true and correct to the best of my belief.

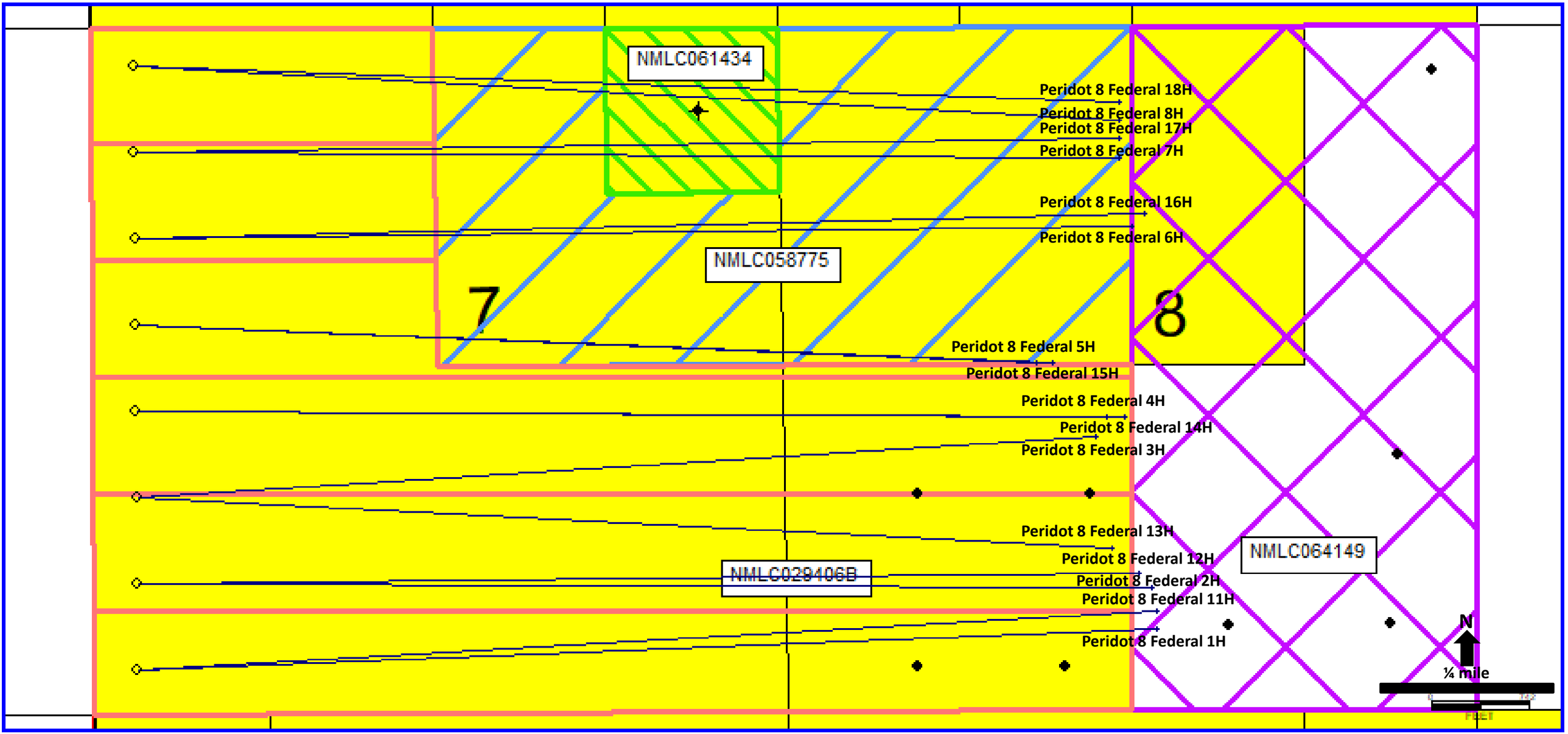
June 24, 2017
Date of Survey

Signature and Seal of Professional Surveyor:

PAUL BUCHELE
NEW MEXICO
23782
PROFESSIONAL SURVEYOR
07-14-17

Certificate Number:

Peridot Section 7 and 8 Lease Map



APD ID: 10400032588 **Submission Date:** 12/08/2018

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: PERIDOT 8 FEDERAL **Well Number:** 16H

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
274582	RUSTLER	3216	855	855	ANHYDRITE, DOLOMITE	NONE	N
274583	SALADO	2226	990	990	ANHYDRITE, SALT	NONE	N
274584	TANSILL	1141	2075	2075	ANHYDRITE, DOLOMITE	NONE	N
274585	YATES	1001	2215	2215	ANHYDRITE, DOLOMITE	NATURAL GAS, OIL	N
274603	SEVEN RIVERS	696	2520	2520	ANHYDRITE, DOLOMITE, SANDSTONE	NATURAL GAS, OIL	N
274604	QUEEN	76	3140	3142	ANHYDRITE, DOLOMITE, SANDSTONE	NATURAL GAS, OIL	N
274605	GRAYBURG	-359	3575	3577	DOLOMITE, SANDSTONE	NATURAL GAS, OIL	N
274606	SAN ANDRES	-659	3875	3877	ANHYDRITE, DOLOMITE, SANDSTONE	NATURAL GAS, OIL	N
274607	GLORIETA	-2169	5385	5388	DOLOMITE, SILTSTONE	NATURAL GAS, OIL	N
274608	PADDOCK	-2259	5475	5478	ANHYDRITE, DOLOMITE, SILTSTONE	NATURAL GAS, OIL	N
274625	BLINEBRY	-2593	5809	5823	DOLOMITE, SILTSTONE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M **Rating Depth:** 6110

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.
Testing Procedure: BOP/BOPE tested by independent company to 250 psi low; high of 50% working psi, and as required by Onshore Order 2. See also attached "Drill Plan".
Choke Diagram Attachment:

Peridot_8_Fed_16H_3M_Choke_Manifold__1__20180803143459.pdf

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: PERIDOT 8 FEDERAL **Well Number:** 16H

Peridot_8_Fed_16H_CoflexHoseVariance_20200214130826.pdf

BOP Diagram Attachment:

Peridot_8_Fed_16H_13in_5M_BOPE_Diagram_20180803143514.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	4054		885	J-55	54.5	ST&C	2.89	6.98	DRY	10.7	DRY	17.7
2	INTERMEDIATE	12.25	9.625	NEW	API	N	0	2250	0	2250			2250	J-55	40	LT&C	2.2	3.38	DRY	5.78	DRY	7
3	PRODUCTION	8.75	7.0	NEW	API	Y	0	5200	0	5200			5200	L-80	29	LT&C	2.88	3.35	DRY	3.89	DRY	4.48
4	PRODUCTION	8.75	5.5	NEW	API	Y	5200	13586	5200	13586			8386	L-80	20	LT&C	3.09	3.21	DRY	3.12	DRY	2.78

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Peridot_8_Fed_16H_CsgWorksheetCased_20180803144647.pdf

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: PERIDOT 8 FEDERAL **Well Number:** 16H

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Peridot_8_Fed_16H_CsgWorksheetCased_20180803145146.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Peridot_8_Fed_16H_CsgWorksheetCased_20181206142033.pdf

Casing Design Assumptions and Worksheet(s):

Peridot_8_Fed_16H_CsgWorksheetCased_20181206142117.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Peridot_8_Fed_16H_CsgWorksheetCased_20181206142226.pdf

Casing Design Assumptions and Worksheet(s):

Peridot_8_Fed_16H_CsgWorksheetCased_20181206142141.pdf

Section 4 - Cement

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: PERIDOT 8 FEDERAL **Well Number:** 16H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	585	500	1.68	13.5	840	50	Class C	4.0% Bentonite + 0.2% Anti-Foam + 2.0% CaCl2 +0.125lb/sk LCM + 0.1% Dispersant
SURFACE	Tail		585	885	400	1.35	14.8	540	50	Class C	0.2% Anti-Foam + 0.1% Lost Circ Control + 2 lbs/bbl CemNET (losses Control)
INTERMEDIATE	Lead		0	1750	450	2.29	11.5	1031	50	Class C	10.0% Bentonite + 0.2% Anti-Foam + 2.0% Expanding + 0.15% Viscosifier + 1.3% Retarder.
INTERMEDIATE	Tail		1750	2250	300	1.29	13.5	387	50	Class C	1% Extender + 3 lb/sk Extender + 0.2% Anti-Foam + 0.1% Dispersant + 13 lb/sk LCM + 0.5% Fluid Loss + 0.7% Retarder
PRODUCTION	Lead		1700	5200	650	3.2	11	2080	15	Class C	6% Extender + 10% Gas Migration Control + 2% Sodium Metasilicate (dry) + 1% Cement Bonding Agent + 3% Aluminum Silicate + 0.125 lb/sx Cello Flake + 3 lb/sx LCM-1
PRODUCTION	Lead		5200	13586	1900	1.37	14	2603	15	Class C	3lb/sk LCM + 1.5% Fluid Loss + 0.1% + 1% Sodium Metasilicate (dry) + 1.5% Fluid Loss Control

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: PERIDOT 8 FEDERAL **Well Number:** 16H

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 discussion.
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 discussion.

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							
885	2250	SALT SATURATED	10	10							
2250	6110	OTHER : Cut Brine	8.6	10							

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

CNL,DS,GR,MUDLOG

Coring operation description for the well:

No coring operation is planned at this time.

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: PERIDOT 8 FEDERAL **Well Number:** 16H

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 2815 **Anticipated Surface Pressure:** 1489.28

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_16H_H2S_CPlan_20181206191553.pdf

Peridot_8_Fed_16H_TypicalRigLayout_20181206191618.pdf

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Peridot_8_Fed_16H_DirectionalPlan_20181206191713.pdf

Peridot_8_Fed_16H_WellboreSchematicCH_20181206191753.pdf

Other proposed operations facets description:

Option to upgrade casing connection to BTC is requested, in addition to the ability to upgrade our BOP equipment, depending on availability. We request approval of option to run open-hole sliding sleeve in lateral section (option attachment is included). We request variance to use multi-bowl wellhead. See attached "Drill Plan" for discussion. Geologist confirmed expected top of Rustler at ~855', so our casing point of 880-885' meets the requirement. It will be adjusted based on actual formation top. Intermediate casing setting depth may be adjusted based on formation tops encountered. The depth of 2250' was requested by BLM for planning purposes on prior Peridot 8 Federal permits.

Other proposed operations facets attachment:

Peridot_8_Fed_16H_GasCapturePlan_20181206192123.pdf

Peridot_8_Fed_16H_Drill_Waste_Containment_20181206192147.pdf

Peridot_8_Fed_16H_WellboreSchematicOHS_20181206192212.pdf

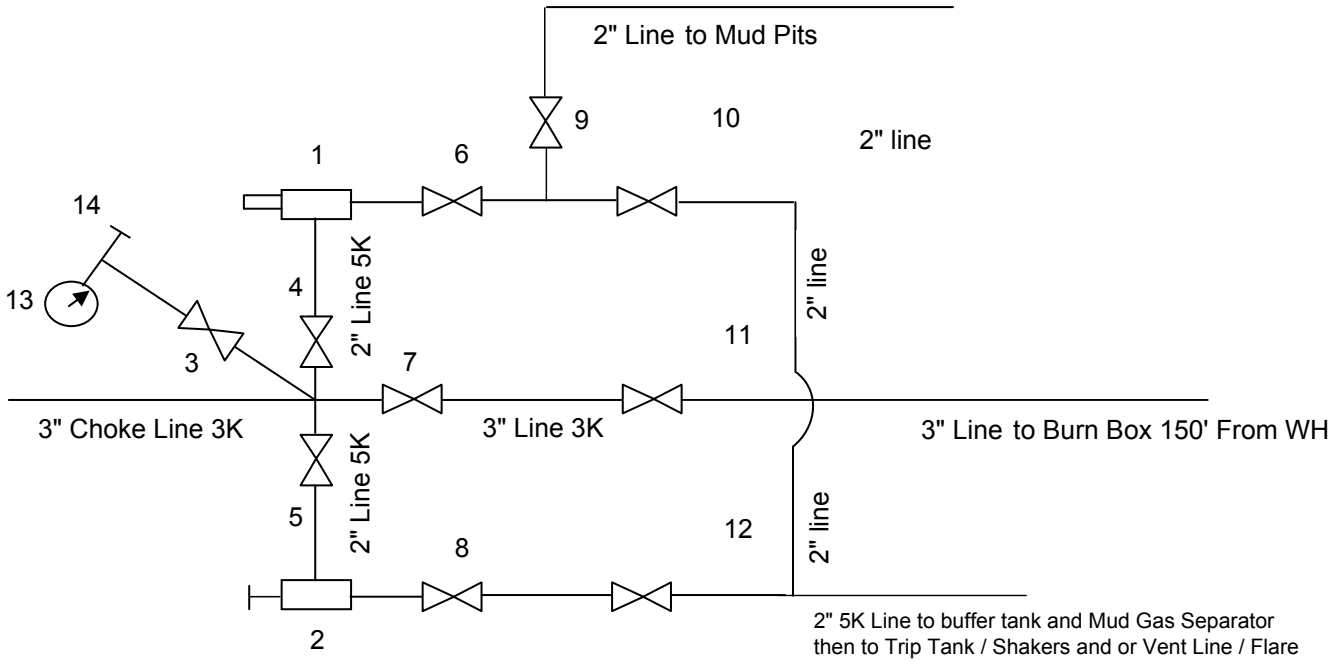
Peridot_8_Fed_16H_DrillPlan_wOHS_Opt_20181206192315.pdf

Other Variance attachment:

Peridot_8_Fed_16H_Generic_Wellhead_5M_20181206192507.pdf

CHOKE MANIFOLD ARRANGEMENT - 3M Choke

per Onshore Oil and Gas Order No. 2 utilizing 3M/5M Equipment



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.

ContiTech

QUALITY CONTROL	No.: QC-DB- 298 / 2017
	Page : 1 / 119
Hose No.:	Revision : 0
73979, 73980, 73981, 73982, 73983,	Date: 13. October 2017.
73984, 73985, 73986, 73987, 73988	Prepared by :
	Appr. by:

CHOKE AND KILL HOSES

id.: 3" 69 MPa x 13,72 m (45 ft)

DATA BOOK

Purchaser: Nabors Drilling Technologies USA Inc.

Purchaser Order No.: 15020206

ContiTech Rubber Order No.: 987778

ContiTech Oil & Marine Corp. Order No.: 4500984922 CO987640

NOT DESIGNED FOR WELL TESTING

CONTENT

ContiTech Rubber Industrial Kft. Quality Control Dept. (1)

QMS REGISTERED

Certificate of Registration

APIQR® REGISTRATION NUMBER

0760

This certifies that the quality management system of

CONTITECH RUBBER INDUSTRIAL LTD.

Budapesti Ut 10

Szeged

Hungary

has been assessed by the American Petroleum Institute Quality Registrar (APIQR®) and found it to be in conformance with the following standard:

ISO 9001:2008

The scope of this registration and the approved quality management system applies to the

Design and Manufacture of High Pressure Hoses

APIQR® approves the organization's justification for excluding:

No Exclusions Identified as Applicable

Effective Date: OCTOBER 15, 2016
Expiration Date: SEPTEMBER 15, 2018
Registered Since: OCTOBER 15, 2007

Vice President, API Global Industry Services

Accredited by Member of the International Accreditation Forum Multilateral Recognition Arrangement for Quality Management Systems

ANAB ACCREDITED

IAF

This certificate is valid for the period specified herein. The registered organization must continually meet all requirements of APIQR's Registration Program and the requirements of the Registration Agreement. Registration is maintained and regularly monitored through annual full system audits. Further clarifications regarding the scope of this certificate and the applicability of ISO 9001 standard requirements may be obtained by consulting the registered organization. This certificate has been issued from APIQR offices located at 1220 L Street, N.W., Washington, D.C. 20005-4070, U.S.A., it is the property of APIQR, and must be returned upon request. To verify the authenticity of this certificate, go to www.api.org/compositelist.

QUALITY REGISTRAR

2015-049 | 01.16

Certificate of Authority to use the Official API Monogram

License Number: 16C-0004

ORIGINAL

The American Petroleum Institute hereby grants to

CONTITECH RUBBER INDUSTRIAL LTD.
Budapesti Ut 10
Szeged
Hungary

the right to use the Official API Monogram® on manufactured products under the conditions in the official publications of the American Petroleum Institute entitled API Spec Q1® and **API-16C** and in accordance with the provisions of the License Agreement.

In all cases where the Official API Monogram is applied, the API Monogram shall be used in conjunction with this certificate number: **16C-0004**

The American Petroleum Institute reserves the right to revoke this authorization to use the Official API Monogram for any reason satisfactory to the Board of Directors of the American Petroleum Institute.

The scope of this license includes the following: Flexible Choke and Kill Lines atFSL 0, FSL 1, FSL 2, FSL 3

American Petroleum Institute

AMERICAN PETROLEUM INSTITUTE CORPORATE SEAL INCORPORATED 1919

2015-313

QMS Exclusions: No Exclusions Identified as Applicable

Effective Date: JULY 26, 2016
Expiration Date: OCTOBER 15, 2019

To verify the authenticity of this license, go to www.api.org/compositelist.

Vice President, API Global Industry Services

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE

CERT. N°: 680

PURCHASER:	ContiTech Oil & Marine Corp.				P.O. N°:	4500984922	
CONTITECH RUBBER order N°:	987778	HOSE TYPE:	3"	ID	Choke and Kill Hose		
HOSE SERIAL N°:	73979	NOMINAL / ACTUAL LENGTH:			13,72 m /13,78 m		
W.P. 69,0 MPa	10000 psi	T.P. 103,5 MPa	15000 psi		Duration: 60 min.		

Pressure test with water at ambient temperature

See attachment (1 page)

COUPLINGS Type	Serial N°	Quality	Heat N°
3" coupling with	8079 8082	AISI 4130	A0939Y
4 1/16" 10K API Swivel Flange end		AISI 4130	85913
Hub		AISI 4130	A0939Y

Not Designed For Well Testing

API Spec 16 C 2nd Edition– FSL2

TAG NO.: 66-1484

Temperature rate: "B"

All metal parts are flawless

WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER INSPECTED AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.

STATEMENT OF CONFORMITY: We hereby certify that the above items/equipment supplied by us are in conformity with the terms, conditions and specifications of the above Purchaser Order and that these items/equipment were fabricated inspected and tested in accordance with the referenced standards, codes and specifications and meet the relevant acceptance criteria and design requirements.

COUNTRY OF ORIGIN HUNGARY/EU

Date:	Inspector	Quality Control
03. October 2017.		ContiTech Rubber Industrial Kft. Quality Control Dept. (1)

ATTACHMENT OF QUALITY CONTROL INSPECTION AND TEST CERTIFICATE No: 680, 683, 684

File Name	: 020584_73979-82-83.GEV,...,020594_73979-82-83.GEV
File Message	: 73979,73982,73983
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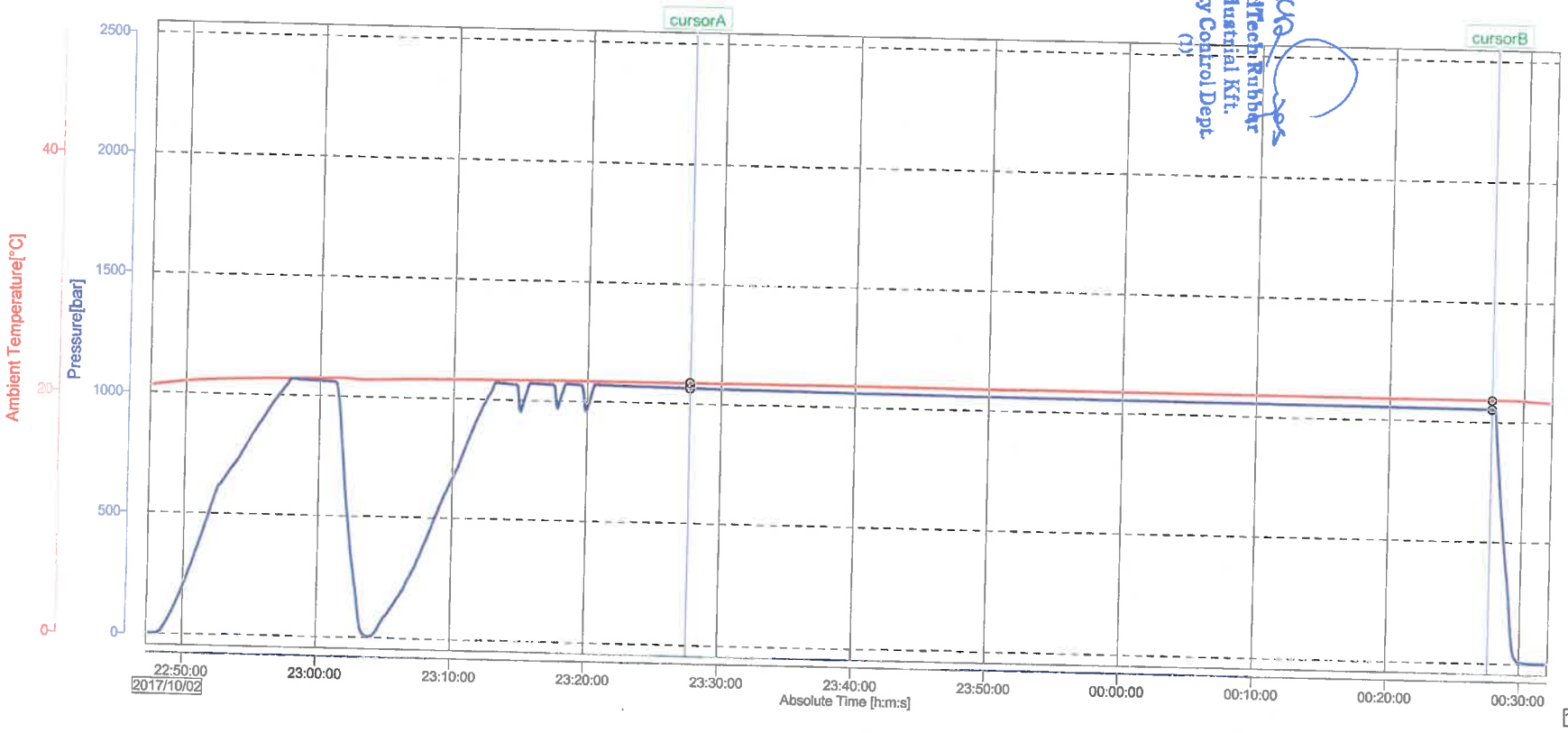
Serial No.	: S5P606399
Data Count	: 1258
Sampling Int.	: 5.000 sec
Start Time	: 2017/10/02 22:47:20.000
Stop Time	: 2017/10/03 00:32:05.000
Print Group	: Press-Temp
Print Range	: 2017/10/02 22:47:20.000 - 2017/10/03 00:32:05.000
Comment	: 142056632

	Cursor A	Cursor B	Difference
Data No.	484	1204	720
Absolute Time	2017/10/02 23:27:40.000	2017/10/03 00:27:40.000	01:00:00.000
Tag Comment	Value A	Value B	Value B-A
Pressure[bar]	1066.07	1052.38	-13.69
Ambient Temperature[°C]	21.73	21.80	0.07



ContiTech Rubber
Industrial Kft.
Quality Control Dept.

CONTITECH RUBBER
Industrial Kft.

No: QC-DB- 298 / 2017

Page: 6 / 119

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE					CERT. N°: 681
PURCHASER: ContiTech Oil & Marine Corp.					P.O. N°: 4500984922
CONTITECH RUBBER order N°: 987778		HOSE TYPE: 3" ID		Choke and Kill Hose	
HOSE SERIAL N°: 73980		NOMINAL / ACTUAL LENGTH:		13,72 m / 13,72 m	
W.P. 69,0 MPa 10000 psi		T.P. 103,5 MPa 15000 psi		Duration: 60 min.	

Pressure test with water at ambient temperature

See attachment (1 page)

COUPLINGS Type	Serial N°		Quality	Heat N°
3" coupling with	8080	8081	AISI 4130	A0939Y
4 1/16" 10K API Swivel Flange end			AISI 4130	85913
Hub			AISI 4130	A0939Y

Not Designed For Well Testing

API Spec 16 C 2nd Edition– FSL2

TAG NO.: 66-1485

Temperature rate: "B"

All metal parts are flawless

WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER INSPECTED AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.

STATEMENT OF CONFORMITY: We hereby certify that the above items/equipment supplied by us are in conformity with the terms, conditions and specifications of the above Purchaser Order and that these items/equipment were fabricated inspected and tested in accordance with the referenced standards, codes and specifications and meet the relevant acceptance criteria and design requirements.

COUNTRY OF ORIGIN HUNGARY/EU

Date:	Inspector	Quality Control
03. October 2017.		ContiTech Rubber Industrial Kft. Quality Control Dept. (1)

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE

CERT. N°: 682

PURCHASER: ContiTech Oil & Marine Corp.

P.O. N°: 4500984922

CONTITECH RUBBER order N°: 987778	HOSE TYPE: 3" ID	Choke and Kill Hose
HOSE SERIAL N°: 73981	NOMINAL / ACTUAL LENGTH:	13,72 m / 13,80 m
W.P. 69,0 MPa 10000 psi	T.P. 103,5 MPa 15000 psi	Duration: 60 min.

Pressure test with water at ambient temperature

See attachment (1 page)

COUPLINGS Type	Serial N°	Quality	Heat N°
3" coupling with	8077 8083	AISI 4130	A0939Y
4 1/16" 10K API Swivel Flange end		AISI 4130	037184 85913
Hub		AISI 4130	A0939Y

Not Designed For Well Testing

API Spec 16 C 2nd Edition– FSL2

TAG NO.: 66-1486

Temperature rate: "B"

All metal parts are flawless

WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER INSPECTED AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.

STATEMENT OF CONFORMITY: We hereby certify that the above items/equipment supplied by us are in conformity with the terms, conditions and specifications of the above Purchaser Order and that these items/equipment were fabricated inspected and tested in accordance with the referenced standards, codes and specifications and meet the relevant acceptance criteria and design requirements.

COUNTRY OF ORIGIN HUNGARY/EU

Date:	Inspector	Quality Control
03. October 2017.		ContiTech Rubber Industrial Kft. Quality Control Dept.

ATTACHMENT OF QUALITY CONTROL INSPECTION AND TEST CERTIFICATE No: 681, 682

File Name	: 020572_73980,73981.GEV,...,020583_73980,73981.GEV
File Message	: 73980,73981
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Stop Time	: 2017/10/02 20:26:35.000
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Comment	: 142056635

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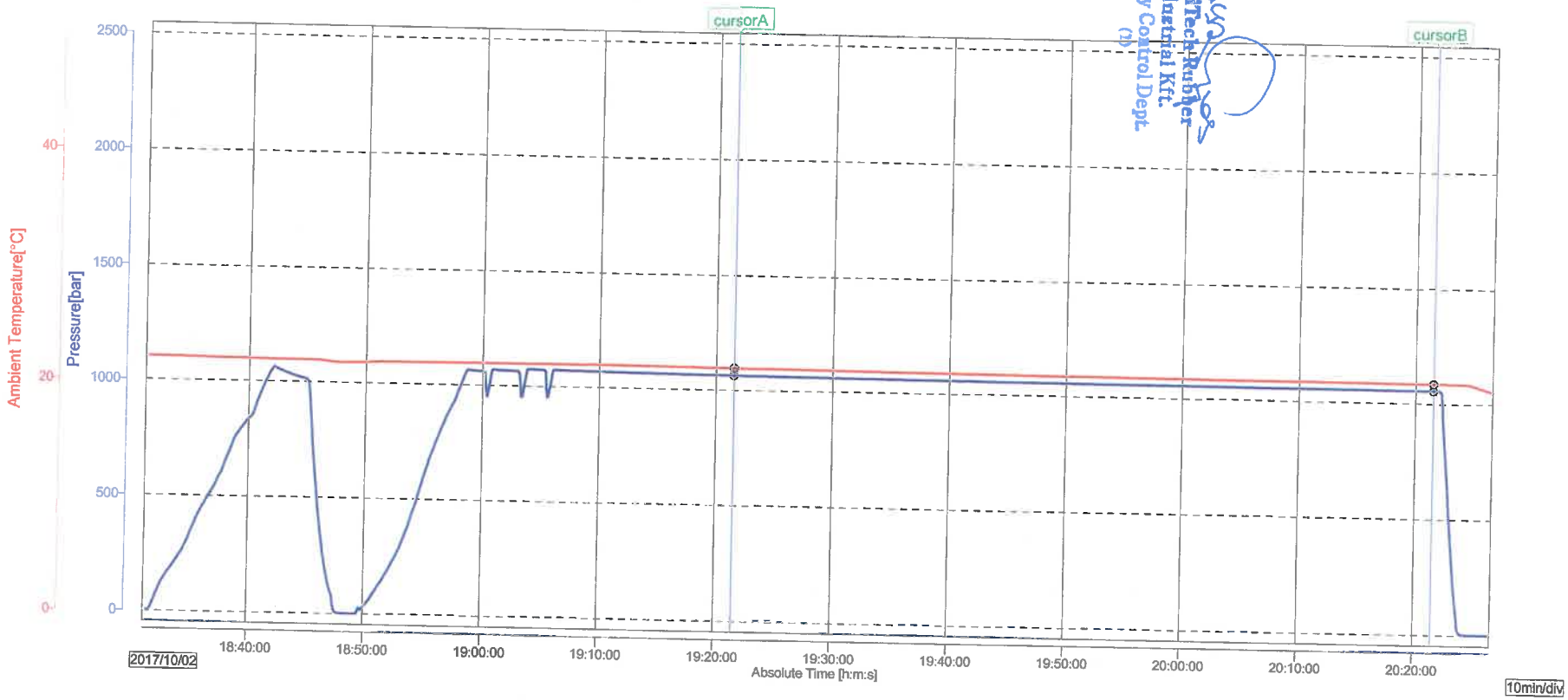

ContiTech Rubber Industrial Kft. Quality Control Dept.

CONTITECH RUBBER Industrial Kft.

No: QC-DB- 298 / 2017

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QUALITY CONTROL INSPECTION AND TEST CERTIFICATE

CERT. N°: 683

PURCHASER:	ContiTech Oil & Marine Corp.			P.O. N°:	4500984922
CONTITECH RUBBER order N°:	987778	HOSE TYPE:	3" ID		Choke and Kill Hose
HOSE SERIAL N°:	73982	NOMINAL / ACTUAL LENGTH:			13,72 m / 13,74 m
W.P. 69,0 MPa	10000 psi	T.P. 103,5 MPa	15000 psi	Duration:	60 min.

Pressure test with water at ambient temperature

See attachment (1 page)

COUPLINGS Type	Serial N°	Quality	Heat N°
3" coupling with	8076 8078	AISI 4130	A0939Y
4 1/16" 10K API Swivel Flange end		AISI 4130	037184
Hub		AISI 4130	A0939Y

Not Designed For Well Testing

API Spec 16 C 2nd Edition– FSL2

TAG NO.: 66-1487

Temperature rate: "B"

All metal parts are flawless

WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER INSPECTED AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.

STATEMENT OF CONFORMITY: We hereby certify that the above items/equipment supplied by us are in conformity with the terms, conditions and specifications of the above Purchaser Order and that these items/equipment were fabricated inspected and tested in accordance with the referenced standards, codes and specifications and meet the relevant acceptance criteria and design requirements.

COUNTRY OF ORIGIN HUNGARY/EU

Date:	Inspector	Quality Control
03. October 2017.		ContiTech Rubber Industrial Kft. Quality Control Dept.

QUALITY CONTROL INSPECTION AND TEST CERTIFICATE					CERT. N°:	684	
PURCHASER:	ContiTech Oil & Marine Corp.				P.O. N°:	4500984922	
CONTITECH RUBBER order N°:	987778		HOSE TYPE:	3" ID	Choke and Kill Hose		
HOSE SERIAL N°:	73983		NOMINAL / ACTUAL LENGTH:		13,72 m /13,76 m		
W.P. 69,0 MPa	10000 psi		T.P. 103,5 MPa	15000 psi	Duration:	60	min.

Pressure test with water at ambient temperature

See attachment (1 page)

COUPLINGS Type	Serial N°		Quality	Heat N°
3" coupling with	8074	8075	AISI 4130	A0939Y
4 1/16" 10K API Swivel Flange end			AISI 4130	037184
Hub			AISI 4130	A0939Y

Not Designed For Well Testing **API Spec 16 C 2nd Edition– FSL2**

TAG NO.: 66-1488 **Temperature rate: "B"**

All metal parts are flawless

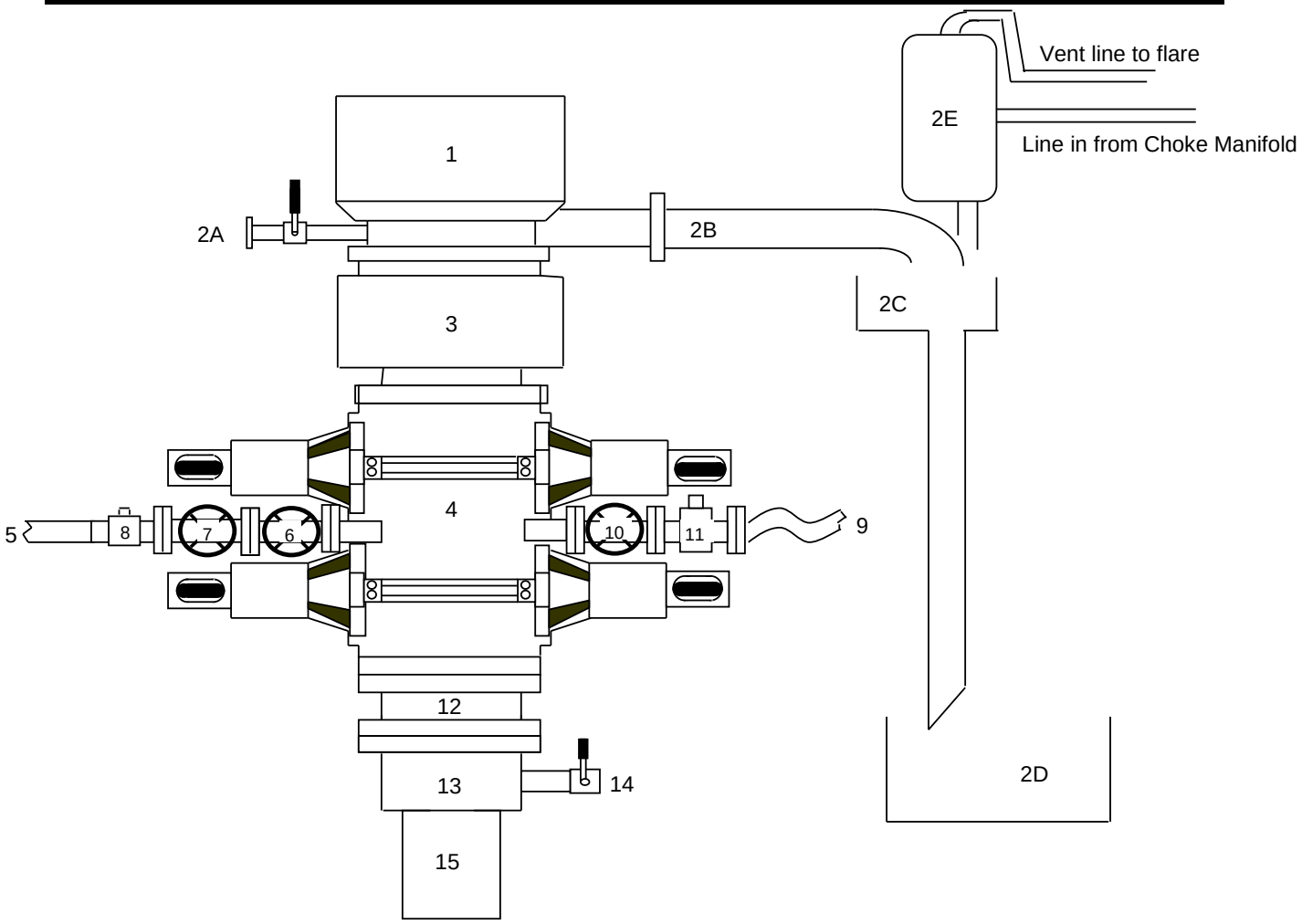
WE CERTIFY THAT THE ABOVE HOSE HAS BEEN MANUFACTURED IN ACCORDANCE WITH THE TERMS OF THE ORDER INSPECTED AND PRESSURE TESTED AS ABOVE WITH SATISFACTORY RESULT.

STATEMENT OF CONFORMITY: We hereby certify that the above items/equipment supplied by us are in conformity with the terms, conditions and specifications of the above Purchaser Order and that these items/equipment were fabricated inspected and tested in accordance with the referenced standards, codes and specifications and meet the relevant acceptance criteria and design requirements.

COUNTRY OF ORIGIN HUNGARY/EU

Date:	Inspector	Quality Control
03. October 2017.		ContiTech Rubber Ipari Kft. Quality Control Dept.

BLOWOUT PREVENTER ARRANGEMENT - 13-5/8" 5M
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 Connection
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", 5M 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	Casing Head Valve 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.

Cased Hole

Peridot 8 Fed 16H

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	13586	6110	8386	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 / 2859 = **2.20**

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 / 2859 = **2.71**

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 / 142562 = **2.78**
SFi Bouyant = 397000 / (142562 x 0.863) = **3.23**

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 / 142562 = **2.37**
SFi Bouyant = 338000 / (142562 x 0.863) = **2.75**

Cased Hole

Peridot 8 Fed 16H

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	13586	6110	8386	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 / 2859 = **2.20**

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 / 2859 = **2.71**

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 / 142562 = **2.78**
SFi Bouyant = 397000 / (142562 x 0.863) = **3.23**

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 / 142562 = **2.37**
SFi Bouyant = 338000 / (142562 x 0.863) = **2.75**

ConocoPhillips

H_2S Contingency Plan

April 2018

H_2S Contingency Plan Holders:

Attached is an H_2S Contingency Plan for COPC Permian Drilling working in the West Texas and Southeastern New Mexico areas operated by ConocoPhillips Company.

If you have any question regarding this plan, please call Matt Oster (830) 583-1297, or Ryan Vacarella (985) 217-7594.

Table of Contents

Section

HYDROGEN SULFIDE (H_2S) OPERATIONS

Contingency Plan
For
Permian Drilling Operations

ConocoPhillips Company
Mid-Continent Business Unit
Permian Asset Area

I. PURPOSE

The purpose of this Contingency Plan is to provide an organized plan of action for alerting and protecting the public following the release of a potentially hazardous volume of hydrogen sulfide. This plan prescribes mandatory safety procedures to be followed in the event of a release of H_2S into the atmosphere from exploration and production operations included in the scope of this plan. The extent of action taken will be determined by the supervisor and will depend on the severity and extent of H_2S release. Release of H_2S must be reported to the Drilling Superintendent and documented on the IADC and in Wellview.

II. SCOPE

This Contingency plan shall cover the West Texas and Southeastern New Mexico areas, which contain H2S gas and could result in a release where the R.O.E. is greater than 100 ppm at 50' and less than 3000' and does not include a public area and 500 ppm R.O.E. does not include a public road. Radius of exposure is defined as the maximum distance from the source of release that a specified calculated average concentration of H_2S could exist under specific weather conditions.

III. PROCEDURES

First Employee on Scene

____ Assess the incident and ensure your own safety.

Note the following:

____ Location of the incident.
____ Nature of the incident.
____ Wind direction and weather conditions.
____ Other assistance that may be needed.

____ Call local supervisory personnel (refer to Section V: Emergency Call List) until personal contact is made with a person on the list.

____ Perform emergency assessment and response as needed. The response may include rescue and/or evacuation of personnel, shutting in a system and/or notification of nearby residents/public (refer to Section VII: Public Notification/Evacuation).

____ Secure the site.

____ Follow the direction of the On-scene Incident Commander (first ConocoPhillips supervisor arriving on-scene).

First Supervisor on Scene (ConocoPhillips On-scene Incident Commander)

____ Becomes ConocoPhillips' On-scene Incident Commander upon arrival to location.

____ Follow the principles of the **D.E.C.I.D.E.** process below to assess the incident. (Note wind direction and weather conditions and ensure everyone's safety).

DETECT the problem
ESTIMATE likely harm without intervention
CHOOSE response objectives
IDENTIFY action options
DO the best option
EVALUATE the progress

____ Complete the Preliminary Emergency Information Sheet (refer to Section VIII: Forms/Reports).

____ Call your supervisor (refer to Section V: Emergency Call List).

____ Perform emergency response as necessary. (This may include notification & evacuation of all personnel and/or nearby residents/public (refer to Section VII: Public Notification/Evacuation), requesting assistance from ConocoPhillips personnel or outside agencies (refer to Section V: Emergency Call List) and obtaining any safety equipment that may be required (refer to Section IV: Emergency Equipment and Maintenance).

____ Notify appropriate local emergency response agencies of the incident as needed. Also notify the appropriate regulatory agencies. (refer to Section V: Emergency Call List).

____ Ensure site security.

__ Set barricades and /or warning signs at or beyond the calculated 100 ppm H_2S radius of exposure (ROE). All manned barricades must be equipped with an H_2S monitor and a 2-way radio.

__ Set roadblocks and staging area as determined.

____ Establish the Incident Command Structure by designating appropriate on-scene response personnel as follows:

Recording Secretary _____
Public Information Officer _____
Safety/Medical Officer _____
Decontamination Officer _____

____ Have the "Recording Secretary" begin documenting the incident on the "Incident Log" (refer to Section VIII: Forms/Reports).

____ If needed, request radio silence on all channels that use your radio tower stating that, until further notice, the channels should be used for emergency communications only.

____ Perform a Site Characterization and designate the following:

Hot Zone -- Hazardous Area
Warm Zone -- Preparation & Decontamination Area
Cold Zone -- Safe Area

AND

On-Scene Incident Command Post	(Cold Zone)
Public Relations Briefing Area	(Cold Zone)
Staging Area	(Cold Zone)
Triage Area	(Cold Zone)
Decontamination Area	(Warm Zone)

____ Refer all media personnel to ConocoPhillips' On-Scene Public Information Officer (refer to Section VI: Public Media Relations).

____ Coordinate the attempt to stop the release of H_2S. You should consider closing upstream and downstream valves to shut-off gas supply sources, and/or plugging or clamping leaks. Igniting escaping gas to reduce the toxicity hazard should be used **ONLY AS A LAST RESORT**. (It must first be determined if the gas can be safely ignited, taking into consideration if there is a possibility of a widespread flammable atmosphere.)

____ Once the emergency is over, return the situation to normal by:

Confirming the absence of H_2S and combustible gas throughout the area,

Discontinuing the radio silence on all channels, stating that the emergency incident is over,

Removing all barricades and warning signs,

Allowing evacuees to return to the area, and

Advising all parties previously notified that the emergency has ended.

____ Ensure the proper regulatory authorities/agencies are notified of the incident (refer to Section V: Emergency Call List).

____ Clean up the site. (Be sure all contractor crews have had appropriate HAZWOPER training.)

____ Report completion of the cleanup to the Asset Environmentalist. (Environmentalist will report this to the proper State and/or Federal agencies.)

____ Fill out all required incident reports and send originals to the Safety Department. (Keep a copy for your records.)

- Company employee receiving occupational injury or illnesses.

- Company employee involved in a vehicle accident while driving a company vehicle.

- Company property that is damaged or lost.

- Accident involving the public or a contractor; includes personal injuries, vehicle accidents, and property damage. Also includes any situation, which could result in a claim against the Company.

- Hazardous Material Spill/Release Report Form

- Emergency Drill Report

____ Assist the Safety Department in the investigation of the incident. Review the factors that caused or allowed the incident to occur, and modify operating, maintenance, and/or surveillance procedures as needed. Make appropriate repairs and train or retrain employees in the use and operation of the system.

____ If this incident was simulated for practice in emergency response, complete the Emergency Drill Report found in Section VIII: Forms/Reports and submit a copy to the Drilling Manager. (Keep one copy in area files to document exercising of the plan.)

Emergency Procedures
Responsibility

In the event of a release of potentially hazardous amounts of H2S, all personnel will immediately proceed upwind/ crosswind to the nearest designated briefing area. The COPC Drilling Rep. will immediately, upon assessing the situation, set this into action by taking the proper procedures to contain the gas and notify appropriate people and agencies.

1. In an emergency situation, the Drilling Rep. on duty will have complete responsibility and will take whatever action is deemed necessary in an emergency situation to insure the personnel's safety, to protect the well and to prevent property damage.

2. The Toolpusher will assume all responsibilities of the Drilling Rep. in an emergency situation in the event the Drilling Rep. becomes incapacitated.

3. Advise each contractor, service company, and all others entering the site that H2S may be encountered and the potential hazards that may exist.

4. Authorize the evacuation of local residents if H2S threatens their safety.

5. Keep the number of persons on location to a minimum during hazardous operations.

6. Direct corrective actions to control the flow of gas.

7. Has full responsibility for igniting escaping gas to reduce the toxicity hazard.

   This should be used **ONLY AS A LAST RESORT**.

IV. EMERGENCY EQUIPMENT and MAINTENANCE

Emergency Equipment Suppliers

United Safety
Safety Equipment 432.400.2889

Gryphon Oilfield Services
Safety Equipment 432.550.0600

DXP/ Safety International – Odessa, Tx.
H_2S monitors 432.580.3770
Breathing air includes cascade systems
First aid and medical supplies
Safety equipment
H2S Specialist

Total Safety US Odessa, Tx/ Hobs, NM 432.561.5049 Odessa
H_2S monitors 575.392.2973 Hobbs
Breathing air includes cascade systems
First aid and medical supplies
Safety equipment

DXP/ Indian Fire & Safety – Hobbs, NM 575.393.3093
H_2S monitors
Breathing air including cascade systems trailer mounted
30 minute air packs
Safety Equipment

TC Safety – Odessa, Tx.
H_2S monitors 432.413.8240
Cascade systems trailer mounted
30 minute air packs
Safety Equipment
H2S Specialist

Secorp Industries – Odessa, Tx. 432.614.2565
H2S Monitor Systems
Cascade Systems
H2S Specialist
H2S, CPR, First Aid Training

Emergency Equipment and Maintenance (continued)

General Information

Materials used for repair should be suitable for use where H_2S concentrations exceed 100 ppm. In general, carbon steels having low-yield strengths and a hardness below RC-22 are suitable. The engineering staff should be consulted if any doubt exists on material specifications.

Appropriate signs should be maintained in good condition at location entrance and other locations as specified in Texas Rule 36 and NMOCD Rule 118.

All notification lists should be kept current with changes in names, telephone numbers, etc.

All shutdown devices, alarms, monitors, breathing air systems, etc., should be maintained in accordance with applicable regulations.

All personnel working in H_2S areas shall have received training on the hazards, characteristics, and properties of H_2S, and on procedures and safety equipment applicable for use in H_2S areas.

H2S Safety Equipment and Monitoring Systems

An H2S emergency response package will be maintained at locations requiring H2S monitoring. The package will contain at a minimum the following:

3 – Fixed H2S sensors located as follows:
- 1 – on the rig floor
- 1 – at the Bell Nipple
- 1 – at the Shale Shaker or Flowline

1 – Entrance Warning Sign located at the main entrance to the location, with warning signs and colored flags to determine the current status for entry into the location.

2 – Windsocks that are clearly visible.

1 – Audible warning system located on rig floor

2 – Visual warning systems (Beacon Lights)
- 1 – Located at the rig floor
- 1 – Located in the mud mixing room

Note: All alarms (audible and visual) should be set to alarm at 10 ppm.

2 - Briefing areas clearly marked
- 2 - SCBA's at each briefing area
- 1- SCBA located at the Drilling Reps office

Note:
1. **All SCBA's must be positive pressure type only!!!**
2. **All SCBA's must either be Scott or Drager brand.**
3. **All SCBA's face pieces should be size large, unless otherwise specified by the Drilling Supervisor.**

5 – Emergency Escape Paks located at Top Doghouse.
Note: Ensure provisions are included for any personnel working above rig floor in derrick.

1 – Tri or Quad gas monitor located at the Drilling Reps office. This will be used to determine if the work area if safe to re-enter prior to returning to work following any alarm.

V. EMERGENCY CALL LIST:

The following is a priority list of personnel to contact in an emergency situation.

Supervisory Personnel	Office No.		Cellphone
Drilling Supt. (Unconventional) **Scott Nicholson**	432.688.9065		432.230.8010
Field Supervisors: **Clint Case** **Patrick Wellman**	 432.688.6878 432.688.9183		 940.231.2839 432.215.7079
Safety Support: **Matt Oster** **Ryan Vaccarella**	 830.583.1245 985.217.7594		 601.540.6988 NA
Operations Support: **Dale Rowell**	 NA		 830.400.2006
Supt Operations-SENM **Mike Neuschafer**-Delaware Basin **Sean Robinson**-SENM	 432.688.6834 575.391.3147		 713.419.9919 575.390.8873
MCBU HSE Permian Supervisor **Chris Boggs**	 432.688.6806		 907.903.5815
Manger GCBU/MCBU D & C **Seth Crissman**	 832.486.6191		 832.513.9308

EMERGENCY CALL LIST: State Officials

Regulatory Agencies

Texas Railroad Commission (District 8) Office: 432.684.5581
Midland, Texas

New Mexico Oil Conservation Commission Office: 575.393.6161
P. O. Box 1980
Hobbs, New Mexico 88240-1980

Bureau of Land Mngt.
Carlsbad Field Office Office: 575.234.5972
620 E. Greene St. Fax: 575.885.9264
Carlsbad, NM 88220

EMERGENCY CALL LIST: Local Officials

Refer to the Location Information Sheet
Note: The LIS should include any area residents (i.e. rancher's house, etc)

VI. Public Media Relations

The **Public Information Officer** becomes the ConocoPhillips on-scene contact (once designated by the Phillips On-Scene Incident Commander).

Confers with Houston Office's Human Relations Representative, who is responsible for assisting in the coordination of local public relations duties.

Answer media questions honestly and **only with facts,** do not speculate about the cause, amount of damage, or the potential impact of the incident of the community, company, employees, or environment. (This information will be formally determined in the incident investigation.)

If you are comfortable answering a question or if you are unsure of the answer, use terms such as the following:

- "I do not know. I will try to find out."
- I am not qualified to answer that question, but I will try to find someone who can."
- "It is under investigation."

Note:
Do Not Say "No Comment." (This implies a cover-up.)

Do Not Disclose Names of Injured or Dead! Confer with the Houston Office's Human Relations Representative, who is responsible for providing that information.

VII. Public Notification/Evacuation

Alert and/or Evacuate People within the Exposure Area

1. Public Notification – If the escape of gas could result in a hazard to area residents, the general public, or employees, the person **first** observing the leak should take **immediate** steps to cause notification of any nearby residents. The avoidance of injury or loss of life should be of prime consideration and given top priority in all cases. If the incident is of such magnitude, or at such location as to create a hazardous situation, local authorities will be requested to assist in the evacuation and roadblocks of the designated area until the situation can be returned to normal.

   Note: Bilingual employees may be needed to assist in notification of residents.

2. Evacuation Procedures – Evacuation will proceed upwind from the source of the release of H_2S. Extreme caution should be exercised in order to avoid any depressions or low-lying areas in the terrain. The public area within the radius of exposure should be evacuated in a southwesterly and southeasterly direction so as to avoid the prevailing southern wind direction.

   Roadblocks and the staging area should be established as necessary for current wind conditions.

Note: In all situations, consideration should be given to wind direction and weather conditions. H_2S is heavier than air and can settle in low spots. Shifts in wind direction can also change the location of possible hazardous areas.

VIII. FORMS & REPORTS

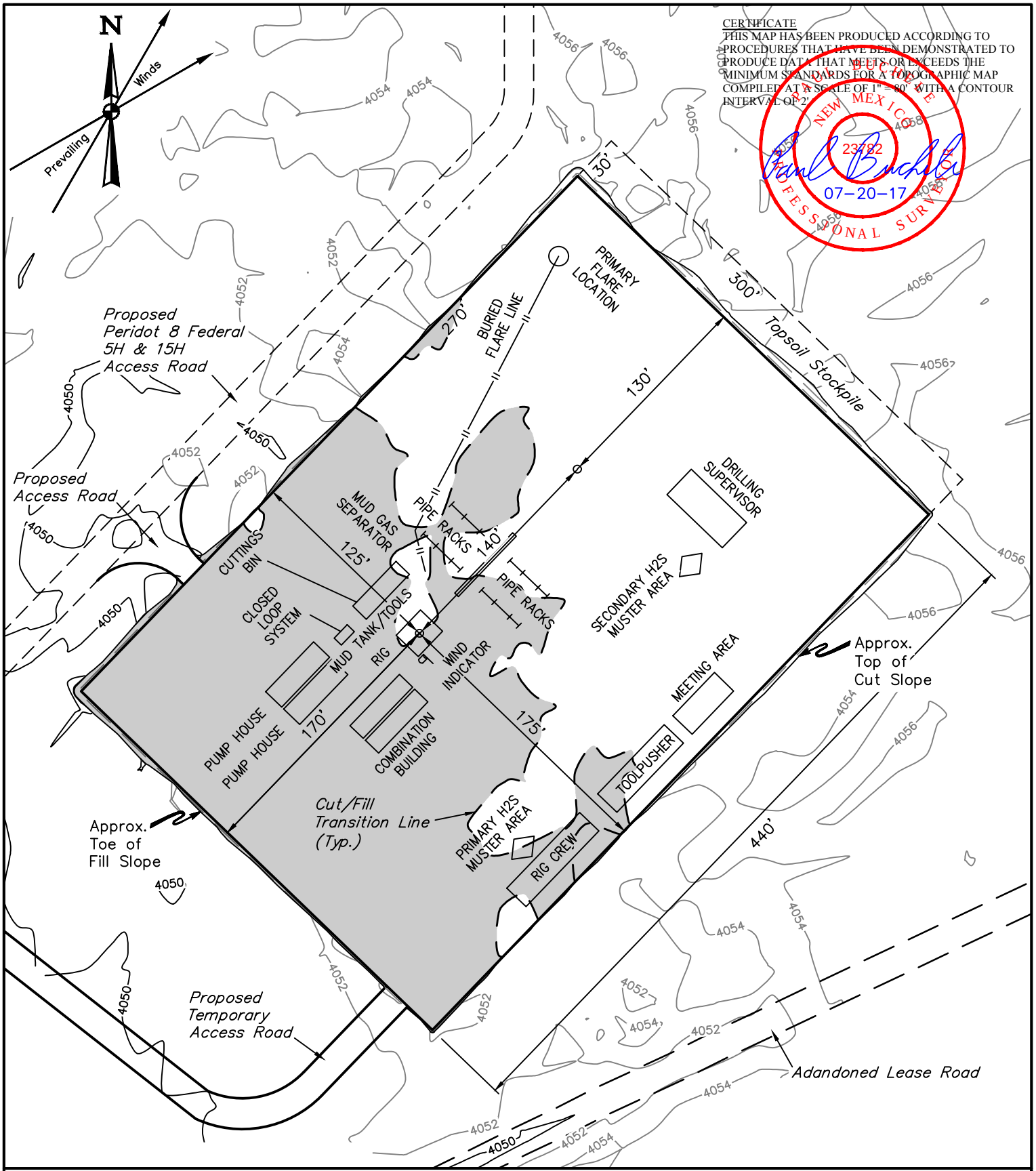
I. Incident Log

II. Preliminary Emergency Information Sheet

III. Emergency Drill Report

IV. Onshore Hazardous Material Spill/Release Report Form

V. Immediate Report of Occupational Injury or Illness
Report of Accident-Public Contractor
Report of Loss or Damage to Company Property
Report of Automotive Incident



NOTES:

- Contours shown at 2' intervals.
- May have different number of Pump Houses and Combination Buildings.

ConocoPhillips Company

PERIDOT 8 FEDERAL 6H & 16H
SW 1/4 NE 1/4, SECTION 8, T17S, R32E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	J.A.V., R.D.	06-24-17	**SCALE**
DRAWN BY	S.S.	07-18-17	1" = 80'
TYPICAL RIG LAYOUT			**FIGURE #3**

UINTAH ENGINEERING & LAND SURVEYING

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

ConocoPhillips

Company: ConocoPhillips
Site: Peridot 8 Federal
Well: 16H
Project: Lea County, New Mexico (NAD 27)
Rig: Trinidad 417 (or equivalent)

MS Energy Services
WWW.MSENERGYSERVICES.COM

T G M

Azimuths to Grid North
True North: -0.30°
Magnetic North: 6.83°

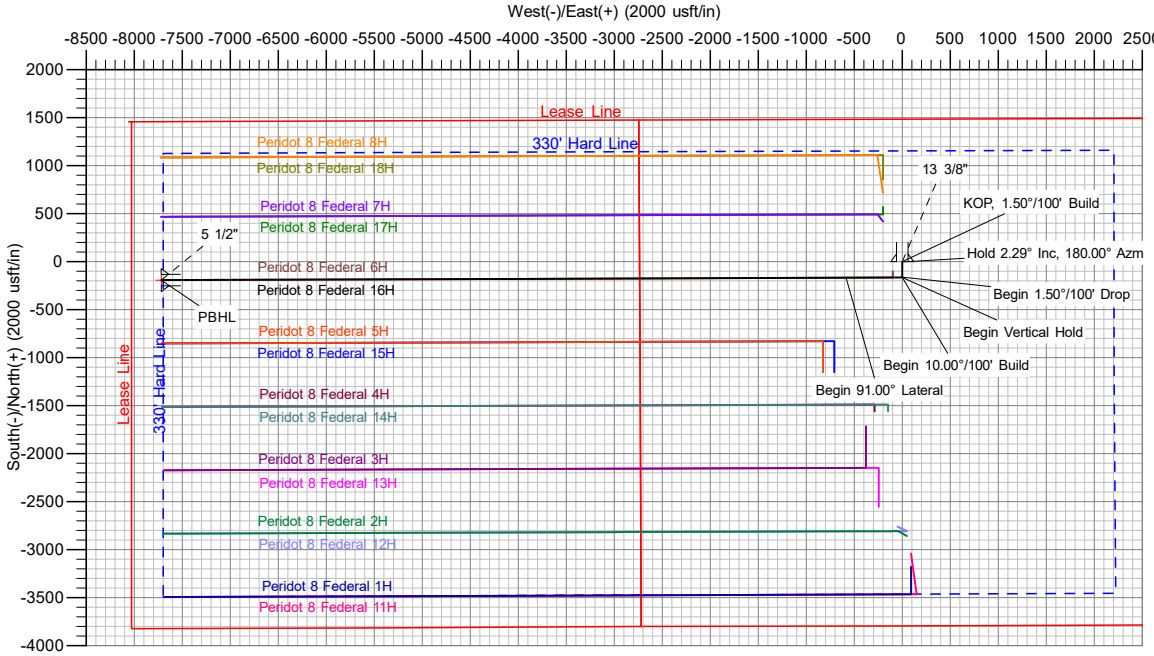
Magnetic Field
Strength: 48340.9snT
Dip Angle: 60.62°
Date: 8/2/2017
Model: BGGM2017

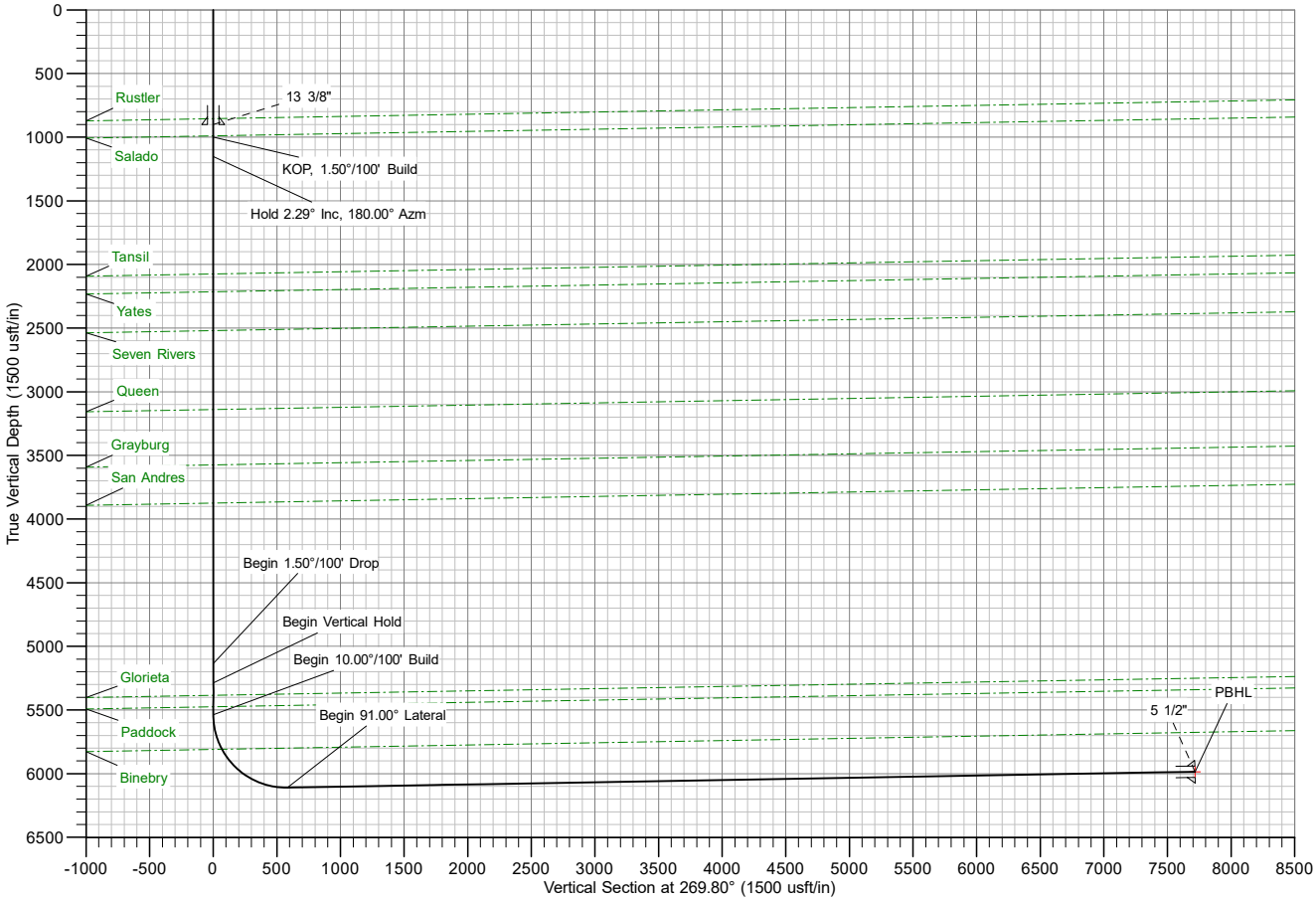
US State Plane 1927 (Exact solution)
New Mexico East 3001

Created By: MEB
Date: 10:35, August 18 2017
Plan: Design #1

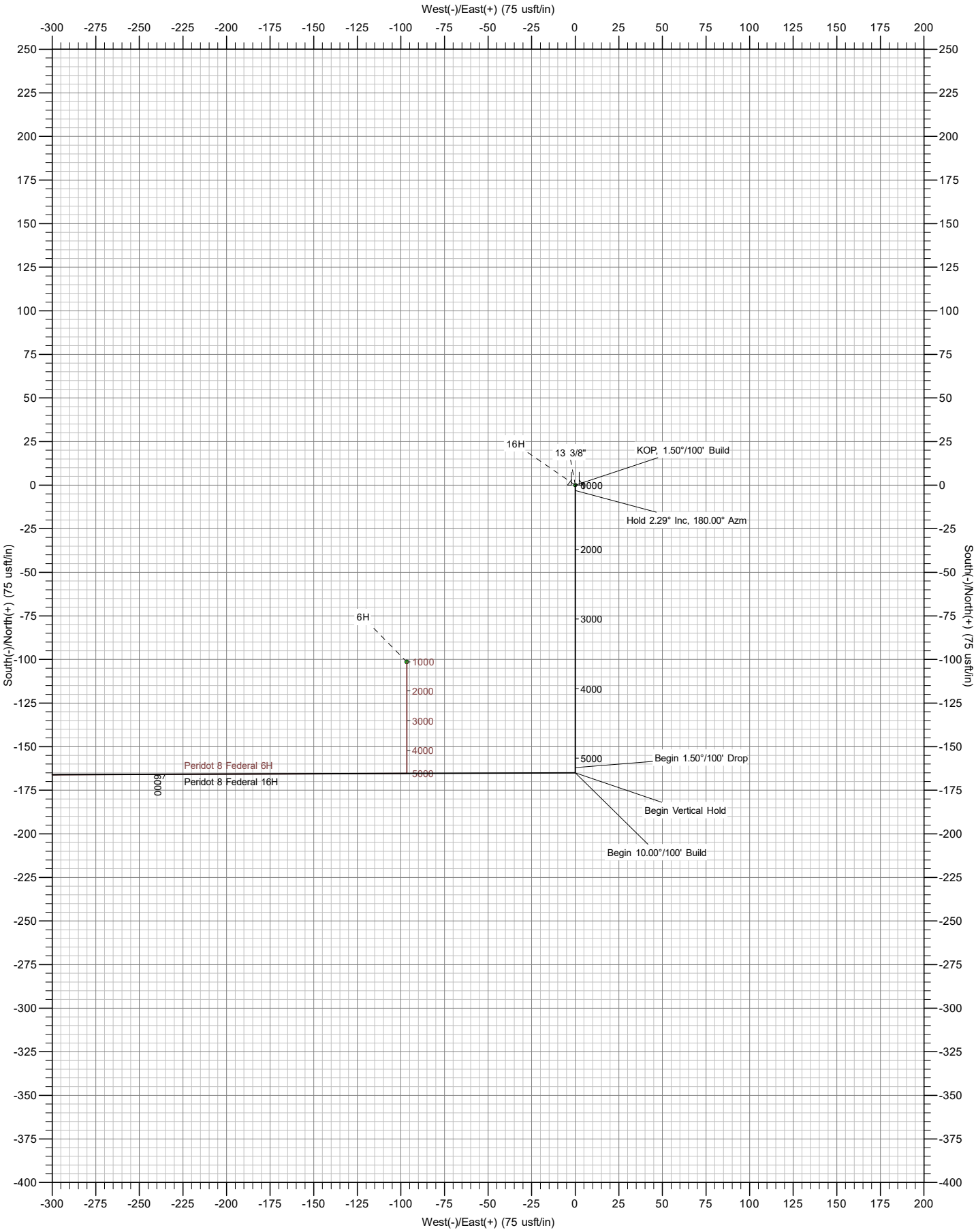
ANNOTATIONS

MD	Inc	Azi	TVD	+N/-S	+E/-W	VSect	Departure	Annotation
1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	KOP, 1.50°/100' Build
1152.35	2.29	180.00	1152.31	-3.04	0.00	0.01	3.04	Hold 2.29° Inc, 180.00° Azm
5138.03	2.29	180.00	5134.82	-161.96	0.00	0.57	161.96	Begin 1.50°/100' Drop
5290.38	0.00	0.00	5287.13	-165.00	0.00	0.58	165.00	Begin Vertical Hold
5540.38	0.00	0.00	5537.13	-165.00	0.00	0.58	165.00	Begin 10.00°/100' Build
6450.38	91.00	269.80	6110.00	-167.05	-582.95	583.53	747.96	Begin 91.00° Lateral
13585.62	91.00	269.80	5985.47	-192.14	-7717.07	7717.69	7882.12	PBHL





Company: ConocoPhillips
Site: Peridot 8 Federal
Well: 16H
Project: Lea County, New Mexico (NAD 27)
Rig: Trinidad 417



ConocoPhillips

Lea County, New Mexico (NAD 27)
Peridot 8 Federal
16H

Wellbore #1

Plan: Design #1

Standard Planning Report

18 August, 2017

MS Energy Services
WWW.MSENERGYSERVICES.COM

Database:	EDM 5000.14 Conroe DB	**Local Co-ordinate Reference:**	Well 16H
Company:	ConocoPhillips	**TVD Reference:**	Well @ 4071.90usft (Trinidad 417)
Project:	Lea County, New Mexico (NAD 27)	**MD Reference:**	Well @ 4071.90usft (Trinidad 417)
Site:	Peridot 8 Federal	**North Reference:**	Grid
Well:	16H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Project	Lea County, New Mexico (NAD 27)		
Map System:	US State Plane 1927 (Exact solution)	**System Datum:**	Mean Sea Level
Geo Datum:	NAD 1927 (NADCON CONUS)		
Map Zone:	New Mexico East 3001		

Well	16H				
Well Position	**+N/-S**	674,184.43 usft	**Northing:**	674,184.43 usft	**Latitude:**	32° 51' 8.021 N
	+E/-W	667,529.67 usft	**Easting:**	667,529.67 usft	**Longitude:**	103° 47' 16.092 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**		**Ground Level:**	4,054.40 usft

Wellbore Wellbore #1

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	BGGM2017	8/2/2017	7.13	60.62	48,341

Design Design #1

Audit Notes:

Version:	**Phase:**	PROTOTYPE	**Tie On Depth:**	0.00

Vertical Section:	Depth From (TVD) (usft)	+N/-S (usft)	+E/-W (usft)	Direction (°)
	0.00	0.00	0.00	269.80

Plan Survey Tool Program **Date** 8/17/2017

	Depth From (usft)	Depth To (usft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	13,585.62	Design #1 (Wellbore #1)	MWD - OWSG R1	
				MWD - OWSG R1	

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,152.35	2.29	180.00	1,152.31	-3.04	0.00	1.50	1.50	0.00	180.00	
5,138.03	2.29	180.00	5,134.82	-161.96	0.00	0.00	0.00	0.00	0.00	
5,290.38	0.00	0.00	5,287.13	-165.00	0.00	1.50	-1.50	0.00	180.00	
5,540.38	0.00	0.00	5,537.13	-165.00	0.00	0.00	0.00	0.00	0.00	
6,450.38	91.00	269.80	6,110.00	-167.05	-582.95	10.00	10.00	0.00	269.80	
13,585.62	91.00	269.80	5,985.47	-192.14	-7,717.07	0.00	0.00	0.00	0.00	PBHL - Peridot 8 Fe

Database:	EDM 5000.14 Conroe DB	**Local Co-ordinate Reference:**	Well 16H
Company:	ConocoPhillips	**TVD Reference:**	Well @ 4071.90usft (Trinidad 417)
Project:	Lea County, New Mexico (NAD 27)	**MD Reference:**	Well @ 4071.90usft (Trinidad 417)
Site:	Peridot 8 Federal	**North Reference:**	Grid
Well:	16H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
855.00	0.00	0.00	855.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
13 3/8"									
990.00	0.00	0.00	990.00	0.00	0.00	0.00	0.00	0.00	0.00
Salado									
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP, 1.50°/100' Build									
1,100.00	1.50	180.00	1,099.99	-1.31	0.00	0.00	1.50	1.50	0.00
1,152.35	2.29	180.00	1,152.31	-3.04	0.00	0.01	1.50	1.50	0.00
Hold 2.29° Inc, 180.00° Azm									
1,200.00	2.29	180.00	1,199.92	-4.94	0.00	0.02	0.00	0.00	0.00
1,300.00	2.29	180.00	1,299.84	-8.93	0.00	0.03	0.00	0.00	0.00
1,400.00	2.29	180.00	1,399.76	-12.91	0.00	0.05	0.00	0.00	0.00
1,500.00	2.29	180.00	1,499.68	-16.90	0.00	0.06	0.00	0.00	0.00
1,600.00	2.29	180.00	1,599.60	-20.89	0.00	0.07	0.00	0.00	0.00
1,700.00	2.29	180.00	1,699.52	-24.87	0.00	0.09	0.00	0.00	0.00
1,800.00	2.29	180.00	1,799.44	-28.86	0.00	0.10	0.00	0.00	0.00
1,900.00	2.29	180.00	1,899.37	-32.85	0.00	0.11	0.00	0.00	0.00
2,000.00	2.29	180.00	1,999.29	-36.84	0.00	0.13	0.00	0.00	0.00
2,075.77	2.29	180.00	2,075.00	-39.86	0.00	0.14	0.00	0.00	0.00
Tansil									
2,100.00	2.29	180.00	2,099.21	-40.82	0.00	0.14	0.00	0.00	0.00
2,200.00	2.29	180.00	2,199.13	-44.81	0.00	0.16	0.00	0.00	0.00
2,215.88	2.29	180.00	2,215.00	-45.44	0.00	0.16	0.00	0.00	0.00
Yates									
2,300.00	2.29	180.00	2,299.05	-48.80	0.00	0.17	0.00	0.00	0.00
2,400.00	2.29	180.00	2,398.97	-52.79	0.00	0.18	0.00	0.00	0.00
2,500.00	2.29	180.00	2,498.89	-56.77	0.00	0.20	0.00	0.00	0.00
2,521.13	2.29	180.00	2,520.00	-57.62	0.00	0.20	0.00	0.00	0.00
Seven Rivers									
2,600.00	2.29	180.00	2,598.81	-60.76	0.00	0.21	0.00	0.00	0.00
2,700.00	2.29	180.00	2,698.73	-64.75	0.00	0.23	0.00	0.00	0.00
2,800.00	2.29	180.00	2,798.65	-68.74	0.00	0.24	0.00	0.00	0.00
2,900.00	2.29	180.00	2,898.57	-72.72	0.00	0.25	0.00	0.00	0.00
3,000.00	2.29	180.00	2,998.49	-76.71	0.00	0.27	0.00	0.00	0.00
3,100.00	2.29	180.00	3,098.41	-80.70	0.00	0.28	0.00	0.00	0.00
3,141.62	2.29	180.00	3,140.00	-82.36	0.00	0.29	0.00	0.00	0.00
Queen									
3,200.00	2.29	180.00	3,198.33	-84.69	0.00	0.30	0.00	0.00	0.00
3,300.00	2.29	180.00	3,298.25	-88.67	0.00	0.31	0.00	0.00	0.00
3,400.00	2.29	180.00	3,398.17	-92.66	0.00	0.32	0.00	0.00	0.00
3,500.00	2.29	180.00	3,498.09	-96.65	0.00	0.34	0.00	0.00	0.00
3,576.96	2.29	180.00	3,574.99	-99.72	0.00	0.35	0.00	0.00	0.00

Database:	EDM 5000.14 Conroe DB	**Local Co-ordinate Reference:**	Well 16H
Company:	ConocoPhillips	**TVD Reference:**	Well @ 4071.90usft (Trinidad 417)
Project:	Lea County, New Mexico (NAD 27)	**MD Reference:**	Well @ 4071.90usft (Trinidad 417)
Site:	Peridot 8 Federal	**North Reference:**	Grid
Well:	16H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
Grayburg									
3,600.00	2.29	180.00	3,598.01	-100.64	0.00	0.35	0.00	0.00	0.00
3,700.00	2.29	180.00	3,697.93	-104.62	0.00	0.37	0.00	0.00	0.00
3,800.00	2.29	180.00	3,797.85	-108.61	0.00	0.38	0.00	0.00	0.00
3,877.20	2.29	180.00	3,874.99	-111.69	0.00	0.39	0.00	0.00	0.00
San Andres									
3,900.00	2.29	180.00	3,897.77	-112.60	0.00	0.39	0.00	0.00	0.00
4,000.00	2.29	180.00	3,997.70	-116.58	0.00	0.41	0.00	0.00	0.00
4,100.00	2.29	180.00	4,097.62	-120.57	0.00	0.42	0.00	0.00	0.00
4,200.00	2.29	180.00	4,197.54	-124.56	0.00	0.43	0.00	0.00	0.00
4,300.00	2.29	180.00	4,297.46	-128.55	0.00	0.45	0.00	0.00	0.00
4,400.00	2.29	180.00	4,397.38	-132.53	0.00	0.46	0.00	0.00	0.00
4,500.00	2.29	180.00	4,497.30	-136.52	0.00	0.48	0.00	0.00	0.00
4,600.00	2.29	180.00	4,597.22	-140.51	0.00	0.49	0.00	0.00	0.00
4,700.00	2.29	180.00	4,697.14	-144.50	0.00	0.50	0.00	0.00	0.00
4,800.00	2.29	180.00	4,797.06	-148.48	0.00	0.52	0.00	0.00	0.00
4,900.00	2.29	180.00	4,896.98	-152.47	0.00	0.53	0.00	0.00	0.00
5,000.00	2.29	180.00	4,996.90	-156.46	0.00	0.55	0.00	0.00	0.00
5,100.00	2.29	180.00	5,096.82	-160.45	0.00	0.56	0.00	0.00	0.00
5,138.03	2.29	180.00	5,134.82	-161.96	0.00	0.57	0.00	0.00	0.00
Begin 1.50°/100' Drop									
5,200.00	1.36	180.00	5,196.76	-163.93	0.00	0.57	1.50	-1.50	0.00
5,290.38	0.00	0.00	5,287.13	-165.00	0.00	0.58	1.50	-1.50	0.00
Begin Vertical Hold									
5,300.00	0.00	0.00	5,296.75	-165.00	0.00	0.58	0.00	0.00	0.00
5,388.24	0.00	0.00	5,384.99	-165.00	0.00	0.58	0.00	0.00	0.00
Glorieta									
5,400.00	0.00	0.00	5,396.75	-165.00	0.00	0.58	0.00	0.00	0.00
5,478.24	0.00	0.00	5,474.99	-165.00	0.00	0.58	0.00	0.00	0.00
Paddock									
5,500.00	0.00	0.00	5,496.75	-165.00	0.00	0.58	0.00	0.00	0.00
5,540.38	0.00	0.00	5,537.13	-165.00	0.00	0.58	0.00	0.00	0.00
Begin 10.00°/100' Build									
5,550.00	0.96	269.80	5,546.75	-165.00	-0.08	0.66	10.00	10.00	0.00
5,600.00	5.96	269.80	5,596.64	-165.01	-3.10	3.68	10.00	10.00	0.00
5,650.00	10.96	269.80	5,646.08	-165.04	-10.45	11.03	10.00	10.00	0.00
5,700.00	15.96	269.80	5,694.69	-165.08	-22.09	22.67	10.00	10.00	0.00
5,750.00	20.96	269.80	5,742.10	-165.13	-37.92	38.50	10.00	10.00	0.00
5,800.00	25.96	269.80	5,787.96	-165.20	-57.82	58.40	10.00	10.00	0.00
5,823.42	28.30	269.80	5,808.79	-165.24	-68.50	69.08	10.00	10.00	0.00
Binebry									
5,850.00	30.96	269.80	5,831.90	-165.29	-81.64	82.22	10.00	10.00	0.00
5,900.00	35.96	269.80	5,873.60	-165.38	-109.20	109.78	10.00	10.00	0.00
5,950.00	40.96	269.80	5,912.74	-165.49	-140.29	140.87	10.00	10.00	0.00
6,000.00	45.96	269.80	5,949.02	-165.61	-174.68	175.25	10.00	10.00	0.00
6,050.00	50.96	269.80	5,982.16	-165.75	-212.09	212.67	10.00	10.00	0.00
6,100.00	55.96	269.80	6,011.92	-165.89	-252.25	252.83	10.00	10.00	0.00
6,150.00	60.96	269.80	6,038.06	-166.04	-294.85	295.43	10.00	10.00	0.00
6,200.00	65.96	269.80	6,060.40	-166.19	-339.57	340.15	10.00	10.00	0.00
6,250.00	70.96	269.80	6,078.75	-166.36	-386.06	386.64	10.00	10.00	0.00
6,300.00	75.96	269.80	6,092.97	-166.53	-433.98	434.56	10.00	10.00	0.00
6,350.00	80.96	269.80	6,102.97	-166.70	-482.95	483.53	10.00	10.00	0.00
6,400.00	85.96	269.80	6,108.66	-166.87	-532.61	533.19	10.00	10.00	0.00

Database:	EDM 5000.14 Conroe DB	**Local Co-ordinate Reference:**	Well 16H
Company:	ConocoPhillips	**TVD Reference:**	Well @ 4071.90usft (Trinidad 417)
Project:	Lea County, New Mexico (NAD 27)	**MD Reference:**	Well @ 4071.90usft (Trinidad 417)
Site:	Peridot 8 Federal	**North Reference:**	Grid
Well:	16H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
6,450.38	91.00	269.80	6,110.00	-167.05	-582.95	583.53	10.00	10.00	0.00
Begin 91.00° Lateral									
6,500.00	91.00	269.80	6,109.13	-167.22	-632.57	633.15	0.00	0.00	0.00
6,600.00	91.00	269.80	6,107.39	-167.58	-732.55	733.13	0.00	0.00	0.00
6,700.00	91.00	269.80	6,105.64	-167.93	-832.54	833.12	0.00	0.00	0.00
6,800.00	91.00	269.80	6,103.90	-168.28	-932.52	933.10	0.00	0.00	0.00
6,900.00	91.00	269.80	6,102.15	-168.63	-1,032.51	1,033.09	0.00	0.00	0.00
7,000.00	91.00	269.80	6,100.41	-168.98	-1,132.49	1,133.07	0.00	0.00	0.00
7,100.00	91.00	269.80	6,098.66	-169.33	-1,232.47	1,233.06	0.00	0.00	0.00
7,200.00	91.00	269.80	6,096.91	-169.69	-1,332.46	1,333.04	0.00	0.00	0.00
7,300.00	91.00	269.80	6,095.17	-170.04	-1,432.44	1,433.03	0.00	0.00	0.00
7,400.00	91.00	269.80	6,093.42	-170.39	-1,532.43	1,533.01	0.00	0.00	0.00
7,500.00	91.00	269.80	6,091.68	-170.74	-1,632.41	1,633.00	0.00	0.00	0.00
7,600.00	91.00	269.80	6,089.93	-171.09	-1,732.39	1,732.98	0.00	0.00	0.00
7,700.00	91.00	269.80	6,088.19	-171.44	-1,832.38	1,832.97	0.00	0.00	0.00
7,800.00	91.00	269.80	6,086.44	-171.80	-1,932.36	1,932.95	0.00	0.00	0.00
7,900.00	91.00	269.80	6,084.70	-172.15	-2,032.35	2,032.94	0.00	0.00	0.00
8,000.00	91.00	269.80	6,082.95	-172.50	-2,132.33	2,132.92	0.00	0.00	0.00
8,100.00	91.00	269.80	6,081.21	-172.85	-2,232.32	2,232.90	0.00	0.00	0.00
8,200.00	91.00	269.80	6,079.46	-173.20	-2,332.30	2,332.89	0.00	0.00	0.00
8,300.00	91.00	269.80	6,077.72	-173.55	-2,432.28	2,432.87	0.00	0.00	0.00
8,400.00	91.00	269.80	6,075.97	-173.91	-2,532.27	2,532.86	0.00	0.00	0.00
8,500.00	91.00	269.80	6,074.23	-174.26	-2,632.25	2,632.84	0.00	0.00	0.00
8,600.00	91.00	269.80	6,072.48	-174.61	-2,732.24	2,732.83	0.00	0.00	0.00
8,700.00	91.00	269.80	6,070.74	-174.96	-2,832.22	2,832.81	0.00	0.00	0.00
8,800.00	91.00	269.80	6,068.99	-175.31	-2,932.20	2,932.80	0.00	0.00	0.00
8,900.00	91.00	269.80	6,067.25	-175.66	-3,032.19	3,032.78	0.00	0.00	0.00
9,000.00	91.00	269.80	6,065.50	-176.02	-3,132.17	3,132.77	0.00	0.00	0.00
9,100.00	91.00	269.80	6,063.76	-176.37	-3,232.16	3,232.75	0.00	0.00	0.00
9,200.00	91.00	269.80	6,062.01	-176.72	-3,332.14	3,332.74	0.00	0.00	0.00
9,300.00	91.00	269.80	6,060.26	-177.07	-3,432.12	3,432.72	0.00	0.00	0.00
9,400.00	91.00	269.80	6,058.52	-177.42	-3,532.11	3,532.71	0.00	0.00	0.00
9,500.00	91.00	269.80	6,056.77	-177.77	-3,632.09	3,632.69	0.00	0.00	0.00
9,600.00	91.00	269.80	6,055.03	-178.13	-3,732.08	3,732.68	0.00	0.00	0.00
9,700.00	91.00	269.80	6,053.28	-178.48	-3,832.06	3,832.66	0.00	0.00	0.00
9,800.00	91.00	269.80	6,051.54	-178.83	-3,932.05	3,932.65	0.00	0.00	0.00
9,900.00	91.00	269.80	6,049.79	-179.18	-4,032.03	4,032.63	0.00	0.00	0.00
10,000.00	91.00	269.80	6,048.05	-179.53	-4,132.01	4,132.62	0.00	0.00	0.00
10,100.00	91.00	269.80	6,046.30	-179.88	-4,232.00	4,232.60	0.00	0.00	0.00
10,200.00	91.00	269.80	6,044.56	-180.24	-4,331.98	4,332.59	0.00	0.00	0.00
10,300.00	91.00	269.80	6,042.81	-180.59	-4,431.97	4,432.57	0.00	0.00	0.00
10,400.00	91.00	269.80	6,041.07	-180.94	-4,531.95	4,532.55	0.00	0.00	0.00
10,500.00	91.00	269.80	6,039.32	-181.29	-4,631.93	4,632.54	0.00	0.00	0.00
10,600.00	91.00	269.80	6,037.58	-181.64	-4,731.92	4,732.52	0.00	0.00	0.00
10,700.00	91.00	269.80	6,035.83	-181.99	-4,831.90	4,832.51	0.00	0.00	0.00
10,800.00	91.00	269.80	6,034.09	-182.34	-4,931.89	4,932.49	0.00	0.00	0.00
10,900.00	91.00	269.80	6,032.34	-182.70	-5,031.87	5,032.48	0.00	0.00	0.00
11,000.00	91.00	269.80	6,030.60	-183.05	-5,131.86	5,132.46	0.00	0.00	0.00
11,100.00	91.00	269.80	6,028.85	-183.40	-5,231.84	5,232.45	0.00	0.00	0.00
11,200.00	91.00	269.80	6,027.11	-183.75	-5,331.82	5,332.43	0.00	0.00	0.00
11,300.00	91.00	269.80	6,025.36	-184.10	-5,431.81	5,432.42	0.00	0.00	0.00
11,400.00	91.00	269.80	6,023.61	-184.45	-5,531.79	5,532.40	0.00	0.00	0.00
11,500.00	91.00	269.80	6,021.87	-184.81	-5,631.78	5,632.39	0.00	0.00	0.00

Database:	EDM 5000.14 Conroe DB	**Local Co-ordinate Reference:**	Well 16H
Company:	ConocoPhillips	**TVD Reference:**	Well @ 4071.90usft (Trinidad 417)
Project:	Lea County, New Mexico (NAD 27)	**MD Reference:**	Well @ 4071.90usft (Trinidad 417)
Site:	Peridot 8 Federal	**North Reference:**	Grid
Well:	16H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
11,600.00	91.00	269.80	6,020.12	-185.16	-5,731.76	5,732.37	0.00	0.00	0.00
11,700.00	91.00	269.80	6,018.38	-185.51	-5,831.74	5,832.36	0.00	0.00	0.00
11,800.00	91.00	269.80	6,016.63	-185.86	-5,931.73	5,932.34	0.00	0.00	0.00
11,900.00	91.00	269.80	6,014.89	-186.21	-6,031.71	6,032.33	0.00	0.00	0.00
12,000.00	91.00	269.80	6,013.14	-186.56	-6,131.70	6,132.31	0.00	0.00	0.00
12,100.00	91.00	269.80	6,011.40	-186.92	-6,231.68	6,232.30	0.00	0.00	0.00
12,200.00	91.00	269.80	6,009.65	-187.27	-6,331.67	6,332.28	0.00	0.00	0.00
12,300.00	91.00	269.80	6,007.91	-187.62	-6,431.65	6,432.27	0.00	0.00	0.00
12,400.00	91.00	269.80	6,006.16	-187.97	-6,531.63	6,532.25	0.00	0.00	0.00
12,500.00	91.00	269.80	6,004.42	-188.32	-6,631.62	6,632.23	0.00	0.00	0.00
12,600.00	91.00	269.80	6,002.67	-188.67	-6,731.60	6,732.22	0.00	0.00	0.00
12,700.00	91.00	269.80	6,000.93	-189.03	-6,831.59	6,832.20	0.00	0.00	0.00
12,800.00	91.00	269.80	5,999.18	-189.38	-6,931.57	6,932.19	0.00	0.00	0.00
12,900.00	91.00	269.80	5,997.44	-189.73	-7,031.55	7,032.17	0.00	0.00	0.00
13,000.00	91.00	269.80	5,995.69	-190.08	-7,131.54	7,132.16	0.00	0.00	0.00
13,100.00	91.00	269.80	5,993.95	-190.43	-7,231.52	7,232.14	0.00	0.00	0.00
13,200.00	91.00	269.80	5,992.20	-190.78	-7,331.51	7,332.13	0.00	0.00	0.00
13,300.00	91.00	269.80	5,990.45	-191.14	-7,431.49	7,432.11	0.00	0.00	0.00
13,400.00	91.00	269.80	5,988.71	-191.49	-7,531.48	7,532.10	0.00	0.00	0.00
13,500.00	91.00	269.80	5,986.96	-191.84	-7,631.46	7,632.08	0.00	0.00	0.00
13,585.62	91.00	269.80	5,985.47	-192.14	-7,717.07	7,717.69	0.00	0.00	0.00
PBHL - 5 1/2"									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (usft)	+N/-S (usft)	+E/-W (usft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL - Peridot 8 Fed - plan hits target center - Point	0.00	0.00	5,985.47	-192.14	-7,717.07	673,992.29	659,812.60	32° 51' 6.505 N	103° 48' 46.565 W

Casing Points

Measured Depth (usft)	Vertical Depth (usft)	Name	Casing Diameter (")	Hole Diameter (")
900.00	900.00	13 3/8"	13-3/8	17-1/2
13,585.62	5,985.47	5 1/2"	5-1/2	6

Database:	EDM 5000.14 Conroe DB	**Local Co-ordinate Reference:**	Well 16H
Company:	ConocoPhillips	**TVD Reference:**	Well @ 4071.90usft (Trinidad 417)
Project:	Lea County, New Mexico (NAD 27)	**MD Reference:**	Well @ 4071.90usft (Trinidad 417)
Site:	Peridot 8 Federal	**North Reference:**	Grid
Well:	16H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Design #1		

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
855.00	855.00	Rustler		-1.00	269.80
990.00	990.00	Salado		-1.00	269.80
2,075.77	2,075.00	Tansil		-1.00	269.80
2,215.88	2,215.00	Yates		-1.00	269.80
2,521.13	2,520.00	Seven Rivers		-1.00	269.80
3,141.62	3,140.00	Queen		-1.00	269.80
3,576.96	3,574.99	Grayburg		-1.00	269.80
3,877.20	3,874.99	San Andres		-1.00	269.80
5,388.24	5,384.99	Glorieta		-1.00	269.80
5,478.24	5,474.99	Paddock		-1.00	269.80
5,823.42	5,808.79	Binebry		-1.00	269.80

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
1,000.00	1,000.00	0.00	0.00	KOP, 1.50°/100' Build
1,152.35	1,152.31	-3.04	0.00	Hold 2.29° Inc, 180.00° Azm
5,138.03	5,134.82	-161.96	0.00	Begin 1.50°/100' Drop
5,290.38	5,287.13	-165.00	0.00	Begin Vertical Hold
5,540.38	5,537.13	-165.00	0.00	Begin 10.00°/100' Build
6,450.38	6,110.00	-167.05	-582.95	Begin 91.00° Lateral
13,585.62	5,985.47	-192.14	-7,717.07	PBHL

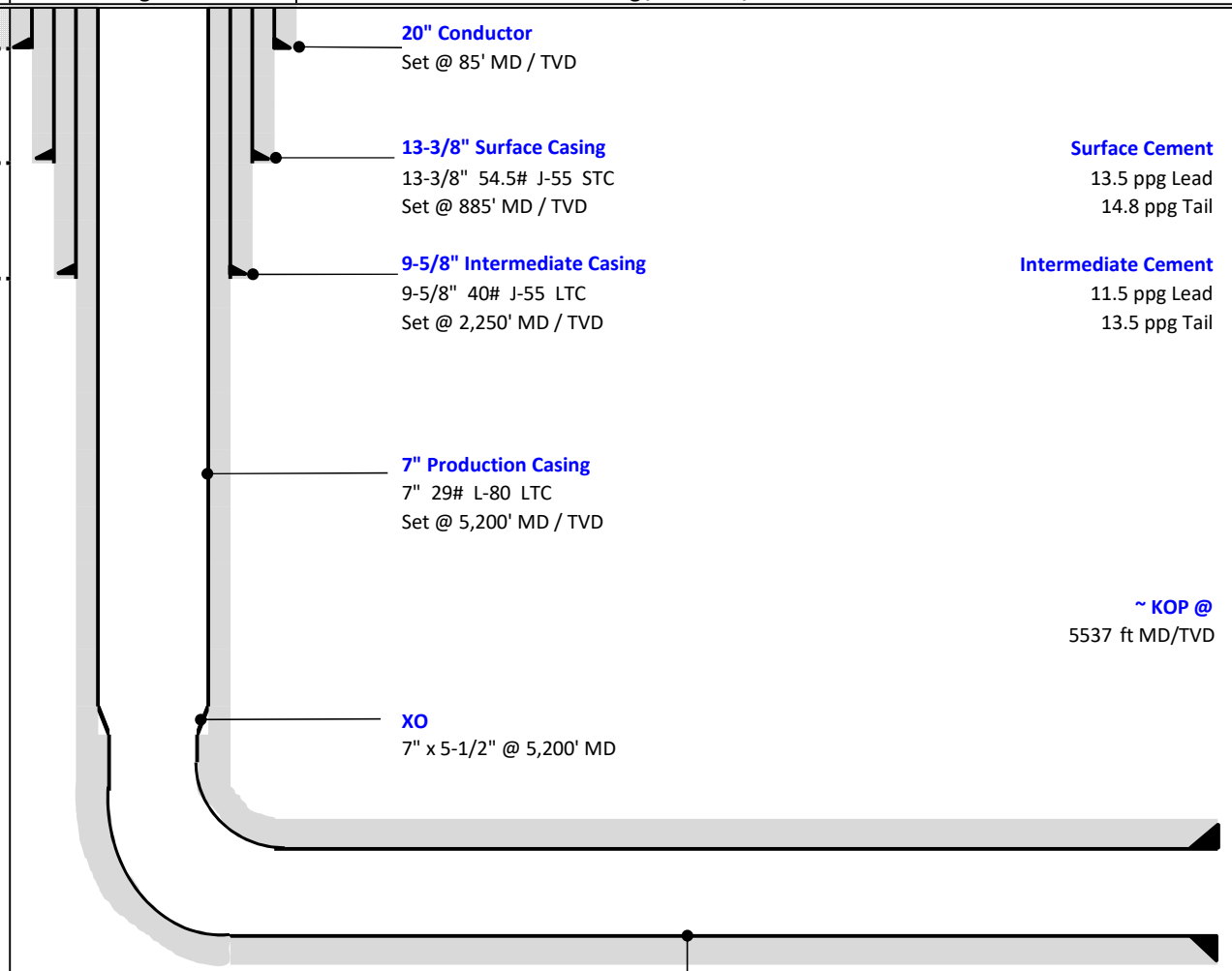
ConocoPhillips

CASED HOLE - WELLBORE CASING & CEMENTING SCHEMATIC

Wellbore Section	Mud Properties Type	Mud Properties PPG	Hole Size
COND			
SURFACE	Native	8.6 PPG	17-1/2"
INTERM	Brine	10.0 PPG	12-1/4"
PRODUCTION	Cut Brine	8.6 PPG - 9.0 PPG	8-3/4"

Wellbore Design

Casing Profile



Casing / Cement / Directional Plan Details

20" Conductor
Set @ 85' MD / TVD

13-3/8" Surface Casing
13-3/8" 54.5# J-55 STC
Set @ 885' MD / TVD

Surface Cement
13.5 ppg Lead
14.8 ppg Tail

9-5/8" Intermediate Casing
9-5/8" 40# J-55 LTC
Set @ 2,250' MD / TVD

Intermediate Cement
11.5 ppg Lead
13.5 ppg Tail

7" Production Casing
7" 29# L-80 LTC
Set @ 5,200' MD / TVD

~ KOP @
5537 ft MD/TVD

XO
7" x 5-1/2" @ 5,200' MD

5-1/2" Production Casing
5-1/2" 17# L-80 LTC
Set @ 13586 ft MD
6110 ft TVD

Production Cement
11.0 ppg Lead
14.0 ppg Tail

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Road, Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals and Natural Resources Department

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

Submit Original to Appropriate District Office

GAS CAPTURE PLAN

☒ Original
☐ Amended
Reason for Amendment:

Operator & OGRID No.: ConocoPhillips Company/ 217817
Date: 7/22/18

This Gas Capture Plan outlines actions to be taken by the Operator to reduce well/production facility flaring/venting for new completion (new drill, recomplete to new zone, re-frac) activity.

Note: A C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule 19.15.18.12.A

Well(s)/Production Facility – Name of facility

The well(s) that will be located at the production facility are shown in the table below.

Well Name	API	Well Location (ULSTR)	Footages	Expected MCF/D	Flared or Vented	Comments
Peridot 8 Federal 6H and 16H	Pending	Sec. 8, 17S, 32E	various	620/well initial production	Flared	flaring is expected to be sporadic

Note: Completion dates will vary, but typically will occur 60-120 days after total depth (TD) is reached.

Gathering System and Pipeline Notification

Well(s) will be connected to a production facility after flowback operations are complete, if gas transporter system is in place. The gas produced from production facility is dedicated to Frontier Field Services, LL and will be connected to Frontier Field Service low/high pressure gathering system located in Lea County, New Mexico. It will not require new pipeline to connect the facility to low/high pressure gathering system. ConocoPhillips provides (periodically) to Frontier a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, ConocoPhillips and Frontier have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at Frontier Processing Plant located in Sec.21, TWN 17S, RNG 32E, Lea County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures.

Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to production test tank(s) and gas will be flared or vented. During flowback, the fluids and sand content will be monitored. When the produced fluids contain minimal sand, the wells will be turned to production facilities. Gas sales should start as soon as the wells start flowing through the production facilities, unless there are operational issues on Frontier Services system at that time. Based on current information, it is ConocoPhillip's belief the system can take this gas upon completion of the well(s).

Safety requirements during cleanout operations from the use of underbalanced air cleanout systems may necessitate that sand and non-pipeline quality gas be vented and/or flared rather than sold on a temporary basis.

Alternatives to Reduce Flaring

Below are alternatives considered from a conceptual standpoint to reduce the amount of gas flared.

- Power Generation – On lease
  - Only a portion of gas is consumed operating the generator, remainder of gas will be flared
- Compressed Natural Gas – On lease
  - Gas flared would be minimal, but might be uneconomical to operate when gas volume declines
- NGL Removal – On lease
  - Plants are expensive, residue gas is still flared, and uneconomical to operate when gas volume declines

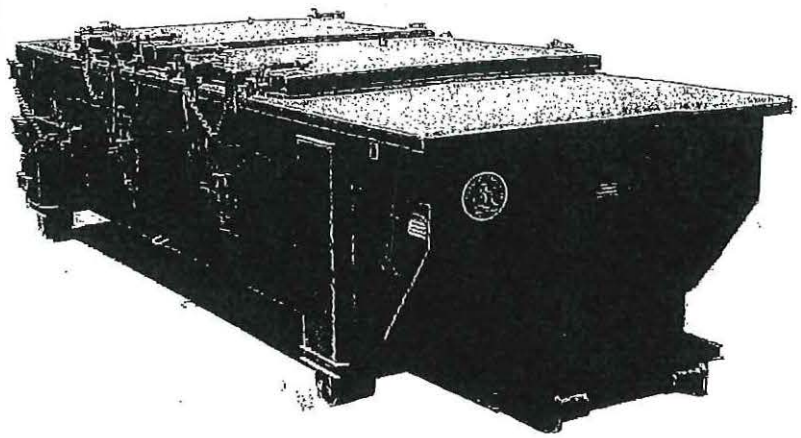
Gas Capture Plan
Peridot 8 Federal Wells

Peridot 8 Federal Wells-Located in Sec. 8, T17S, R32E				
Well Name:	6H	8H	16H	18H
Well Location:	1586' FNL	775' FNL	1485' FNL	635' FNL
	2635' FEL	2543' FWL	2538' FEL	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	480	480
Gas (mcfd)	620	620	530	530
Water (bwpd)	2300	2300	1900	1900
Date of First Production:	<45 days following completion operations			
Expected Well Life Expectancy:	25 years	25 years	25 years	25 years

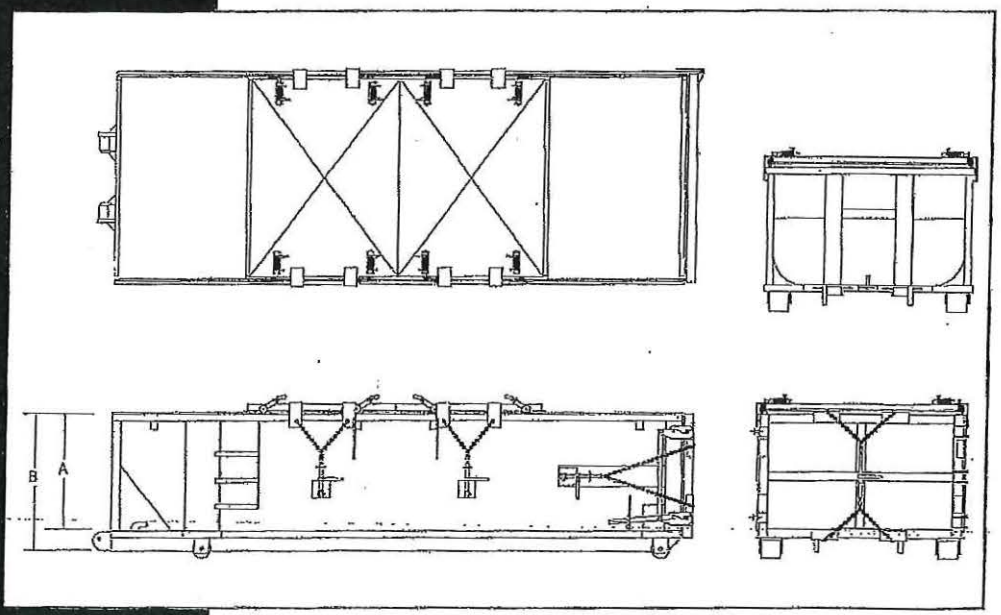
SPECIFICATIONS

FLOOR: 3/16" PL one piece
CROSS MEMBER: 3 x 4.1 channel 16" on center
WALLS: 3/16" PL solid welded with tubing top, inside liner hooks
DOOR: 3/16" PL with tubing frame
FRONT: 3/16" PL slant formed
PICK UP: Standard cable with 2" x 6" x 1/4" rails, gusset at each crossmember
WHEELS: 10 DIA x 9 long with rease fittings
DOOR LATCH: 3 Independent ratchet binders with chains, vertical second latch
GASKETS: Extruded rubber seal with metal retainers
WELDS: All welds continuous except sub-structure crossmembers
FINISH: Coated inside and out with direct to metal, rust inhibiting acrylic enamel color coat
HYDROTESTING: Full capacity static test
DIMENSIONS: 22'-11" long (21'-8" inside), 99" wide (88" inside), see drawing for height
OPTIONS: Steel grit blast and special paint, Ampliroll, Heil and Dino pickup
ROOF: 3/16" PL roof panels with tubing and channel support frame
LIDS: (2) 68" x 90" metal rolling lids spring loaded, self raising
ROLLERS: 4" V-groove rollers with delrin bearings and grease fittings
OPENING: (2) 60" x 82" openings with 8" divider centered on container
LATCH: (2) independent ratchet binders with chains per lid
GASKETS: Extruded rubber seal with metal retainers

Heavy Duty Split Metal Rolling Lid



CONT.	A	B
20 YD	41	53
25 YD	53	65
30 YD	65	77



Peridot 8 Fed 16H

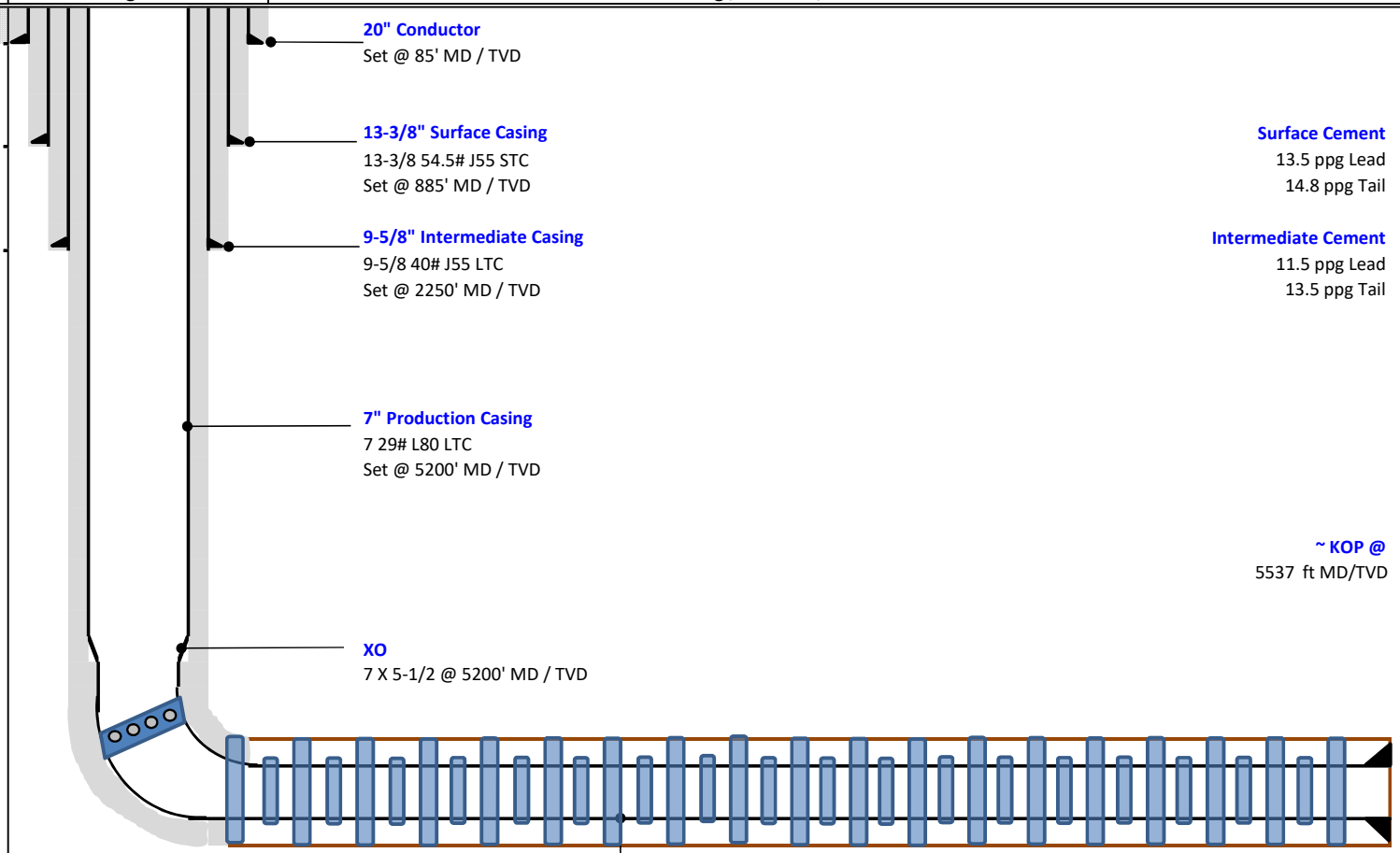
ConocoPhillips

OPEN HOLE SLEEVE - WELLBORE CASING & CEMENTING SCHEMATIC

Wellbore Section	Mud Properties Type	Mud Properties PPG	Hole Size
COND			
SURFACE	Native	8.6 PPG	17-1/2"
INTERM	Brine	10.0 PPG	12-1/4"
PRODUCTION	Cut Brine	8.6 PPG - 9.0 PPG	8-3/4"

Wellbore Design | 7/23/2018

Casing Profile



Casing / Cement / Directional Plan Details

20" Conductor
Set @ 85' MD / TVD

13-3/8" Surface Casing
13-3/8 54.5# J55 STC
Set @ 885' MD / TVD

Surface Cement
13.5 ppg Lead
14.8 ppg Tail

9-5/8" Intermediate Casing
9-5/8 40# J55 LTC
Set @ 2250' MD / TVD

Intermediate Cement
11.5 ppg Lead
13.5 ppg Tail

7" Production Casing
7 29# L80 LTC
Set @ 5200' MD / TVD

~ KOP @
5537 ft MD/TVD

XO
7 X 5-1/2 @ 5200' MD / TVD

5-1/2" Production Casing
5-1/2 20# L80 LTC
Set @ 13586 ft MD
6110 ft TVD

Production Cement
11.0 ppg Lead
14.0 ppg Tail

ConocoPhillips, Peridot 8 Federal 16H – Drill Plan

1. Geologic Formations

KB TVD of target	6110’	Pilot hole depth	NA
KB MD at TD:	13586’	Deepest expected fresh water:	855’

Basin

Formation	KB TVD (ft)	Elevation KB (ft)	Water/Mineral Bearing/Target Zone	Hazards*
Rustler	855	3216	Fresh Water	
Salado	990	3081	Brackish Water	
Tansill	2075	1996	Salt	
Yates	2215	1856	Salt Water	
Seven Rivers	2520	1551	Oil/Gas	
Queen	3140	931	Oil/Gas	
Grayburg	3575	496	Oil/Gas	
San Andres	3875	196	Oil/Gas	
Glorieta	5385	-1314	Oil/Gas	
Paddock	5475	-1404	Oil/Gas	
Blinebry	5810	-1738	Target	
Land Pt / TD	6110	-2039	Target	

2. Casing Program – Openhole Sliding Sleeves Completion Option

3 strings casing design										
Hole Size	Casing Interval From	Casing Interval 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”	5200	13586	5.5”	20	L80	LTC/BTC	3.09	3.21	2.78	3.12
				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.
- Option to run Openhole Sliding Sleeves, 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 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.	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?	

2. Cementing Program

Casing	# Sks	Wt. lb/ gal	Yld ft3/ sack	H_20 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
Prod – Cased Hole Option	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

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’	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 – 100º

- 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.

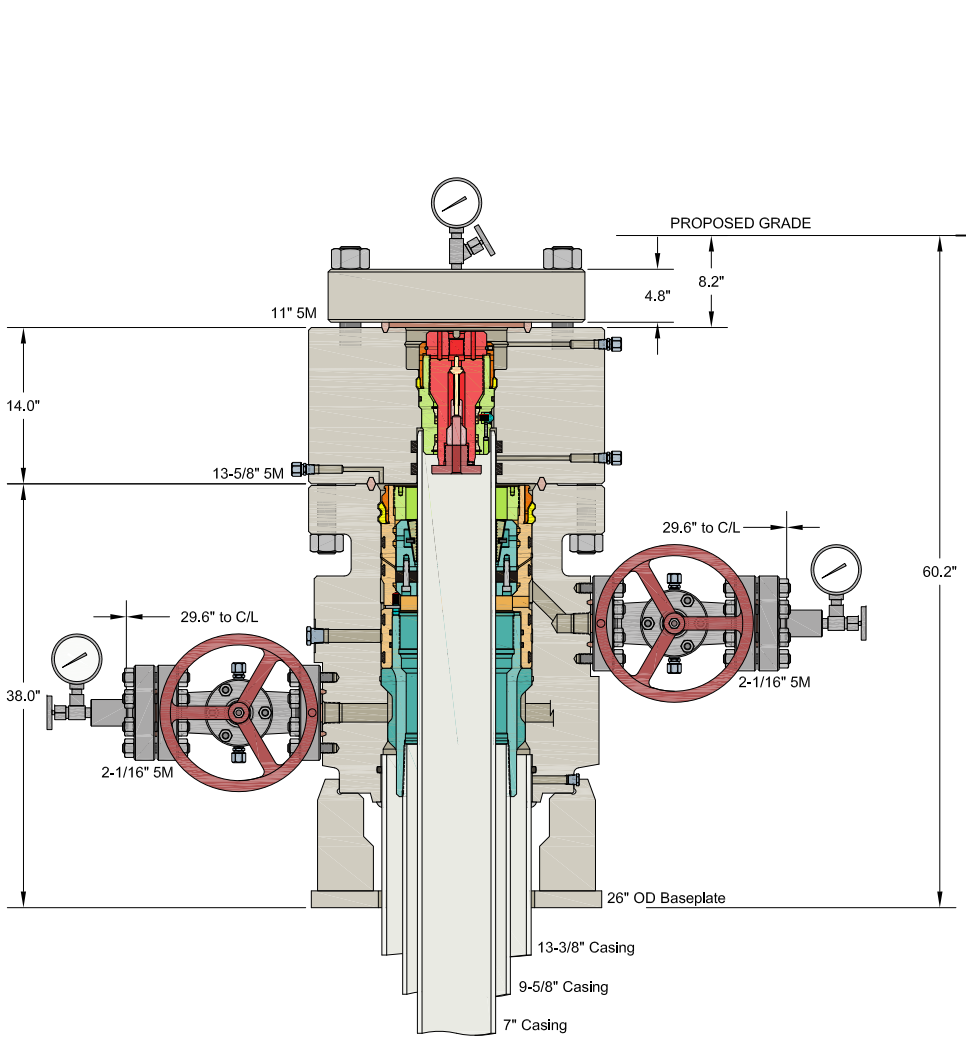
Gas detection equipment and pit level flow monitoring equipment will be on location. A flow paddle will be installed in the flow line to monitor relative amount of mud flowing in the non-pressurized return line. Mud probes will be installed in the individual tanks to monitor pit volumes of the drilling 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

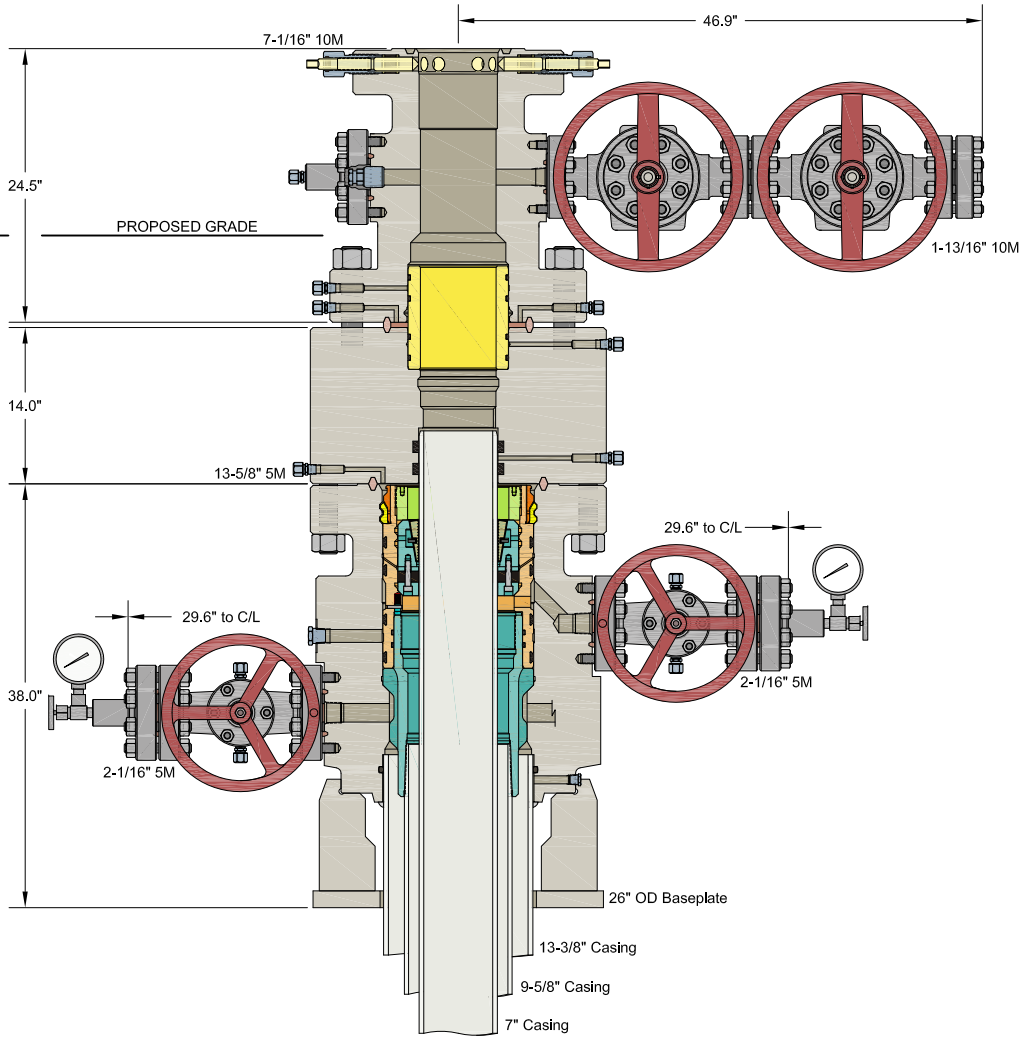
Is this a walking operation? If yes, describe. NO.
Will be pre-setting casing? If yes, describe. NO.

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



DRILL AND SKID CONFIGURATION



PRODUCTION CONFIGURATION

Peridot 8 Federal 16H

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 and11" 5M x 7-1/16" 10M CTH-HPS-F Tubing Head

DRAWN	THH	26JUL15
APPRV		
DRAWING NO.	ODE0000716	

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**BTA OIL PRODUCERS LLC**
LEASE NO.:	**NMLC0064149**
WELL NAME & NO.:	PERIDOT 8 FEDERAL 16H
SURFACE HOLE FOOTAGE:	1485'/N & 2538'/E
BOTTOM HOLE FOOTAGE	1650'/N & 330'/W
LOCATION:	Section 8, T.17 S., R.32 E., NMPM
COUNTY:	Lea County, New Mexico

COA

H2S	◉ Yes	○ No	
Potash	◉ None	○ Secretary	○ R-111-P
Cave/Karst Potential	◉ Low	○ Medium	○ High
Cave/Karst Potential	○ Critical		
Variance	○ None	◉ Flex Hose	○ Other
Wellhead	○ Conventional	○ Multibowl	◉ Both
Other	☐ 4 String Area	☐ Capitan Reef	☐ WIPP
Other	☐ Fluid Filled	☐ Cement Squeeze	☐ Pilot Hole
Special Requirements	☐ Water Disposal	☐ COM	☐ Unit

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the Grayburg formation. As a result, the Hydrogen Sulfide area must meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, please provide measured values and formations to the BLM.

B. CASING

Casing Design:

1. The **13-3/8** inch surface casing shall be set at approximately **885** feet (a minimum of **25 feet (Lea County)** into the Rustler Anhydrite and above the salt) and cemented to the surface.

    a. If cement does not circulate to the surface, the appropriate BLM office shall be notified and a temperature survey utilizing an electronic type temperature survey with surface log readout will be used or a cement bond log shall be run to verify the top of the cement. Temperature survey will be run a minimum of six hours after pumping cement and ideally between 8-10 hours after

completing the cement job.

b. Wait on cement (WOC) time for a primary cement job will be a minimum of **8 hours** or 500 pounds compressive strength, whichever is greater. (This is to include the lead cement)
c. Wait on cement (WOC) time for a remedial job will be a minimum of 4 hours after bringing cement to surface or 500 pounds compressive strength, whichever is greater.
d. If cement falls back, remedial cementing will be done prior to drilling out that string.

2. The minimum required fill of cement behind the **9-5/8** inch intermediate casing, which shall be set at approximately **2000** feet is:

- Cement to surface. If cement does not circulate see B.1.a, c-d above.

3. The minimum required fill of cement behind the **7 X 5-1/2** inch production casing is:

- Cement should tie-back at least **200 feet** into previous casing string. Operator shall provide method of verification.

C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).'

2.

Option 1:

a. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **2000 (2M)** psi.

b. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the intermediate casing shoe shall be **3000 (3M)** psi.

Option 2:

1. Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.

    a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
    b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
    c. Manufacturer representative shall install the test plug for the initial BOP test.
    d. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.
    e. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.

GENERAL REQUIREMENTS

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

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

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

☒ Lea County
Call the Hobbs Field Station, 414 West Taylor, Hobbs NM 88240, (575) 393-3612

1. Unless the production casing has been run and cemented or the well has been properly plugged, the drilling rig shall not be removed from over the hole without prior approval.

    a. In the event the operator has proposed to drill multiple wells utilizing a skid/walking rig. Operator shall secure the wellbore on the current well, after installing and testing the wellhead, by installing a blind flange of like pressure

rating to the wellhead and a pressure gauge that can be monitored while drilling is performed on the other well(s).

b. When the operator proposes to set surface casing with Spudder Rig
   - Notify the BLM when moving in and removing the Spudder Rig.
   - Notify the BLM when moving in the 2nd Rig. Rig to be moved in within 90 days of notification that Spudder Rig has left the location.
   - BOP/BOPE test to be conducted per Onshore Oil and Gas Order No. 2 as soon as 2nd Rig is rigged up on well.

2. Floor controls are required for 3M or Greater systems. These controls will be on the rig floor, unobstructed, readily accessible to the driller and will be operational at all times during drilling and/or completion activities. Rig floor is defined as the area immediately around the rotary table; the area immediately above the substructure on which the draw works are located, this does not include the dog house or stairway area.

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

A. CASING

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

2. Wait on cement (WOC) for Potash Areas: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi for all cement blends, 2) until cement has been in place at least 24 hours. WOC time will be recorded in the driller's log. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

3. Wait on cement (WOC) for Water Basin: After cementing but before commencing any tests, the casing string shall stand cemented under pressure until both of the following conditions have been met: 1) cement reaches a minimum compressive strength of 500 psi at the shoe, 2) until cement has been in place at least 8 hours. WOC time will be recorded in the driller's log. See individual casing strings for details regarding lead cement slurry requirements. The casing intergrity test can be done (prior to the cement setting up) immediately after bumping the plug.

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

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

6. 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. Formation at the shoe shall be tested to a minimum of the mud weight equivalent anticipated to control the formation pressure to the next casing depth or at total depth of the well. This test shall be performed before drilling more than 20 feet of new hole.

7. If hardband drill pipe is rotated inside casing, returns will be monitored for metal. If metal is found in samples, drill pipe will be pulled and rubber protectors which have a larger diameter than the tool joints of the drill pipe will be installed prior to continuing drilling operations.
8. Whenever a casing string is cemented in the R-111-P potash area, the NMOCD requirements shall be followed.

B. PRESSURE CONTROL

1. All blowout preventer (BOP) and related equipment (BOPE) shall comply with well control requirements as described in Onshore Oil and Gas Order No. 2 and API RP 53 Sec. 17.

2. If a variance is approved for a flexible hose to be installed from the BOP to the choke manifold, the following requirements apply: The flex line must meet the requirements of API 16C. Check condition of flexible line from BOP to choke manifold, replace if exterior is damaged or if line fails test. Line to be as straight as possible with no hard bends and is to be anchored according to Manufacturer's requirements. The flexible hose can be exchanged with a hose of equal size and equal or greater pressure rating. Anchor requirements, specification sheet and hydrostatic pressure test certification matching the hose in service, to be onsite for review. These documents shall be posted in the company man's trailer and on the rig floor.

3. 5M or higher system requires an HCR valve, remote kill line and annular to match. The remote kill line is to be installed prior to testing the system and tested to stack pressure.

4. If the operator has proposed a multi-bowl wellhead assembly in the APD. The following requirements must be met:

a. Wellhead shall be installed by manufacturer's representatives, submit documentation with subsequent sundry.
b. If the welding is performed by a third party, the manufacturer's representative shall monitor the temperature to verify that it does not exceed the maximum temperature of the seal.
c. Manufacturer representative shall install the test plug for the initial BOP test.
d. Whenever any seal subject to test pressure is broken, all the tests in OOGO2.III.A.2.i must be followed.
e. If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head shall be cut off, cementing operations performed and another wellhead installed.

5. The appropriate BLM office shall be notified a minimum of 4 hours in advance for a representative to witness the tests.

a. In a water basin, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. The casing cut-off and BOP installation can be initiated four hours after installing the slips, which will be approximately six hours after bumping the plug. For those casing strings not using slips, the minimum wait time before cut-off is eight hours after bumping the plug. BOP/BOPE testing can begin after cut-off or once cement reaches 500 psi compressive strength (including lead when specified), whichever is greater. However, if the float does not hold, cut-off cannot be initiated until cement reaches 500 psi compressive strength (including lead when specified).

b. In potash areas, for all casing strings utilizing slips, these are to be set as soon as the crew and rig are ready and any fallback cement remediation has been done. For all casing strings, casing cut-off and BOP installation can be initiated at twelve hours after bumping the plug. However, **no tests** shall commence until the cement has had a minimum of 24 hours setup time, except the casing pressure test can be initiated immediately after bumping the plug (only applies to single stage cement jobs).

c. The tests shall be done by an independent service company utilizing a test plug not a cup or J-packer. The operator also has the option of utilizing an independent tester to test without a plug (i.e. against the casing) pursuant to Onshore Order 2 with the pressure not to exceed 70% of the burst rating for the casing. Any test against the casing must meet the WOC time for water basin (8 hours) or potash (24 hours) or 500 pounds compressive strength, whichever is greater, prior to initiating the test (see casing segment as lead cement may be critical item).

d. The test shall be run on a 5000 psi chart for a 2-3M BOP/BOP, on a 10000 psi chart for a 5M BOP/BOPE and on a 15000 psi chart for a 10M BOP/BOPE.

If a linear chart is used, it shall be a one hour chart. A circular chart shall have a maximum 2 hour clock. If a twelve hour or twenty-four hour chart is used, tester shall make a notation that it is run with a two hour clock.

e. The results of the test shall be reported to the appropriate BLM office.

f. All tests are required to be recorded on a calibrated test chart. A copy of the BOP/BOPE test chart and a copy of independent service company test will be submitted to the appropriate BLM office.

g. The BOP/BOPE test shall include a low pressure test from 250 to 300 psi. The test will be held for a minimum of 10 minutes if test is done with a test plug and 30 minutes without a test plug. This test shall be performed prior to the test at full stack pressure.

h. BOP/BOPE must be tested by an independent service company within 500 feet of the top of the Wolfcamp formation if the time between the setting of the intermediate casing and reaching this depth exceeds 20 days. This test does not exclude the test prior to drilling out the casing shoe as per Onshore Order No. 2.

C. DRILLING MUD

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

D. WASTE MATERIAL AND FLUIDS

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

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

OTA06292020

APD ID: 10400032588 **Submission Date:** 12/08/2018

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: PERIDOT 8 FEDERAL **Well Number:** 16H

Well Type: OIL WELL **Well Work Type:** Drill

Highlighted data reflects the most recent changes

Show Final Text

Section 1 - Existing Roads

Will existing roads be used? YES

Existing Road Map:

Peridot_8_Fed_16H_AccessRoadTopos_20181206192601.pdf

Existing Road Purpose: ACCESS **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_16H_AccessRoadROWs_20181206192713.pdf
Peridot_8_Fed_16H_TempAccessRoad_20181206192734.pdf

New road type: RESOURCE

Length: 480 Feet **Width (ft.):** 30

Max slope (%): 0 **Max grade (%):** 4

Army Corp of Engineers (ACOE) permit required? NO

ACOE Permit Number(s):

New road travel width: 17

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

New road access plan or profile prepared? NO

New road access plan attachment:

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: PERIDOT 8 FEDERAL **Well Number:** 16H

Access road engineering design? NO

Access road engineering design attachment:

Turnout? N

Access surfacing type: OTHER

Access topsoil source: OFFSITE

Access surfacing type description: clean 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 of 17' is needed to accommodate larger rig wheelbase.

Access miscellaneous information: About 4659' of access road to be shared with other Peridot wells and new facility is already installed. The temporary road is needed to provide adequate access for the larger rig to be used. The temporary road will be reclaimed according to BLM specifications after both wells on this twin pad are drilled and completed.

Number of access turnouts: **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

Section 3 - Location of Existing Wells

Existing Wells Map? YES

Attach Well map:

Peridot_8_Fed_16H_One_Mile_Radius_Map_20181206193543.pdf

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: PERIDOT 8 FEDERAL **Well Number:** 16H

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

Submit or defer a Proposed Production Facilities plan? DEFER

Estimated 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. Facility should be commissioned in early 2019.

Section 5 - Location and Types of Water Supply

Water Source Table

Water source type: GW WELL

Water source use type: SURFACE CASING
STIMULATION
CAMP USE
INTERMEDIATE/PRODUCTION CASING

Source latitude: **Source longitude:**

Source datum:

Water source permit type: WATER WELL
PRIVATE CONTRACT

Water source transport method: PIPELINE
TRUCKING

Source land ownership: FEDERAL

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_16H_WaterSourceMap_20181206194628.pdf

Water source comments: Current water sources include Rockhouse Ranch (two sources) located in Section 13, T17S, R33E. An additional potential source is Morewest Corporation, New Mexico with wells located in 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

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: PERIDOT 8 FEDERAL **Well Number:** 16H

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

Using any construction materials: YES

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 Topos A and B attached.

Construction Materials source location attachment:

Section 7 - Methods for Handling Waste

Waste type: DRILLING

Waste content description: Drilling mud and cuttings

Amount of waste: 4000 barrels

Waste disposal frequency : Daily

Safe containment description: Drilling fluid and cuttings are temporarily stored in closed loop system of large roll off bins (40-60 yards each). Fluid and cuttings are contained separately.

Safe containmant attachment:

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

Disposal type description:

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: PERIDOT 8 FEDERAL **Well Number:** 16H

Disposal location description: Drilling fluid and cuttings are hauled to an approved commercial site R360 off Hwy 62 near Hobbs and/or the Halfway facility near Carlsbad.

Waste type: SEWAGE

Waste content description: Sewage and gray water

Amount of waste: 3000 gallons

Waste disposal frequency : Weekly

Safe containment description: Tanmar white upright plastic storage tanks are used for temporary containment.

Safe containmant attachment:

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

Disposal type description:

Disposal location description: City of Hobbs treatment facility.

Waste type: GARBAGE

Waste content description: Standard household refuse

Amount of waste: 4000 pounds

Waste disposal frequency : Weekly

Safe containment description: Refuse is temporarily stored in rented standard trash dumpster.

Safe containmant attachment:

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

Disposal type description:

Disposal location description: Trash is hauled to Lea County facility. Other county facility may also be used depending on availability at the time drilling occurs.

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

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: PERIDOT 8 FEDERAL **Well Number:** 16H

Cuttings Area being used? NO

Are you storing cuttings on location? YES

Description of cuttings location Cuttings will be held temporarily 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?: NO

Ancillary Facilities attachment:

Comments:

Section 9 - Well Site Layout

Well Site Layout Diagram:

Peridot_8_Fed_16H_SiteLayoutArch_20181206200736.pdf

Peridot_8_Fed_16H_SiteLayoutCutFill_20181206200759.pdf

Comments:

Section 10 - Plans for Surface Reclamation

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

Multiple Well Pad Number: 6H

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.

Well pad proposed disturbance (acres): 3.122	**Well pad interim reclamation (acres):** 1.573	**Well pad long term disturbance (acres):** 0
Road proposed disturbance (acres): 0.331	**Road interim reclamation (acres):** 0.296	**Road long term disturbance (acres):** 0
Powerline proposed disturbance (acres): 0	**Powerline interim reclamation (acres):** 0	**Powerline long term disturbance (acres):** 0
Pipeline proposed disturbance (acres): 0.18	**Pipeline interim reclamation (acres):** 0	**Pipeline long term disturbance (acres):** 0
Other proposed disturbance (acres): 0	**Other interim reclamation (acres):** 0	**Other long term disturbance (acres):** 0
Total proposed disturbance: 3.633	**Total interim reclamation:** 1.869	**Total long term disturbance:** 0

Disturbance Comments: Disturbance will be shared with the Peridot 8 Federal 6H well, as this is a twin pad.

Reconstruction method: If this well is a producer site interim reclamation/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. Dimensions of production pad are noted on the attached Reclamation Diagram. 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 known as the Mescalero Plain. No named tributaries, streams or wetlands are in the near vicinity. Elevation is around 4054’. 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:

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 Summary

Total pounds/Acre:

Seed Type	Pounds/Acre

Seed reclamation attachment:

Operator Contact/Responsible Official Contact Info

First Name: **Last Name:**

Phone: **Email:**

Seedbed prep:

Seed BMP:

Seed method:

Existing invasive species? NO

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: PERIDOT 8 FEDERAL **Well Number:** 16H

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 line route, and power line

Surface Owner: BUREAU OF LAND MANAGEMENT

Other surface owner description:

BIA Local Office:

BOR Local Office:

COE Local Office:

DOD Local Office:

NPS Local Office:

State Local Office:

Military Local Office:

USFWS Local Office:

Other Local Office:

USFS Region:

USFS Forest/Grassland: **USFS Ranger District:**

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: PERIDOT 8 FEDERAL **Well Number:** 16H

Section 12 - Other Information

Right of Way needed? NO **Use APD as ROW?**

ROW Type(s):

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. Previously approved 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: Onsite was conducted 6/20/17. Surface Use Plan of Operation was finalized during onsites with the following attendees: Ms. Ceperio-Rios, Ms. Brooks, Mr. Mathis, Mr. Wasson, and Ms. Maunder, along with our survey crew. Archaeological survey requirements have been met by block survey 2151. Please review the applications for Peridot 8 Federal 6H and 16H together.

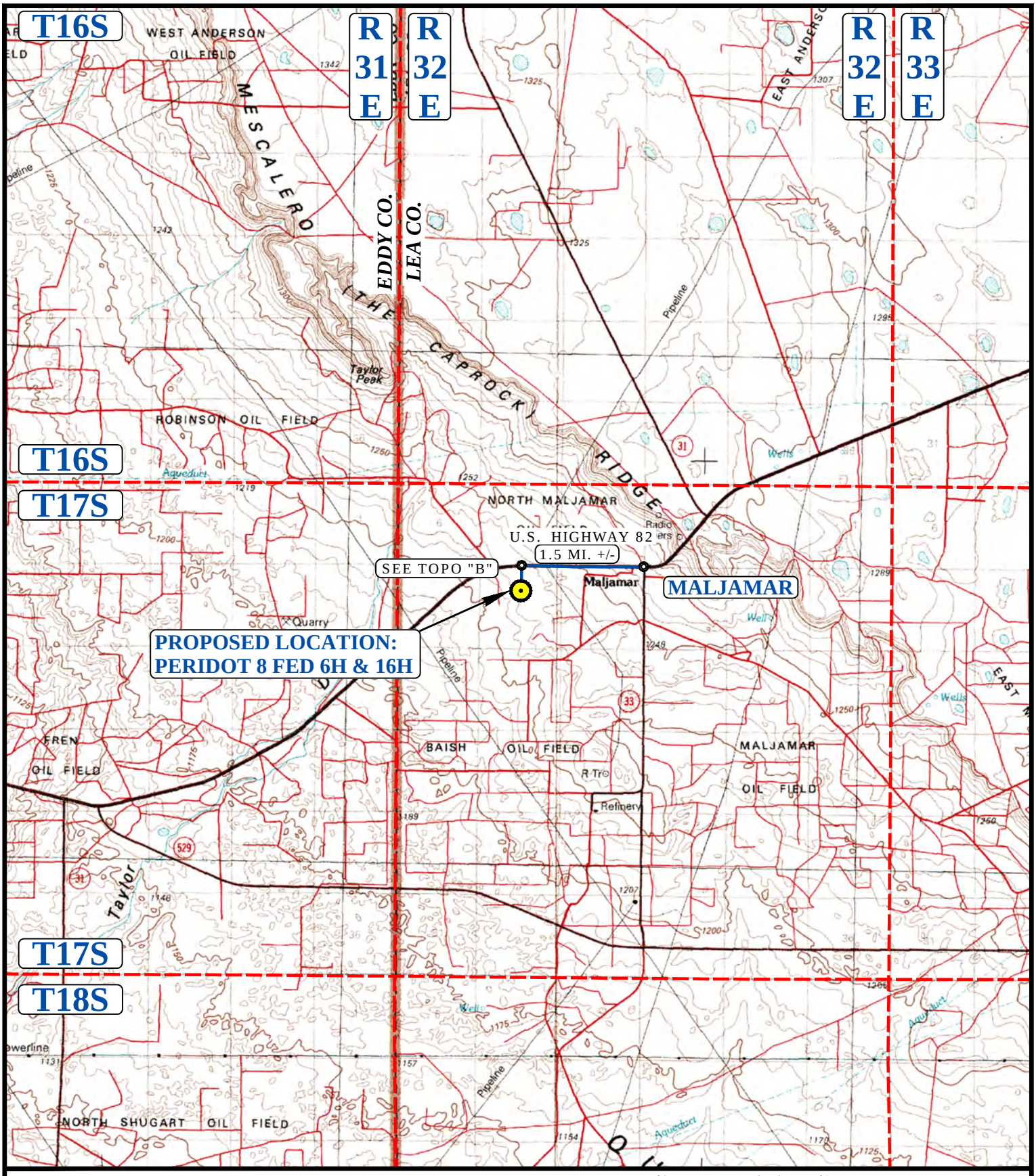
Other SUPO Attachment

Peridot_8_Federal_Development_Image_20181207123916.pdf

Peridot_8_Fed_16H_FlowLineROW_20181207123933.pdf

Peridot_8_Fed_16H_ReclamationDiagram_20181207123956.pdf

Peridot_8_Fed_16H_SUPOviaAccess_20181207124204.pdf



LEGEND:

PROPOSED LOCATION

N

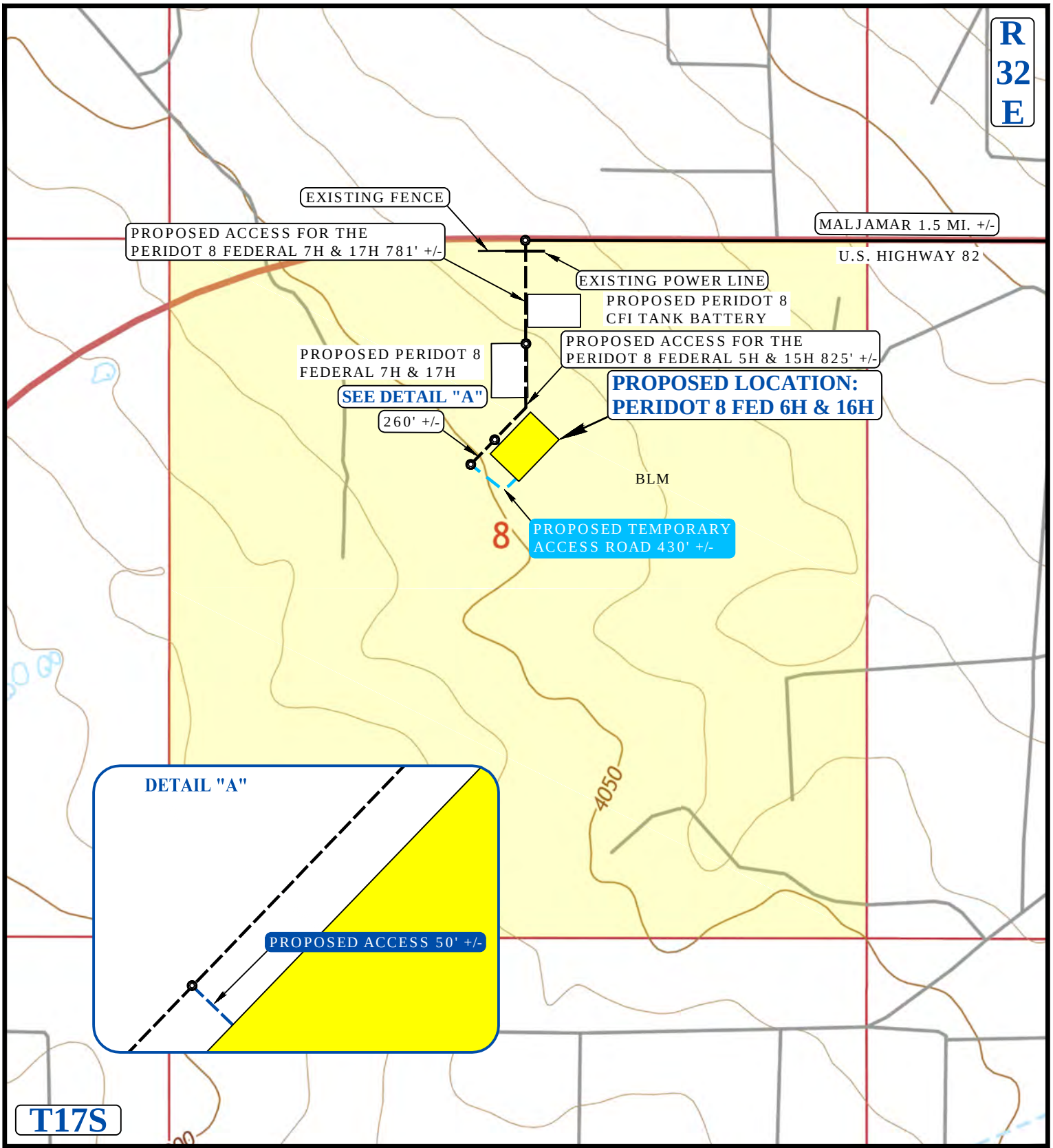
ConocoPhillips Company

PERIDOT 8 FEDERAL 6H & 16H
SE 1/4 NW 1/4, SECTION 8, T17S, R32E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	J.A.V., R.D.	06-24-17	**SCALE**
DRAWN BY	L.W.	06-30-17	1 : 100,000
ACCESS ROAD MAP			**TOPO A**

UINTAH ENGINEERING & LAND SURVEYING

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



NOTE: PARCEL DATA SHOWN HAS BEEN OBTAINED FROM VARIOUS SOURCES AND SHOULD BE USED FOR MAPPING, GRAPHIC AND PLANNING PURPOSES ONLY. NO WARRANTY IS MADE BY UINTAH ENGINEERING AND LAND SURVEYING (UELS) FOR ACCURACY OF THE PARCEL DATA.

LEGEND:

- EXISTING ROAD
- PROPOSED ROAD
- EXISTING FENCE
- PROPOSED TEMPORARY ACCESS ROAD
- PROPOSED ROAD (SERVICING OTHER WELLS)
- EXISTING POWER LINE

UINTAH ENGINEERING & LAND SURVEYING

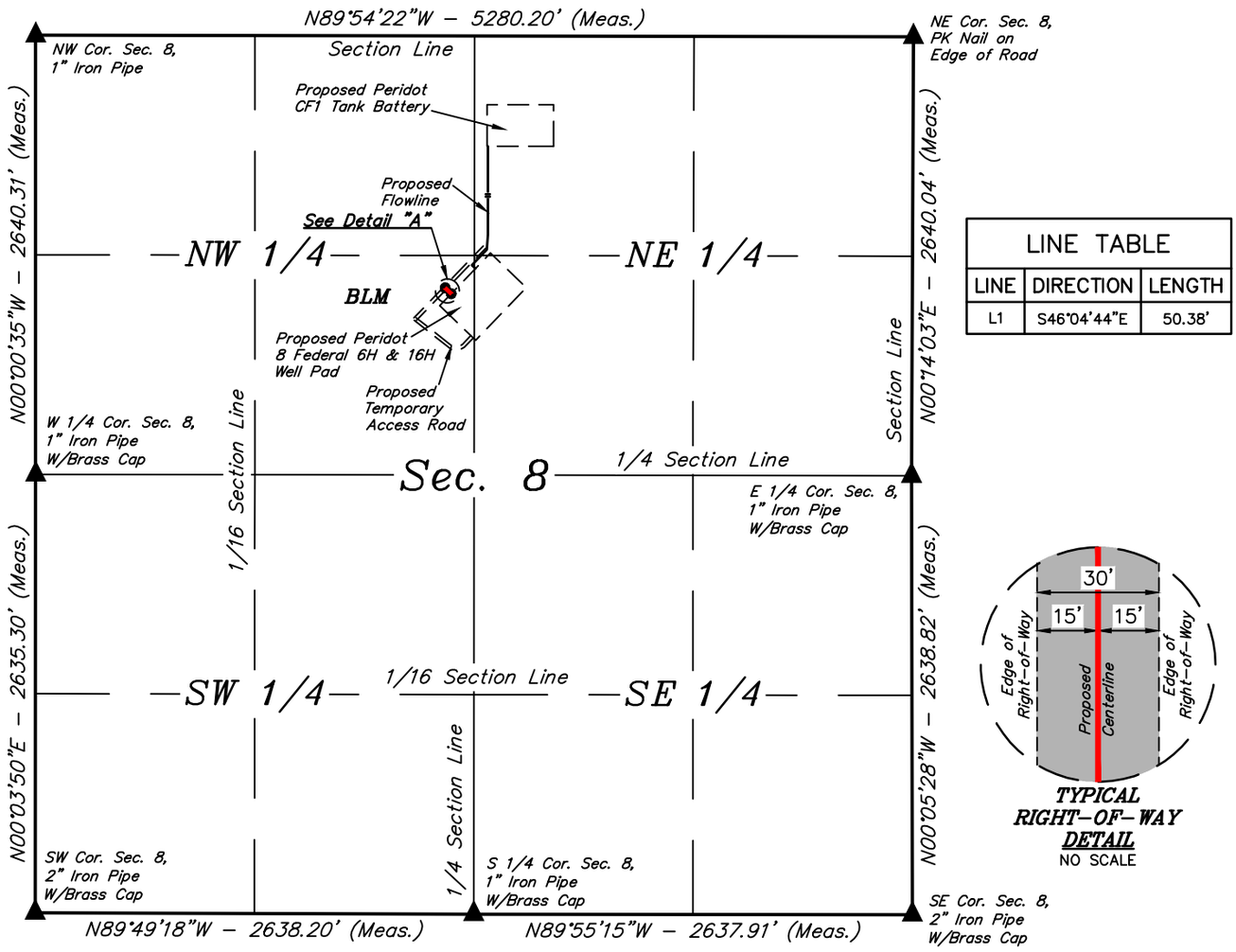
UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

N

ConocoPhillips Company

PERIDOT 8 FEDERAL 6H & 16H
SE 1/4 NW 1/4, SECTION 8, T17S, R32E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	J.A.V., R.D.	06-24-17	SCALE
DRAWN BY	L.W.	06-30-17	1 : 12,000
ACCESS ROAD MAP			TOPO B



LINE TABLE		
LINE	DIRECTION	LENGTH
L1	S46°04'44"E	50.38'

TYPICAL RIGHT-OF-WAY DETAIL
NO SCALE

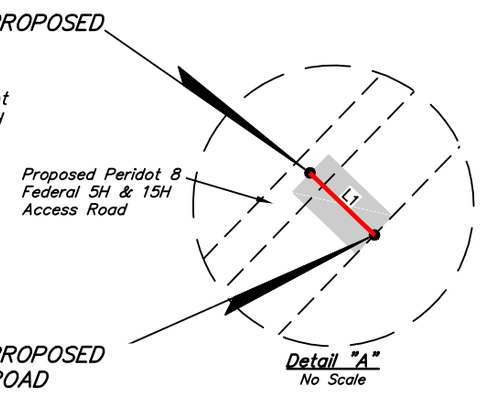
ACCESS ROAD RIGHT-OF-WAY DESCRIPTION

A 30' WIDE RIGHT-OF-WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

BEGINNING AT A POINT IN THE SE 1/4 NW 1/4 OF SECTION 8, T17S, R32E, N.M.P.M., WHICH BEARS N65°31'06"E 2706.84' FROM THE WEST 1/4 CORNER OF SAID SECTION 8, THENCE S46°04'44"E 50.38' TO A POINT IN THE SE 1/4 NW 1/4 OF SAID SECTION 8, WHICH BEARS N66°30'11"E 2725.78' FROM THE WEST 1/4 CORNER OF SAID SECTION 8. 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 W103.786335. CONTAINS 0.035 ACRES MORE OR LESS.

BEGINNING OF ACCESS ROAD BEARS N65°31'06"E 2706.84' FROM THE WEST 1/4 CORNER OF SECTION 8, T17S, R32E, N.M.P.M.

END OF ACCESS ROAD BEARS N66°30'11"E 2725.78' FROM THE WEST CORNER OF SECTION 8, T17S, R32E, N.M.P.M.



Detail "A"
No Scale

ACREAGE / LENGTH TABLE				
	OWNERSHIP	FEET	RODS	ACRES
SEC. 8 (NW 1/4)	BLM	50.38	3.05	0.035

▲ = SECTION CORNERS LOCATED.

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.

STATE OF NEW MEXICO
23782
Frank Buchele
07-20-17
PROFESSIONAL SURVEYOR

FILE: 61943

NOTES:
- The maximum grade of existing ground for the proposed access road is ±0%.
- Basis of Bearings is a Transverse Mercator Projection with a Central Meridian of W103.786335.

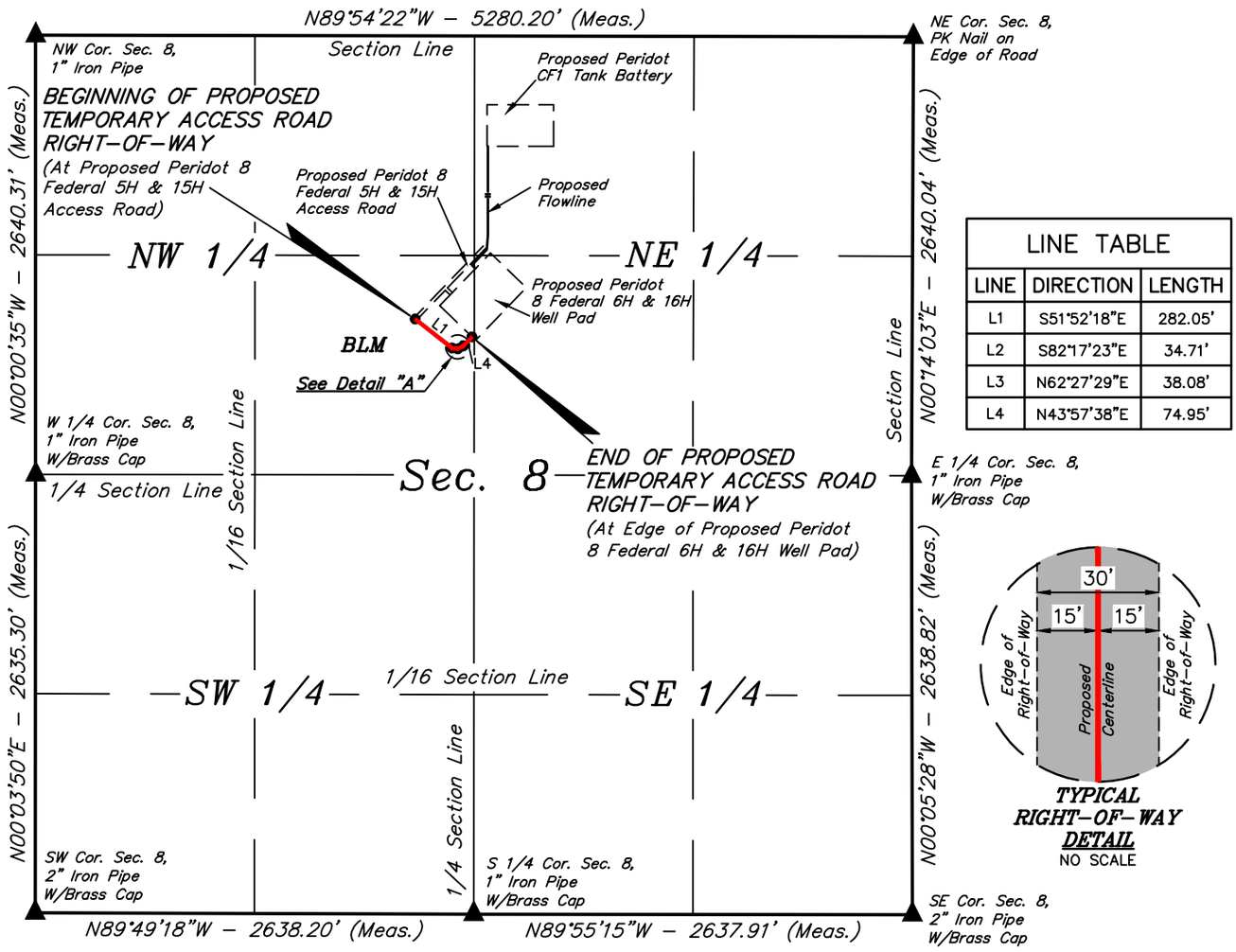
ConocoPhillips Company

PERIDOT 8 FEDERAL 6H & 16H
SECTION 8, T17S, R32E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	J.A.V., R.D.	06-24-17	SCALE
DRAWN BY	C.I.	07-20-17	1" = 1000'

ACCESS ROAD R-O-W

UINTAH ENGINEERING & LAND SURVEYING
UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017



LINE TABLE		
LINE	DIRECTION	LENGTH
L1	S51°52'18"E	282.05'
L2	S82°17'23"E	34.71'
L3	N62°27'29"E	38.08'
L4	N43°57'38"E	74.95'

TYPICAL RIGHT–OF–WAY DETAIL
NO SCALE

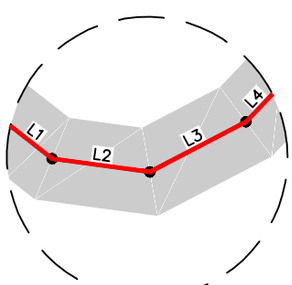
TEMPORARY ACCESS ROAD RIGHT–OF–WAY DESCRIPTION

A 30' WIDE RIGHT–OF–WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

BEGINNING AT A POINT IN THE SE 1/4 NW 1/4 OF SECTION 8, T17S, R32E, N.M.P.M., WHICH BEARS N67°44'08"E 2466.65' FROM THE WEST 1/4 CORNER OF SAID SECTION 8, THENCE S51°52'18"E 282.05'; THENCE S82°17'23"E 34.71'; THENCE N62°27'29"E 38.08'; THENCE N43°57'38"E 74.95' TO A POINT IN THE SE 1/4 NW 1/4 OF SAID SECTION 8, WHICH BEARS N72°30'19"E 2752.11' FROM THE WEST 1/4 CORNER OF SAID SECTION 8. 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 W103.786335. CONTAINS 0.296 ACRES MORE OR LESS.

BEGINNING OF TEMPORARY ACCESS ROAD BEARS N67°44'08"E 2466.65' FROM THE WEST 1/4 CORNER OF SECTION 8, T17S, R32E, N.M.P.M.

END OF TEMPORARY ACCESS ROAD BEARS N72°30'19"E 2752.11' FROM THE WEST 1/4 CORNER OF SECTION 8, T17S, R32E, N.M.P.M.

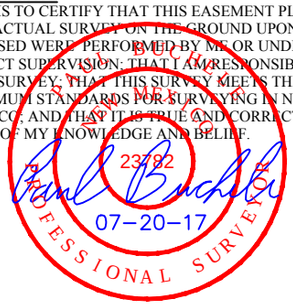


Detail "A"
No Scale

ACREAGE / LENGTH TABLE				
	OWNERSHIP	FEET	RODS	ACRES
SEC. 8 (NW 1/4)	BLM	429.80	26.05	0.296

▲ = SECTION CORNERS LOCATED.

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.



FILE: 61944

NOTES:
- The maximum grade of existing ground for the proposed access road is ±4%.
- Basis of Bearings is a Transverse Mercator Projection with a Central Meridian of W103.786335.

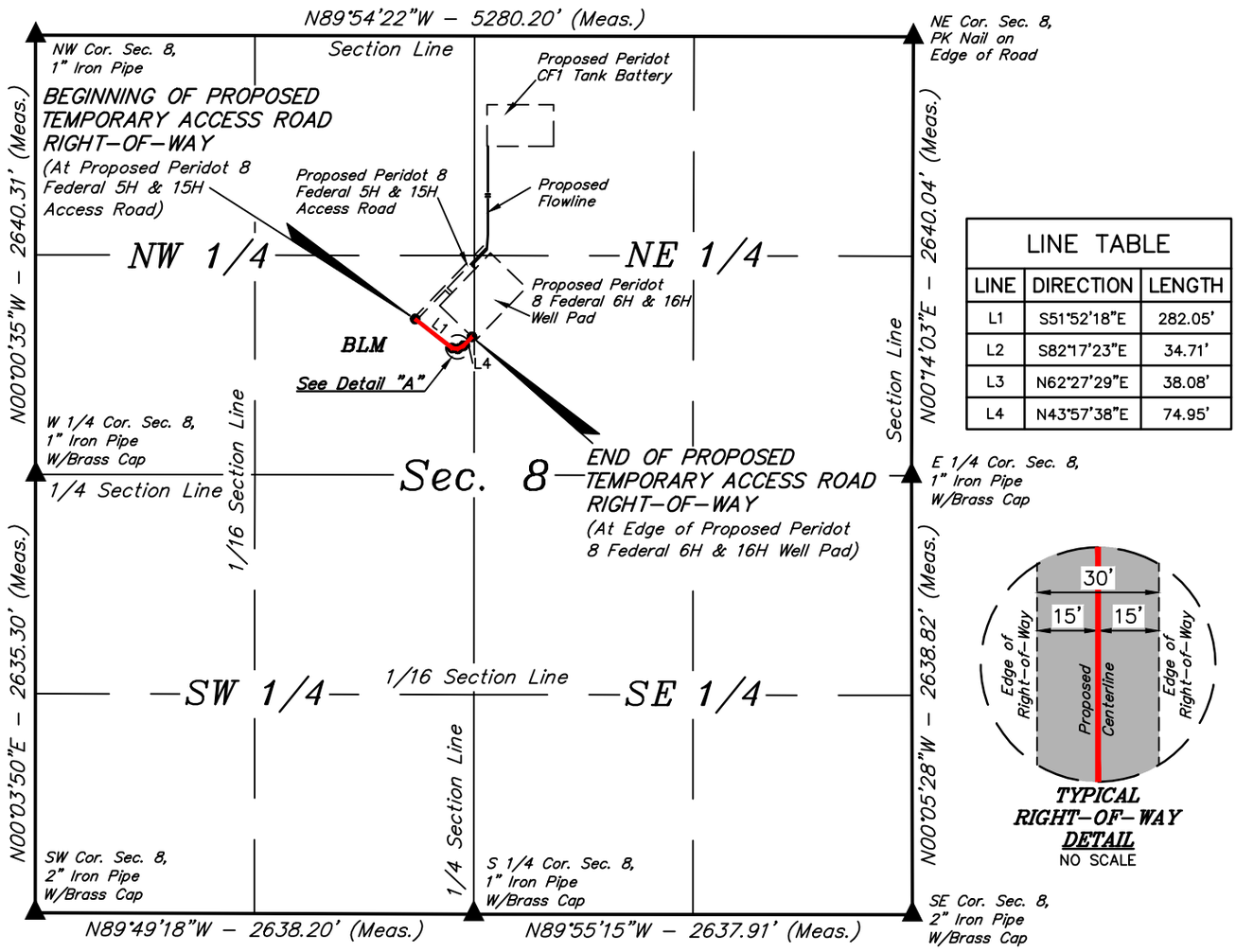
ConocoPhillips Company

PERIDOT 8 FEDERAL 6H & 16H
SECTION 8, T17S, R32E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	J.A.V., R.D.	06-24-17	SCALE
DRAWN BY	C.I.	07-20-17	1" = 1000'

TEMPORARY ACCESS ROAD R-O-W

UINTAH ENGINEERING & LAND SURVEYING
UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017



LINE TABLE		
LINE	DIRECTION	LENGTH
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L4	N43°57'38"E	74.95'

TYPICAL RIGHT–OF–WAY DETAIL
NO SCALE

TEMPORARY ACCESS ROAD RIGHT–OF–WAY DESCRIPTION

A 30' WIDE RIGHT–OF–WAY 15' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

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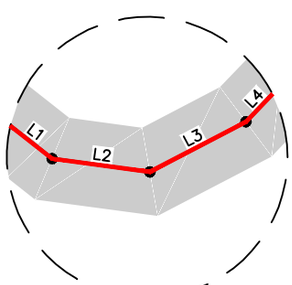
END OF TEMPORARY ACCESS ROAD BEARS N72°30'19"E 2752.11' FROM THE WEST 1/4 CORNER OF SECTION 8, T17S, R32E, N.M.P.M.



Detail "A"
No Scale

ACREAGE / LENGTH TABLE				
	OWNERSHIP	FEET	RODS	ACRES
SEC. 8 (NW 1/4)	BLM	429.80	26.05	0.296

▲ = SECTION CORNERS LOCATED.

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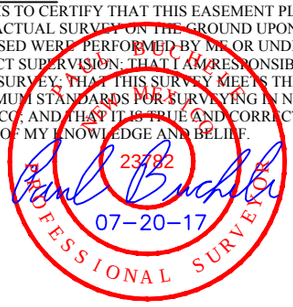


FILE: 61944

NOTES:
- The maximum grade of existing ground for the proposed access road is ±4%.
- Basis of Bearings is a Transverse Mercator Projection with a Central Meridian of W103.786335.

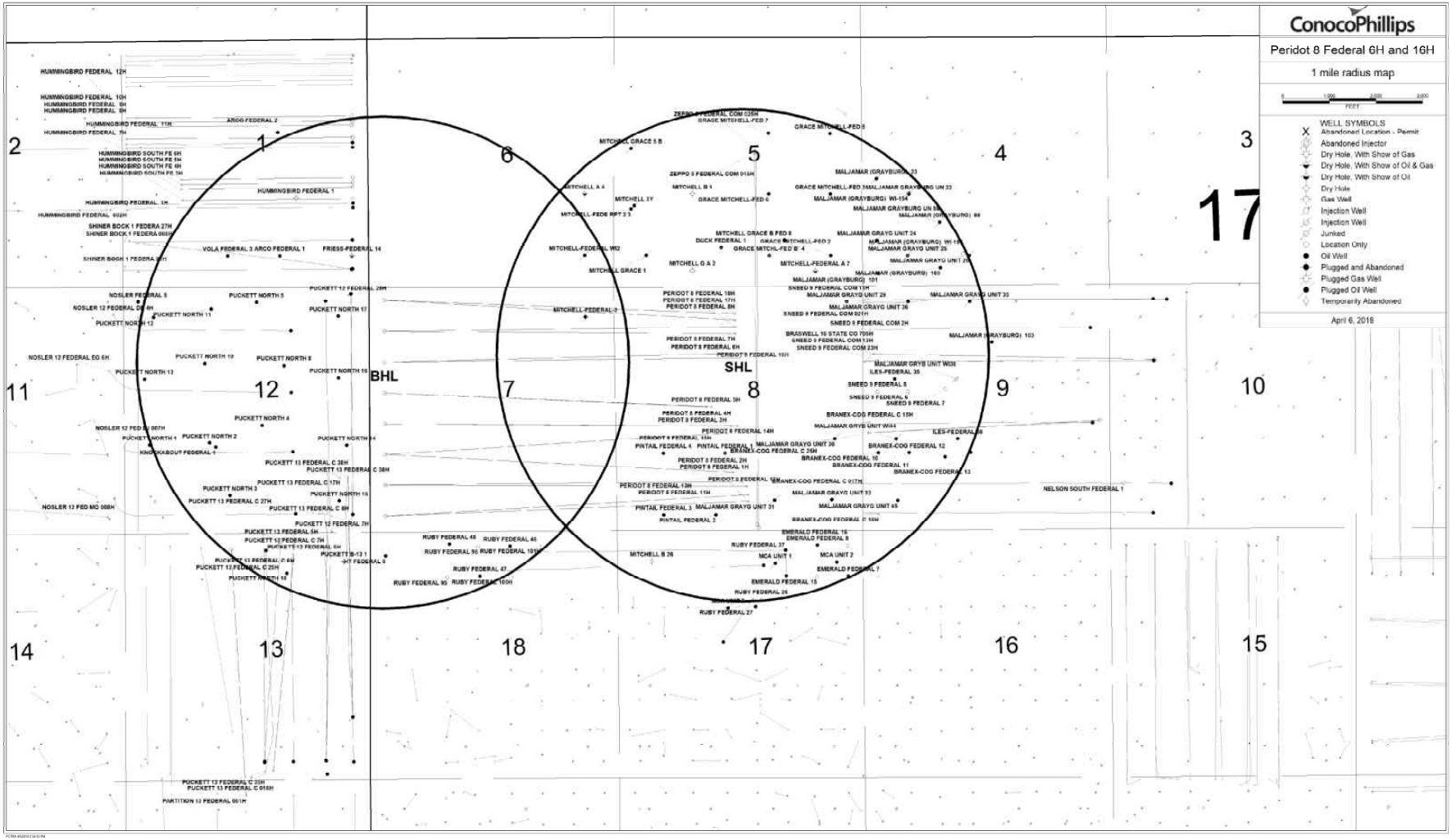
ConocoPhillips Company

PERIDOT 8 FEDERAL 6H & 16H
SECTION 8, T17S, R32E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	J.A.V., R.D.	06-24-17	SCALE
DRAWN BY	C.I.	07-20-17	1" = 1000'

TEMPORARY ACCESS ROAD R-O-W

UINTAH ENGINEERING & LAND SURVEYING
UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017


ConocoPhillips
Peridot 8 Federal 6H and 16H
1 mile radius map
WELL SYMBOLS
Abandoned Location - Permit
Abandoned Injector
Dry Hole, With Show of Gas
Dry Hole, With Show of Oil & Gas
Dry Hole, With Show of Oil
Dry Hole
Gas Well
Injection Well
Injection Well
Junked
Location Only
Oil Well
Plugged and Abandoned
Plugged Gas Well
Plugged Oil Well
Temporarily Abandoned
April 6, 2018
BHL
SHL
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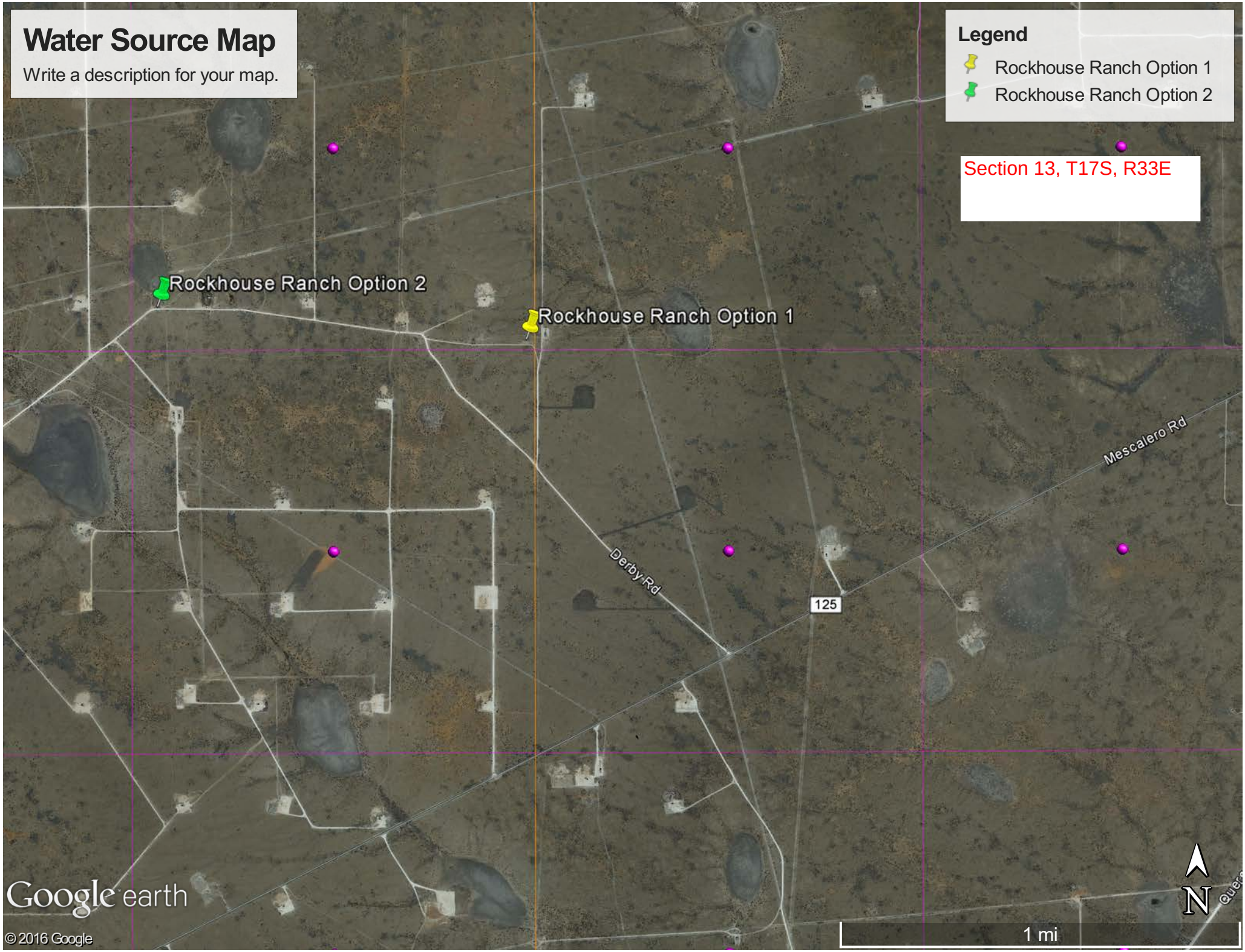
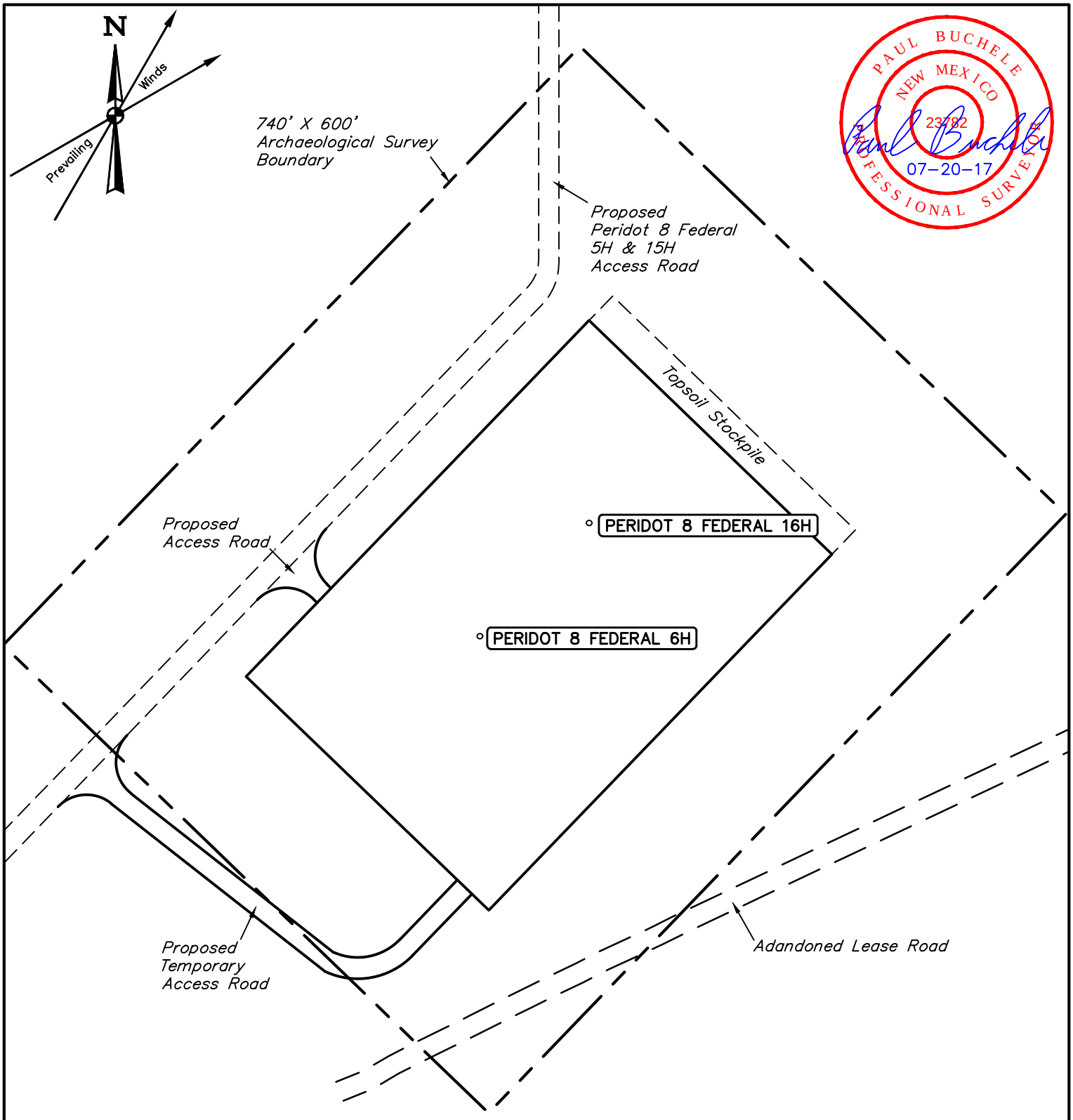

Water Source Map
Write a description for your map.
Legend
Rockhouse Ranch Option 1
Rockhouse Ranch Option 2
Section 13, T17S, R33E
Rockhouse Ranch Option 2
Rockhouse Ranch Option 1
Mescalero Rd
Derby Rd
125
Google earth
© 2016 Google
N
1 mi



ConocoPhillips Company

PERIDOT 8 FEDERAL 6H & 16H
SW 1/4 NE 1/4, SECTION 8, T17S, R32E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	J.A.V., R.D.	06-24-17	**SCALE**
DRAWN BY	S.S.	07-18-17	1" = 120'
ARCHAEOLOGICAL SURVEY BOUNDARY			**FIGURE #5**

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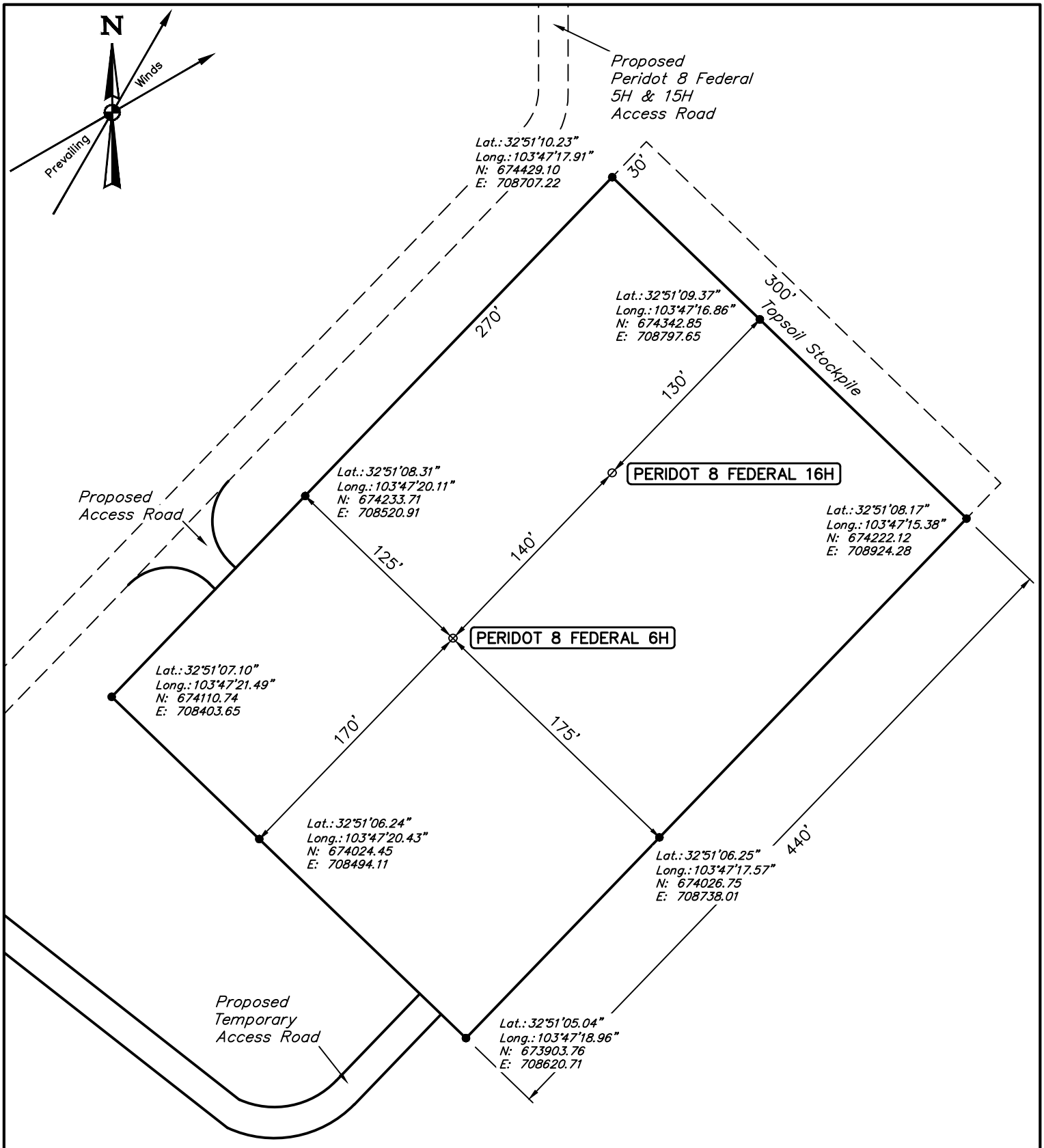
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017



NOTES:

- Latitude and Longitude Coordinates are NAD 83.
- State Plane Coordinates are in NAD 83 N.M. EAST.

ConocoPhillips Company

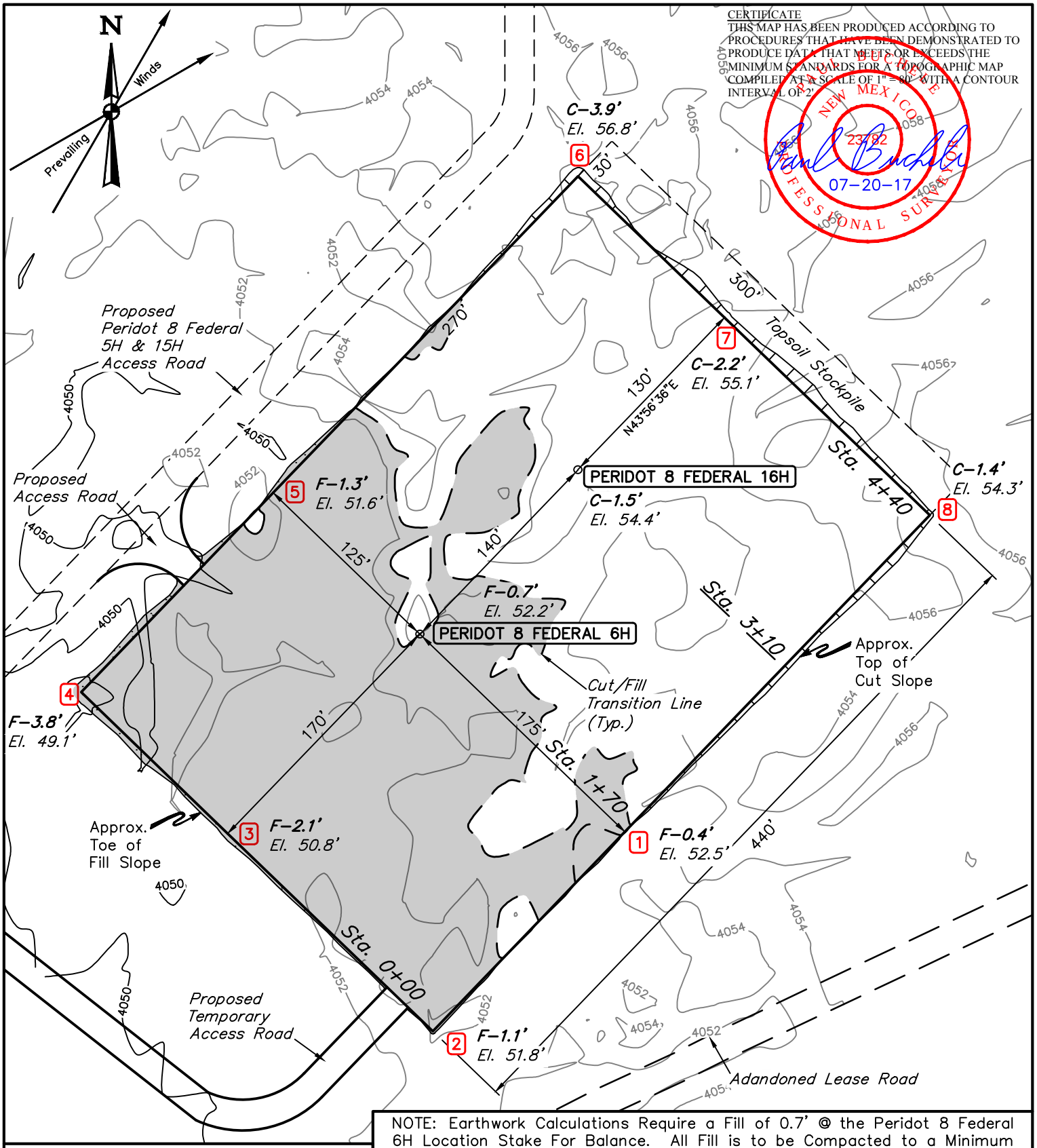
PERIDOT 8 FEDERAL 6H & 16H
SW 1/4 NE 1/4, SECTION 8, T17S, R32E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	J.A.V., R.D.	06-24-17	**SCALE**
DRAWN BY	S.S.	07-18-17	1" = 120'

SITE PLAN

UINTAH ENGINEERING & LAND SURVEYING

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



FINISHED GRADE ELEVATION = **4052.9'**

NOTE: Earthwork Calculations Require a Fill of 0.7' @ the Peridot 8 Federal 6H Location Stake For Balance. All Fill is to be Compacted to a Minimum of 95% of the Maximum Dry Density Obtained by AASHTO Method t-99.

NOTES:

- Contours shown at 2' intervals.

ConocoPhillips Company

PERIDOT 8 FEDERAL 6H & 16H
SW 1/4 NE 1/4, SECTION 8, T17S, R32E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	J.A.V., R.D.	06-24-17	**SCALE**
DRAWN BY	S.S.	07-18-17	1" = 80'
LOCATION LAYOUT			**FIGURE #1**

UINTAH ENGINEERING & LAND SURVEYING

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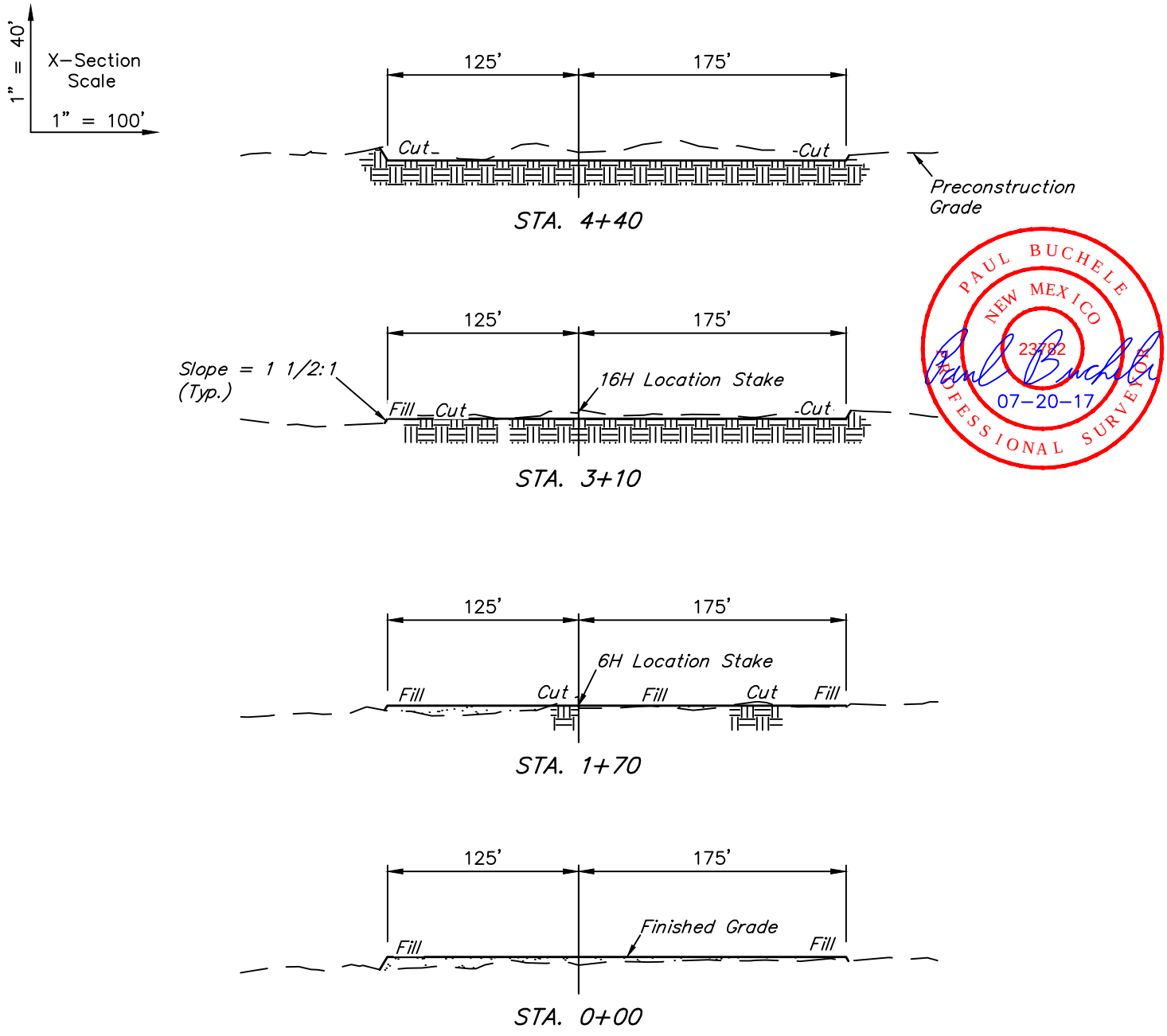
Vernal, UT 84078 * (435) 789-1017



PAUL BUCHELE NEW MEXICO 23782 PROFESSIONAL SURVEYOR 07-20-17

APPROXIMATE EARTHWORK QUANTITIES	
(3") TOPSOIL STRIPPING	1,260 Cu. Yds.
REMAINING LOCATION	3,560 Cu. Yds.
TOTAL CUT	**4,820 Cu. Yds.**
FILL	**3,560 Cu. Yds.**
EXCESS MATERIAL	1,260 Cu. Yds.
TOPSOIL	1,260 Cu. Yds.
EXCESS UNBALANCE (After Interim Rehabilitation)	**0 Cu. Yds.**

APPROXIMATE SURFACE DISTURBANCE AREAS		
	DISTANCE	**ACRES**
WELL SITE DISTURBANCE	NA	±3.122
30' WIDE ACCESS ROAD R-O-W DISTURBANCE	±50.38'	±0.035
30' WIDE TEMPORARY ROAD R-O-W DISTURBANCE	±429.80'	±0.296
10' WIDE FLOW LINE R-O-W DISTURBANCE	±781.52'	±0.179

NOTES:

- Fill quantity includes 5% for compaction.

ConocoPhillips Company

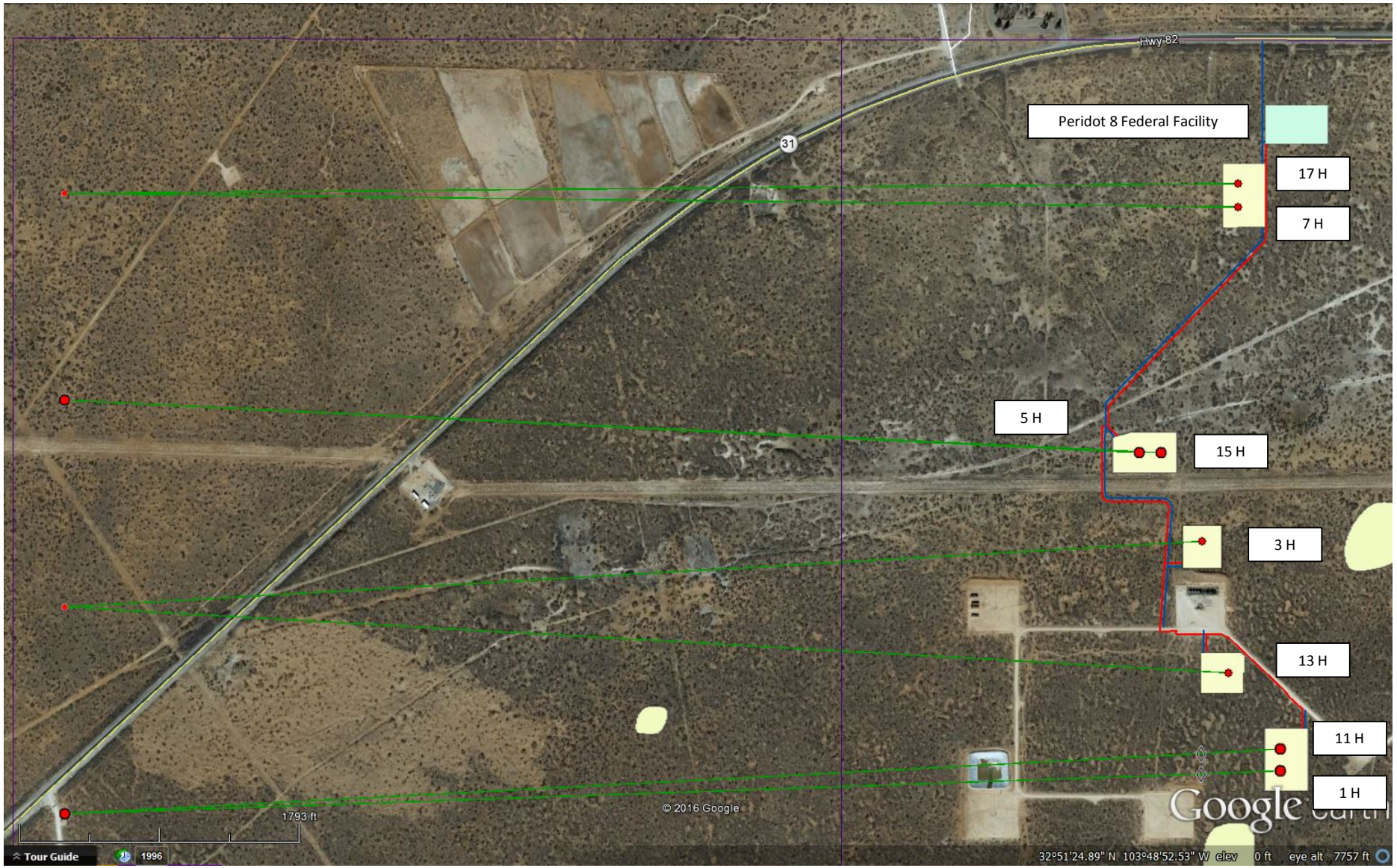
PERIDOT 8 FEDERAL 6H & 16H
SW 1/4 NE 1/4, SECTION 8, T17S, R32E, N.M.P.M.
LEA COUNTY, NEW MEXICO

UINTAH ENGINEERING & LAND SURVEYING

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

SURVEYED BY	J.A.V., R.D.	06-24-17	**SCALE**
DRAWN BY	S.S.	07-18-17	AS SHOWN
TYPICAL CROSS SECTIONS			**FIGURE #2**

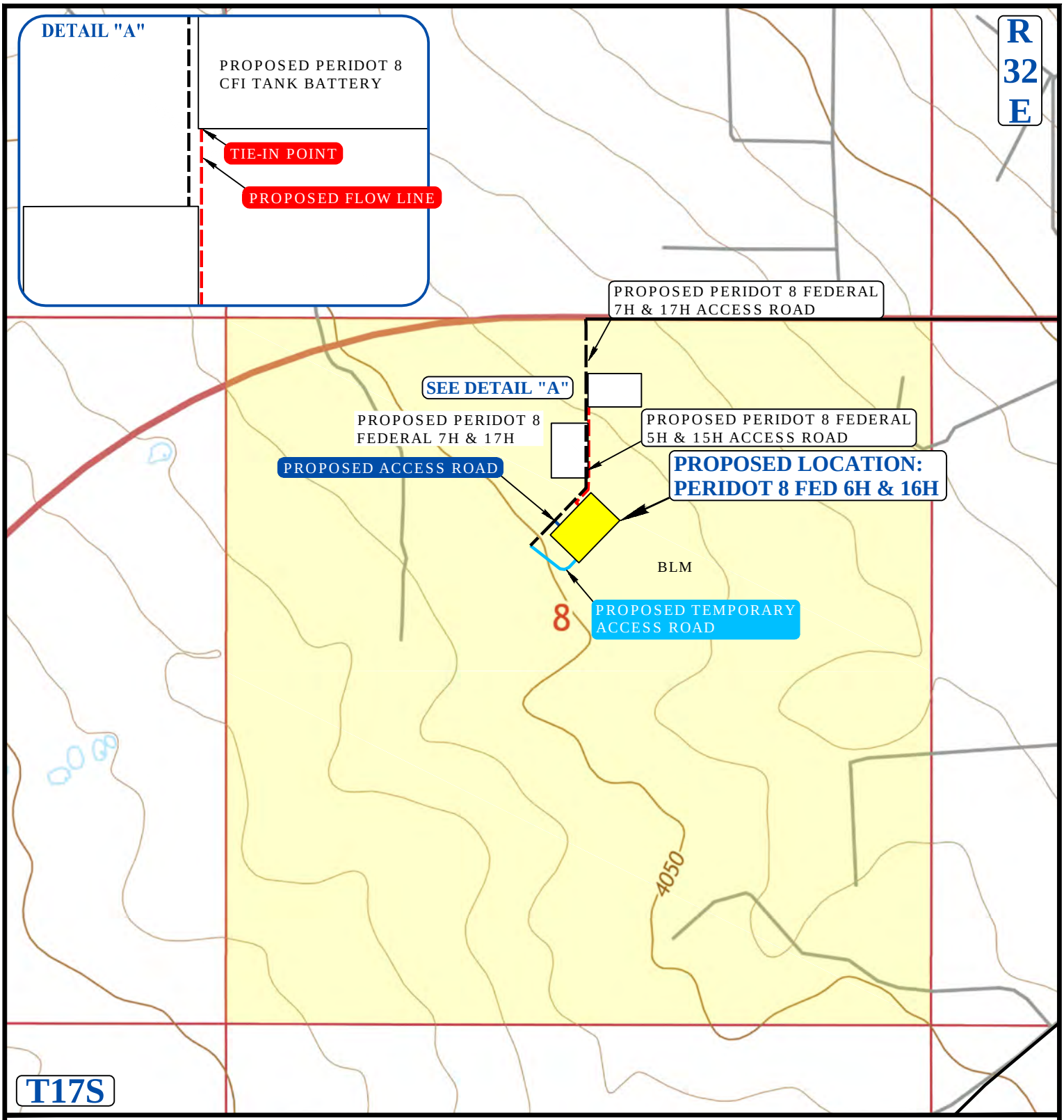
Peridot 8 Federal Initial Development Surface Use



Legend:

- = well pads
- = roads*
- = flow lines
- = well path

*Power line will be installed adjacent to access roads



APPROXIMATE TOTAL FLOW LINE DISTANCE = 782' +/-

NOTE: PARCEL DATA SHOWN HAS BEEN OBTAINED FROM VARIOUS SOURCES AND SHOULD BE USED FOR MAPPING, GRAPHIC AND PLANNING PURPOSES ONLY. NO WARRANTY IS MADE BY UINTAH ENGINEERING AND LAND SURVEYING (UELS) FOR ACCURACY OF THE PARCEL DATA.

LEGEND:

- EXISTING ROAD
- PROPOSED ROAD
- PROPOSED FLOW LINE
- PROPOSED ROAD (SERVICING OTHER WELLS)
- PROPOSED ROAD RE-ROUTE

UINTAH ENGINEERING & LAND SURVEYING

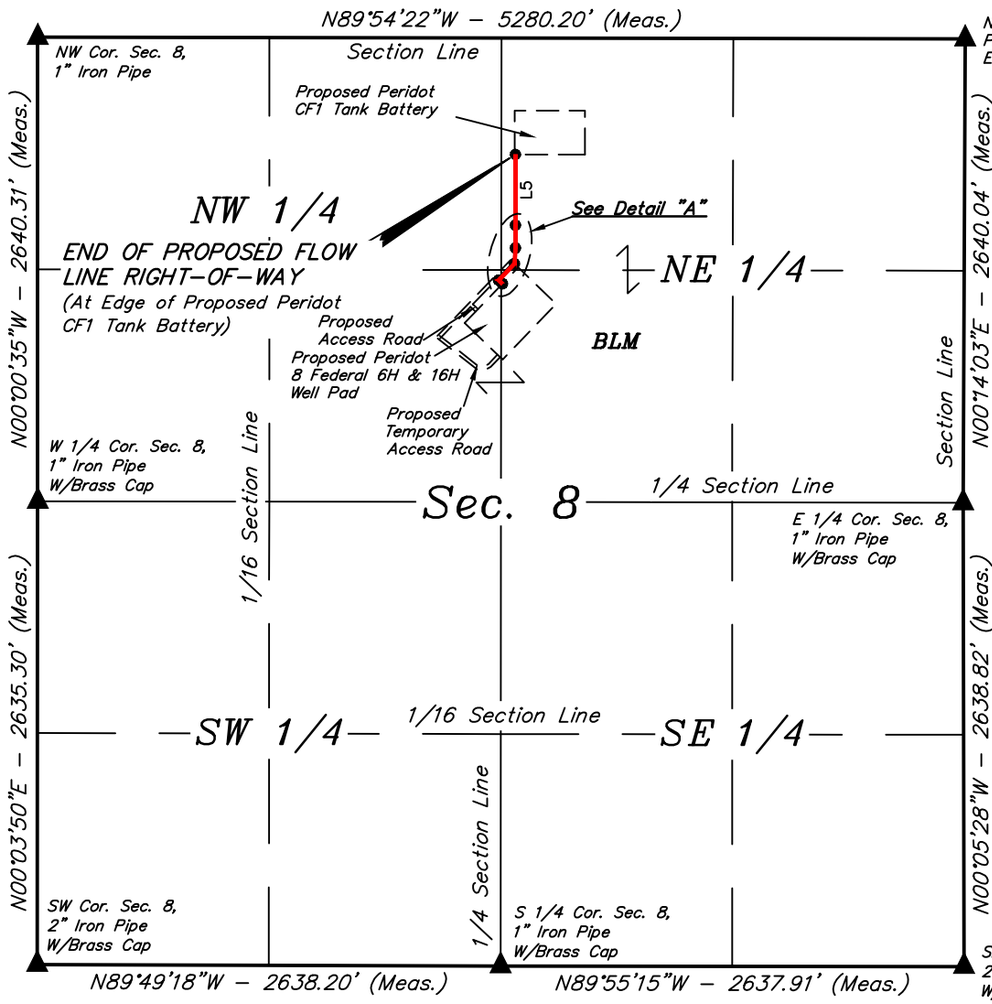
UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017

N

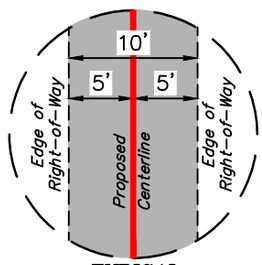
ConocoPhillips Company

PERIDOT 8 FEDERAL 6H & 16H
SE 1/4 NW 1/4, SECTION 8, T17S, R32E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	J.A.V., R.D.	06-24-17	SCALE
DRAWN BY	L.W.	06-30-17	1 : 12,000
PIPELINE MAP			TOPO D



LINE TABLE		
LINE	DIRECTION	LENGTH
L1	N46°15'04"W	30.00'
L2	N44°00'53"E	130.07'
L3	N03°40'07"E	89.14'
L4	N00°04'14"W	129.93'
L5	N00°00'24"W	402.38'



TYPICAL RIGHT-OF-WAY DETAIL
NO SCALE

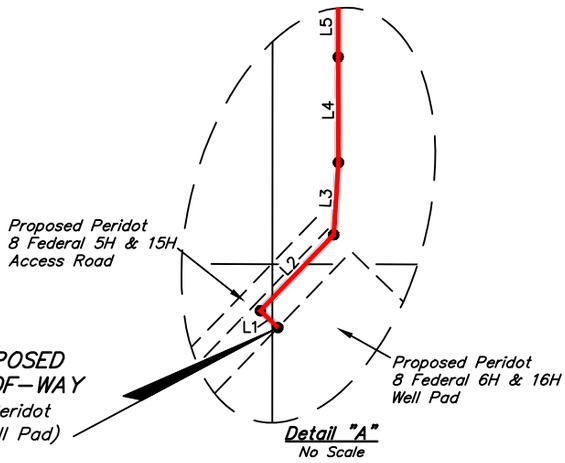
FLOW LINE RIGHT-OF-WAY DESCRIPTION

A 10' WIDE RIGHT-OF-WAY 5' ON EACH SIDE OF THE FOLLOWING DESCRIBED CENTERLINE.

BEGINNING AT A POINT IN THE SW 1/4 NE 1/4 OF SECTION 8, T17S, R32E, N.M.P.M., WHICH BEARS N64°35'20"W 2904.51' FROM THE EAST 1/4 CORNER OF SAID SECTION 8, THENCE N46°15'04"W 30.00'; THENCE N44°00'53"E 130.07'; THENCE N03°40'07"E 89.14'; THENCE N00°04'14"W 129.93'; THENCE N00°00'24"W 402.38' TO A POINT IN THE NW 1/4 NE 1/4 OF SAID SECTION 8, WHICH BEARS S75°35'00"W 2643.31' FROM THE NORTHEAST CORNER OF SAID SECTION 8. 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 W103.786335. CONTAINS 0.179 ACRES MORE OR LESS.

BEGINNING OF FLOW LINE BEARS N64°35'20"W 2904.51' FROM THE EAST 1/4 CORNER OF SECTION 8, T17S, R32E, N.M.P.M.

END OF FLOW LINE BEARS S75°35'00"W 2643.31' FROM THE NORTHEAST CORNER OF SECTION 8, T17S, R32E, N.M.P.M.



Detail "A"
No Scale

ACREAGE / LENGTH TABLE				
	OWNERSHIP	FEET	RODS	ACRES
SEC. 8 (NE 1/4)	BLM	740.00	44.85	0.170
SEC. 8 (NW 1/4)	BLM	41.52	2.52	0.010
TOTAL		781.52	47.37	0.180

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.

STATE OF NEW MEXICO 23782 PROFESSIONAL SURVEYOR
07-20-17

▲ = SECTION CORNERS LOCATED.

FILE: 61945

NOTES:
- Basis of Bearings is a Transverse Mercator Projection with a Central Meridian of W103.786335.

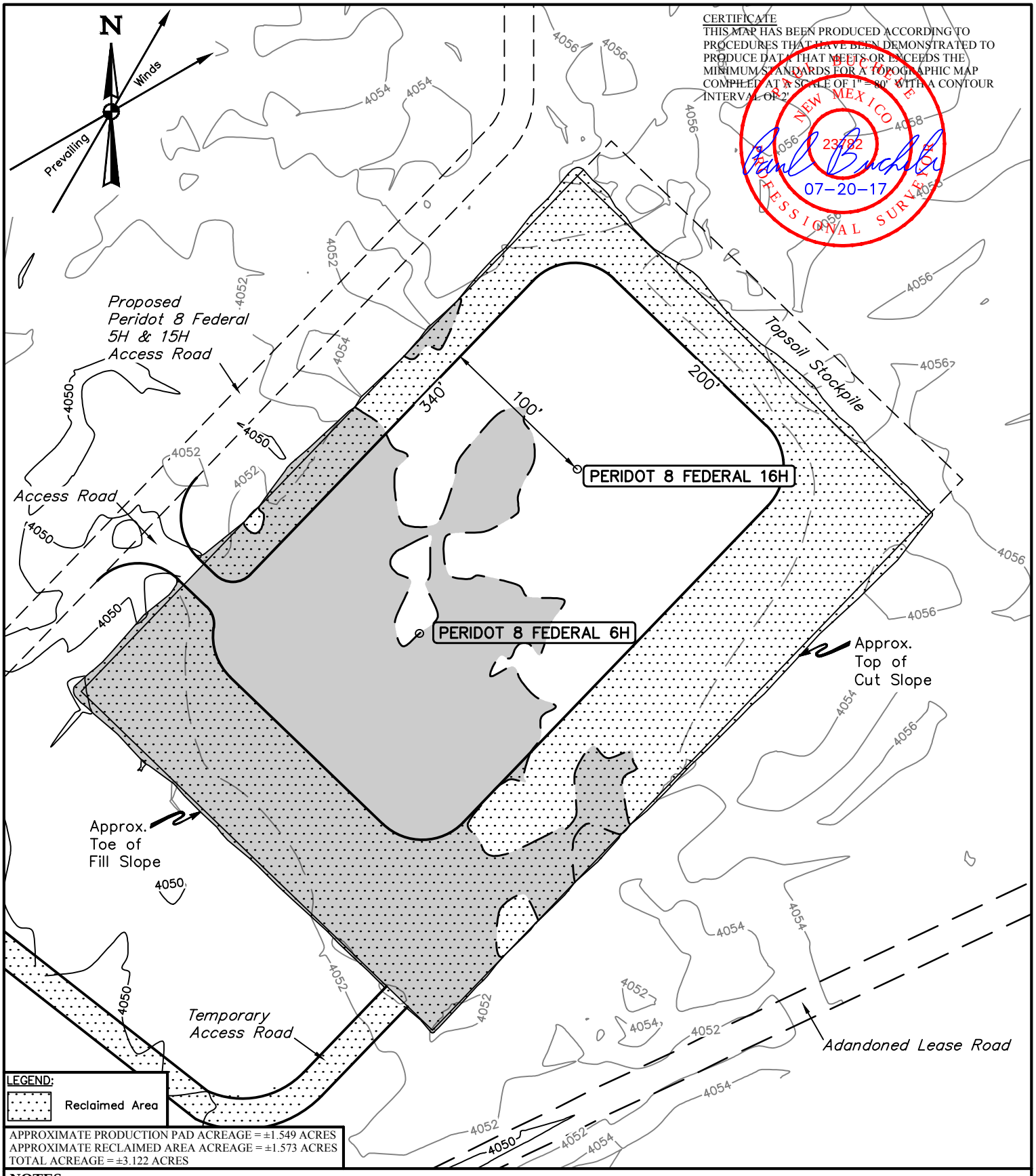
ConocoPhillips Company

PERIDOT 8 FEDERAL 6H & 16H
SECTION 8, T17S, R32E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	J.A.V., R.D.	06-24-17	SCALE
DRAWN BY	C.I.	07-20-17	1" = 1000'

FLOW LINE R-O-W

UINTAH ENGINEERING & LAND SURVEYING
UELS, LLC
Corporate Office * 85 South 200 East
Vernal, UT 84078 * (435) 789-1017



CERTIFICATE

THIS MAP HAS BEEN PRODUCED ACCORDING TO PROCEDURES THAT HAVE BEEN DEMONSTRATED TO PRODUCE DATA THAT MEETS OR EXCEEDS THE MINIMUM STANDARDS FOR A TOPOGRAPHIC MAP COMPILED AT A SCALE OF 1" = 80' WITH A CONTOUR INTERVAL OF 2'.

PAUL BUCHELE
NEW MEXICO
23782
07-20-17
PROFESSIONAL SURVEYOR

NOTES:

- Contours shown at 2' intervals.

Regulatory Note: approximate production pad dimension=340'x200'

ConocoPhillips Company

PERIDOT 8 FEDERAL 6H & 16H
SW 1/4 NE 1/4, SECTION 8, T17S, R32E, N.M.P.M.
LEA COUNTY, NEW MEXICO

SURVEYED BY	J.A.V., R.D.	06-24-17	**SCALE**
DRAWN BY	S.S.	07-18-17	1" = 80'
RECLAMATION DIAGRAM			**FIGURE #4**

UINTAH ENGINEERING & LAND SURVEYING

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

Surface Use Plan of Operations

Introduction

The following surface use plan of operations will be followed and carried out once the APD is approved. No other disturbance will be created other than what was submitted in this surface use plan. If any other surface disturbance is needed after the APD is approved, a BLM approved sundry notice or right of way application will be acquired prior to any new surface disturbance.

Before any surface disturbance is created, stakes or flagging will be installed to mark boundaries of permitted areas of disturbance, including soils storage areas. As necessary, slope, grade, and other construction control stakes will be placed to ensure construction in accordance with the surface use plan. All boundary markers will be maintained in place until final construction cleanup is completed. If disturbance boundary markers are disturbed or knocked down, they will be replaced before construction proceeds.

If terms and conditions are attached to the approved APD and amend any of the proposed actions in this surface use plan, we will adhere to the terms and conditions.

1. Existing Roads

a. The existing access road route to the proposed project is depicted on Access Road Map, Topo A. Improvements to the driving surface will be done where necessary. No new surface disturbance will be done, unless otherwise noted in the New or Reconstructed Access Roads section of this surface use plan..

b. The existing access road route to the proposed project does not cross lease or unit boundaries, so a BLM right-of-way grant will not be acquired for this proposed road route.

c. The operator will improve or maintain existing roads in a condition the same as or better than before operations begin. The operator will repair pot holes, clear ditches, repair the crown, etc. All existing structures on the entire access route such as cattleguards, other range improvement projects, culverts, etc. will be properly repaired or replaced if they are damaged or have deteriorated beyond practical use.

d. We will prevent and abate fugitive dust as needed, whether created by vehicular traffic, equipment operations, or wind events. BLM written approval will be acquired before application of surfactants, binding agents, or other dust suppression chemicals on roadways.

2. New or Reconstructed Access Roads

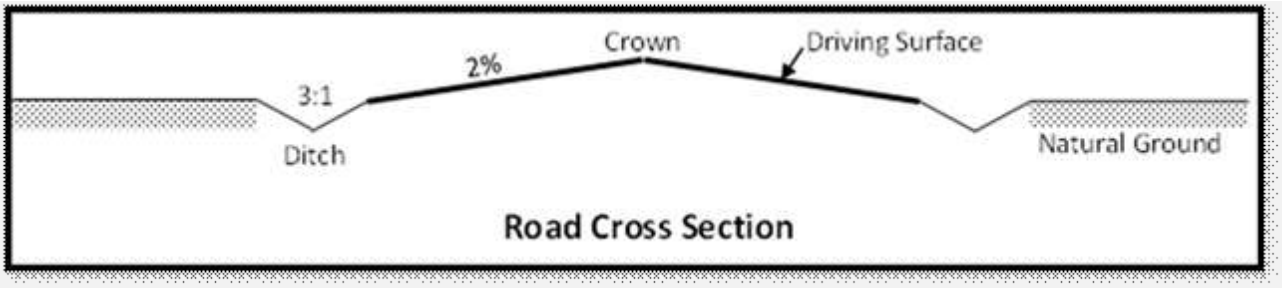
a. An access road will be needed for this proposed project. See the survey plat for the location of the access road.

b. The length of access road needed to be constructed for this proposed project is about 480 feet.

c. The maximum driving width of the access road will be 17 feet. The maximum width of surface disturbance when constructing the access road will not exceed 25 feet. All areas outside of the driving surface will be revegetated.

d. The access road will be constructed with 6 inches of compacted caliche.

e. When the road travels on fairly level ground, the road will be crowned and ditched with a 2% slope from the tip of the road crown to the edge of the driving surface. The ditches will be 3 feet wide with 3:1 slopes. See Road Cross Section diagram below.



f. The access road will be constructed with a ditch on each side of the road.

g. The maximum grade for the access road will be 4 percent.

h. No turnouts will be constructed on the proposed access road.

i. No cattleguards will be installed for this proposed access road.

j. No BLM right-of-way grant is needed for the construction of this access road.

k. No culverts will be constructed for this proposed access road.

l. No low water crossings will be constructed for the access road.

m. Since the access road is on level ground, no lead-off ditches will be constructed for the proposed access road.

n. Newly constructed or reconstructed roads, on surface under the jurisdiction of the Bureau of Land Management, will be constructed as outlined in the BLM "Gold Book" and to meet the standards of the anticipated traffic flow and all anticipated weather requirements as needed. Construction will include ditching, draining, crowning and capping or sloping and dipping the roadbed as necessary to provide a well-constructed and safe road.

o. Wider travel surface is needed to accommodate larger rig wheelbase. 430' of access road will be reclaimed following the completion of drilling operations for wells on this pad.

3. Location of Existing Wells

a. One Mile Radius Map of the APD depicts all known wells within a one mile radius of the proposed well.

b. There is no other information regarding wells within a one mile radius.

4. Location of Existing and/or Proposed Production Facilities

a. All permanent, lasting more than 6 months, above ground structures including but not limited to pumpjacks, storage tanks, barrels, pipeline risers, meter housing, etc. that are not subject to safety requirements will be painted a non-reflective paint color, Shale Green, from the BLM Standard Environmental Colors chart, unless another color is required in the APD Conditions of Approval.

b. If any type of production facilities are located on the well pad, they will be strategically placed to allow for maximum interim reclamation, recontouring, and revegetation of the well location.

c. Production from the proposed well will be transported to the production facility named Peridot 8 Federal CF1 Tank Battery. The location of the facility is as follows: NWNE, Section 8, T17S, R32E.

d. A pipeline to transport production will be installed from the proposed well to the existing production facility.

i. We plan to install a 4 inch surface polyethylene and fiberglass pipeline from the proposed well to the production facility. The proposed length of the pipeline will be 782 feet. The working pressure of the

pipeline will be 125 psi or less. If the pipeline route follows an existing road or buried pipeline right-of-way, the surface pipeline will be installed no farther than 10 feet from the edge of the road or buried pipeline right-of-way. If existing surface pipelines prevent this distance, the proposed surface pipeline will be installed immediately adjacent to the outer surface pipeline. All construction and maintenance activity will be confined to existing roads or right-of-ways.

ii. Pipeline Map, Topo D and Flow Line ROW depicts the proposed production pipeline route from the well to the production facility.

iii. Since the proposed pipeline crossess lease boundaries, a right of way grant will be acquired prior to installation of the proposed pipeline.

If any plans change regarding the production facility or other infrastructure (pipeline, electric line, etc.), we will submit a sundry notice or right of way (if applicable) prior to installation or construction.

Electric Line(s)

a. No electric line will be applied for with this APD.

5. Location and Types of Water

a. The location of the water well is as follows: Current water sources include Rockhouse Ranch (two sources) located in Section 13_ T17S_ R33E An additional potential source is Morewest Corporation_ New Mexico with wells located in 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.

b. The operator will use established or constructed oil and gas roads to transport water to the well site. The operator will try to utilize the identified access route in the surface use plan.

6. Construction Material

a. 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 Topos A and B attached.

7. Methods for Handling Waste

a. Drilling fluids and produced oil and water from the well during drilling and completion operations will be stored safely and disposed of properly in an NMOCD approved disposal facility.

b. Garbage and trash produced during drilling and completion operations will be collected in a trash container and disposed of properly at a state approved disposal facility. All trash on and around the well site will be collected for disposal.

c. Human waste and grey water will be properly contained and disposed of properly at a state approved disposal facility.

d. After drilling and completion operations, trash, chemicals, salts, frac sand and other waste material will be removed and disposed of properly at a state approved disposal facility.

e. The well will be drilled utilizing a closed loop system. Drill cutting will be properly disposed of into steel

tanks and taken to an NMOCD approved disposal facility.

8. Ancillary Facilities

a. No ancillary facilities will be needed for this proposed project.

9. Well Site Layout

a. The following information is presented in the well site survey plat or diagram:

i. reasonable scale (near 1":50')

ii. well pad dimensions

iii. well pad orientation

iv. drilling rig components

v. proposed access road

vi. elevations of all points

vii. topsoil stockpile

viii. reserve pit location/dimensions if applicable

ix. other disturbances needed (flare pit, stinger, frac farm pad, etc.)

x. existing structures within the 600' x 600' archaeoligical surveyed area (pipelines, electric lines, well pads, etc

b. The proposed drilling pad was staked and surveyed by a professional surveyor. The attached survey plat of the well site depicts the drilling pad layout as staked.

c. A title of a well site diagram is Typical Rig Layout, Figure #3. This diagram depicts the estimated layout of buildings on the pad.

d. Topsoil Salvaging

i. Grass, forbs, and small woody vegetation, such as mesquite will be excavated as the topsoil is removed. Large woody vegetation will be stripped and stored separately and respread evenly on the site following topsoil respreading. Topsoil depth is defined as the top layer of soil that contains 80% of the roots. In areas to be heavily disturbed, the top 6 inches of soil material, will be stripped and stockpiled on the perimeter of the well location and along the perimeter of the access road to control run-on and run-off, to keep topsoil viable, and to make redistribution of topsoil more efficient during interim reclamation. Stockpiled topsoil should include vegetative material. Topsoil will be clearly segregated and stored separately from subsoils. Contaminated soil will not be stockpiled, but properly treated and handled prior to topsoil salvaging.

10. Plans for Surface Reclamation

Reclamation Objectives

i. The objective of interim reclamation is to restore vegetative cover and a portion of the landform sufficient to maintain healthy, biologically active topsoil; control erosion; and minimize habitat and forage loss, visual impact, and weed infestation, during the life of the well or facilities.

ii. The long-term objective of final reclamation is to return the land to a condition similar to what existed prior to disturbance. This includes restoration of the landform and natural vegetative community, hydrologic systems, visual resources, and wildlife habitats. To ensure that the long-term objective will be reached through human and natural processes, actions will be taken to ensure standards are met for site stability, visual quality, hydrological functioning, and vegetative productivity.

iii. The BLM will be notified at least 3 days prior to commencement of any reclamation procedures.

iv. If circumstances allow, interim reclamation and/or final reclamation actions will be completed no later than 6 months from when the final well on the location has been completed or plugged. We will gain written permission from the BLM if more time is needed.

v. Interim reclamation will be performed on the well site after the well is drilled and completed. Reclamation Diagram, Figure #4 depicts the location and dimensions of the planned interim reclamation for the well site.

Interim Reclamation Procedures (If performed)

1. Within 30 days of well completion, the well location and surrounding areas will be cleared of, and maintained free of, all materials, trash, and equipment not required for production.

2. In areas planned for interim reclamation, all the surfacing material will be removed and returned to the original mineral pit or recycled to repair or build roads and well pads.

3. The areas planned for interim reclamation will then be recontoured to the original contour if feasible, or if not feasible, to an interim contour that blends with the surrounding topography as much as possible. Where applicable, the fill material of the well pad will be backfilled into the cut to bring the area back to the original contour. The interim cut and fill slopes prior to re-seeding will not be steeper than a 3:1 ratio, unless the adjacent native topography is steeper. Note: Constructed slopes may be much steeper during drilling, but will be recontoured to the above ratios during interim reclamation.

4. Topsoil will be evenly respread and aggressively revegetated over the entire disturbed area not needed for all-weather operations including cuts & fills. To seed the area, the proper BLM seed mixture, free of noxious weeds, will be used. Final seedbed preparation will consist of contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding, dozer tracking, or other imprinting in order to break the soil crust and create seed germination micro-sites.

5. Proper erosion control methods will be used on the area to control erosion, runoff and siltation of the surrounding area.

6. The interim reclamation will be monitored periodically to ensure that vegetation has reestablished and that erosion is controlled.

Final Reclamation (well pad, buried pipelines, etc.)

1. Prior to final reclamation procedures, the well pad, road, and surrounding area will be cleared of material, trash, and equipment.

2. All surfacing material will be removed and returned to the original mineral pit or recycled to repair or build roads and well pads.

3. All disturbed areas, including roads, pipelines, pads, production facilities, and interim reclaimed areas will be recontoured to the contour existing prior to initial construction or a contour that blends indistinguishably with the surrounding landscape. Topsoil that was spread over the interim reclamation areas will be stockpiled prior to recontouring. The topsoil will be redistributed evenly over the entire disturbed site to ensure successful revegetation.

4. After all the disturbed areas have been properly prepared, the areas will be seeded with the proper BLM seed mixture, free of noxious weeds. Final seedbed preparation will consist of contour cultivating to a depth of 4 to 6 inches within 24 hours prior to seeding, dozer tracking, or other imprinting in order to break the soil crust and create seed germination micro-sites.

5. Proper erosion control methods will be used on the entire area to control erosion, runoff and siltation of the surrounding area.

6. All unused equipment and structures including pipelines, electric line poles, tanks, etc. that serviced the well will be removed.

7. All reclaimed areas will be monitored periodically to ensure that revegetation occurs, that the area is not redisturbed, and that erosion is controlled.

11. Surface Ownership

a. The surface ownership of the proposed project is federal.

12. Other Information

a. Onsite for this well was completed 6-20-17. Surface Use Plan of Operation was finalized at that time with the following attendees: Ms. Brooks, Ms. Cepero-Rios, Mr. Mathis, Mr. Wasson and Ms. Maunder, along with operations staff and survey crew. Archaeological survey requirements have been met by block survey 2151 and line survey 2276. Well location is off-lease due to surface considerations. Please review this application with Peridot 8 Fed 6H. For multi-well pad we request deferral of interim reclamation requirements until all wells noted on location have been drilled.
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.

13. Maps and Diagrams

Access Road Map, Topo A - Existing Road
One Mile Radius Map - Wells Within One Mile
Pipeline Map, Topo D and Flow Line ROW - Production Pipeline
Typical Rig Layout, Figure #3 - Well Site Diagram
Reclamation Diagram, Figure #4 - Interim Reclamation

APD ID: 10400032588 **Submission Date:** 12/08/2018

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: PERIDOT 8 FEDERAL **Well Number:** 16H

Well Type: OIL WELL **Well Work Type:** Drill

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:

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: PERIDOT 8 FEDERAL **Well Number:** 16H

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:

Section 3 - Unlined Pits

Would you like to utilize Unlined Pit PWD options? NO

Produced Water Disposal (PWD) Location:

PWD disturbance (acres): **PWD surface owner:**

Unlined pit PWD on or off channel:

Unlined pit PWD discharge volume (bbl/day):

Unlined pit specifications:

Precipitated solids disposal:

Decribe precipitated solids disposal:

Precipitated solids disposal permit:

Unlined pit precipitated solids disposal schedule:

Unlined pit precipitated solids disposal schedule attachment:

Unlined pit reclamation description:

Unlined pit reclamation attachment:

Unlined pit Monitor description:

Unlined pit Monitor attachment:

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

Beneficial use user confirmation:

Estimated depth of the shallowest aquifer (feet):

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

TDS lab results:

Geologic and hydrologic evidence:

State authorization:

Unlined Produced Water Pit Estimated percolation:

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

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: PERIDOT 8 FEDERAL **Well Number:** 16H

Is the reclamation bond a rider under the BLM bond?

Unlined pit bond number:

Unlined pit bond amount:

Additional bond information attachment:

Section 4 - Injection

Would you like to utilize Injection PWD options? NO

Produced Water Disposal (PWD) Location:

PWD surface owner: **PWD disturbance (acres):**

Injection PWD discharge volume (bbl/day):

Injection well mineral owner:

Injection well type:

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?

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):

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: PERIDOT 8 FEDERAL **Well Number:** 16H

Other PWD type description:

Other PWD type attachment:

Have other regulatory requirements been met?

Other regulatory requirements attachment:

AFMSS

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

Bond Info Data Report

06/30/2020

APD ID: 10400032588

Submission Date: 12/08/2018

Operator Name: CONOCOPHILLIPS COMPANY

Well Name: PERIDOT 8 FEDERAL

Well Number: 16H

Well Type: OIL WELL

Well Work Type: Drill

Highlighted data reflects the most recent changes

Show Final Text

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:

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL

OPERATOR'S NAME: ConocoPhillips Company
LEASE NO.: NMLC064149
LOCATION: Section 8, T.17 S., R.32 E., NMPM
COUNTY: Lea County, New Mexico

Peridot 8 Federal 6H
Surface Hole Location: 1586' FNL & 2335' FEL, Section 8, T. 17 S., R.32 E.
Bottom Hole Location: 1650' FNL & 330' FWL, Section 7, T. 17 S., R.32 E.

Peridot 8 Federal 16H
Surface Hole Location: 1485' FNL & 2538' FEL, Section 8, T. 17 S., R.32 E.
Bottom Hole Location: 1650' FNL & 330' FWL, Section 7, T. 17 S., R.32 E.

TABLE OF CONTENTS

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

I. GENERAL PROVISIONS

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

II. PERMIT EXPIRATION

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

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

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

IV. NOXIOUS WEEDS

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

V. SPECIAL REQUIREMENT(S)

Timing Limitation Stipulation / Condition of Approval for lesser prairie-chicken: Oil and gas activities including 3-D geophysical exploration, and drilling will not be allowed in lesser prairie-chicken habitat during the period from March 1st through June 15th annually. During that period, other activities that produce noise or involve human activity, such as the maintenance of oil and gas facilities, pipeline, road, and well pad construction, will be allowed except between 3:00 am and 9:00 am. The 3:00 am to 9:00 am restriction will not apply to normal, around-the-clock operations, such as venting, flaring, or pumping, which do not require a human presence during this period. Additionally, no new drilling will be allowed within up to 200 meters of leks known at the time of permitting. Normal vehicle use on existing roads will not be restricted. Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 feet from the source of the noise.

Timing Limitation Exceptions:
The Carlsbad Field Office will publish an annual map of where the LPC timing and noise stipulations and conditions of approval (Limitations) will apply for the identified year (between March 1 and June 15) based on the latest survey information. The LPC Timing Area map will identify areas which are Habitat Areas (HA), Isolated Population Area (IPA), and Primary Population Area (PPA). The LPC Timing Area map will also have an area in red crosshatch. The red crosshatch area is the only area where an operator is required to submit a request for exception to the LPC Limitations. If an operator is operating outside the red crosshatch area, the LPC Limitations do not apply for that year and an exception to LPC Limitations is not required.

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well. For more installation details, contact the Carlsbad Field Office at 575-234-5972.

Dunes Sagebrush Lizard Trench Stipulation

- Pre-construction contact with a BLM wildlife biologist is required within 5 days before any ground disturbing activities associated with the project occurs.
- Successful completion of the BLM Trench Stipulation Workshop is required for a non-agency person to be approved as a monitor.
- Any trench left open for (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, an agency approved monitor shall walk the entire length of the open trench and remove all trapped vertebrates. The bottom surface of the trench will be disturbed a minimum of 2 inches in order to arouse any buried vertebrates. All vertebrates will be released a minimum of 100 yards from the trench.
- For trenches left open for eight (8) hours or more the following requirements apply:

    - Earthen escape ramps and/or structures (built at no more than a 30 degree slope and spaced no more than 500 feet apart) shall be placed in the

trench. Metal structures will not be authorized. Options will be discussed in detail at the required Trench Stipulation Workshop.

- One approved monitor shall be required to survey up to three miles of trench between the hours of 11 AM-2 PM. A daily report (consolidate if there is more than one monitor) on the vertebrates found and removed from the trench shall be provided to the BLM (email/fax is acceptable) the following morning.
- Prior to backfilling of the trench all structures used as escape ramps will be removed and the bottom surface of the trench will be disturbed a minimum of 2 inches in order to arouse any buried vertebrates. All vertebrates will be released a minimum of 100 yards from the trench.

- This stipulation shall apply to the entire length of the project in the DSL habitat polygon regardless of land ownership or CCA/CCAA enrollment status.
- A project closeout will be required within three business days of the completion of the project.

Hydrology:

The entire well pad(s) will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad. The compacted berm shall be constructed at a minimum of 12 inches with impermeable mineral material (e.g. caliche). Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad. The integrity of the berm shall be maintained around the surfaced pad throughout the life of the well and around the downsized pad after interim reclamation has been completed. Any water erosion that may occur due to the construction of the well pad during the life of the well will be quickly corrected and proper measures will be taken to prevent future erosion. Stockpiling of topsoil is required. The top soil shall be stockpiled in an appropriate location to prevent loss of soil due to water or wind erosion and not used for berming or erosion control. If fluid collects within the bermed area, the fluid must be vacuumed into a safe container and disposed of properly at a state approved facility.

BURIED/SURFACE LINE(S):

When crossing ephemeral drainages the pipeline(s) will be buried to a minimum depth of 48 inches from the top of pipe to ground level. Erosion control methods such as gabions and/or rock aprons should be placed on both up and downstream sides of the pipeline crossing. In addition, curled (weed free) wood/straw fiber wattles/logs and/or silt fences should be placed on the downstream side for sediment control during construction and maintained until soils and vegetation have stabilized. Water bars should be placed within the ROW to divert and dissipate surface runoff. A pipeline access road is not permitted to cross these ephemeral drainages. Traffic should be diverted to a preexisting route. Additional seeding may be required in floodplains and drainages to restore energy dissipating vegetation.

Prior to pipeline installation/construction a leak detection plan will be developed. The method(s) could incorporate gauges to detect pressure drops, situating valves and lines so they can be visually inspected periodically or installing electronic sensors to alarm when a leak is present. The leak detection plan will incorporate an automatic shut off system that will be installed for proposed pipelines to minimize the effects of an undesirable event.

VI. CONSTRUCTION

A. NOTIFICATION

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

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

B. TOPSOIL

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

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

C. CLOSED LOOP SYSTEM

Tanks are required for drilling operations: No Pits.

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

D. FEDERAL MINERAL MATERIALS PIT

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

E. WELL PAD SURFACING

Surfacing of the well pad is not required.

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

F. EXCLOSURE FENCING (CELLARS & PITS)

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

G. ON LEASE ACCESS ROADS

Road Width
The access road shall have a driving surface that creates the smallest possible surface disturbance and does not exceed seventeen (17) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty-five (25) feet.

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

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

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

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

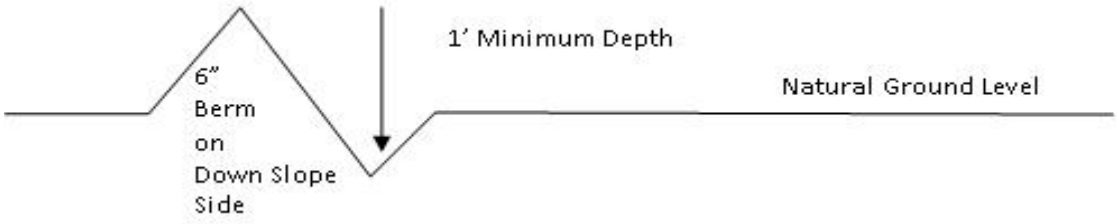
Ditching
Ditching shall be required on both sides of the road.

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

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

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

Cross Section of a Typical Lead-off Ditch



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

Formula for Spacing Interval of Lead-off Ditches

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

400 foot road with 4% road slope: $\frac{400'}{4\%}$ + 100' = 200' lead-off ditch interval

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

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

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

Construction Steps

1. Salvage topsoil
2. Construct road
3. Redistribute topsoil
4. Revegetate slopes

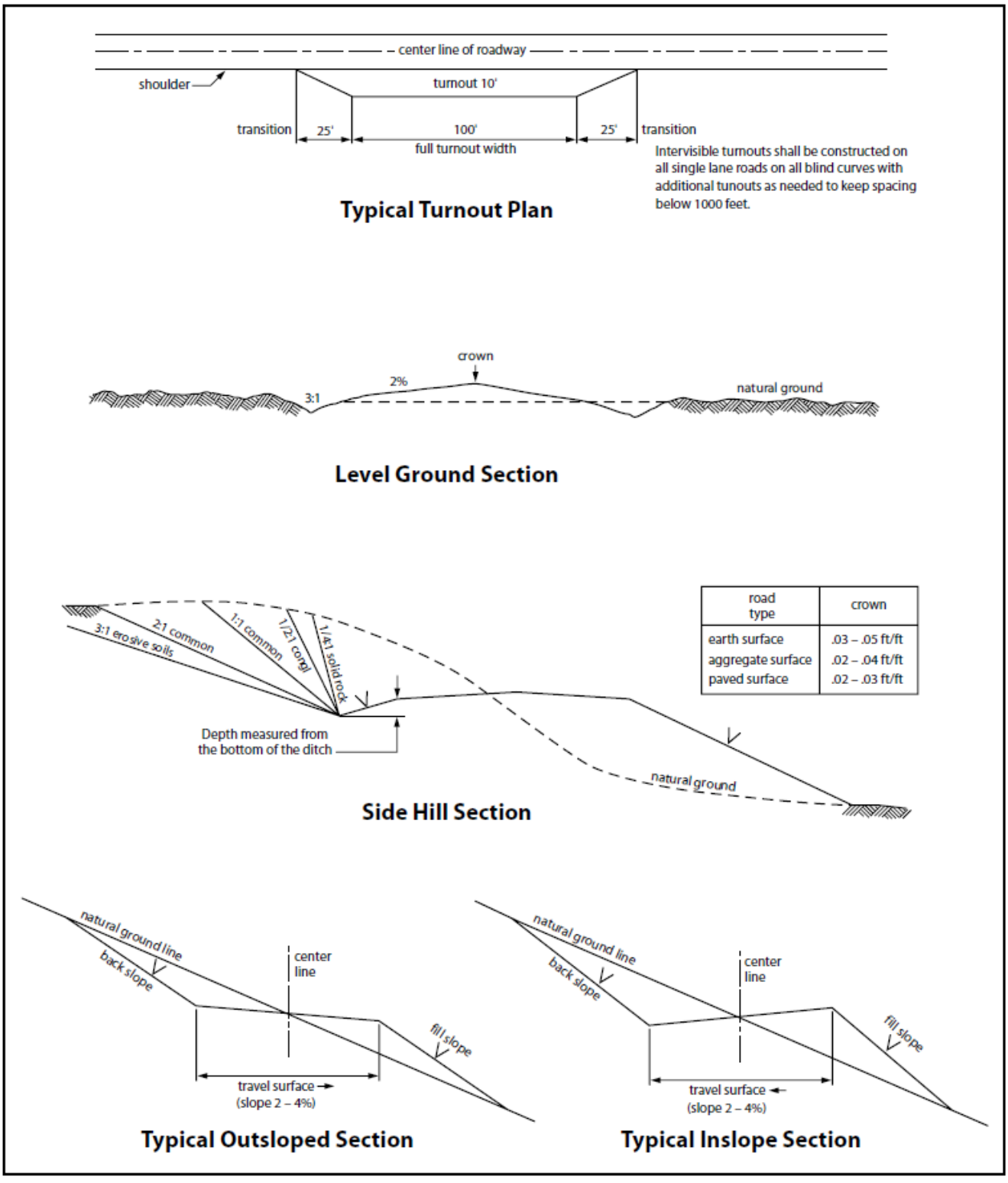


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

VII. PRODUCTION (POST DRILLING)

A. WELL STRUCTURES & FACILITIES

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

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

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

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

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

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

B. SURFACE PIPELINES

STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES

A copy of the Grant and attachments, including stipulations, survey plat(s) and/or map(s), shall be on location during construction. BLM personnel may request to review a copy of your permit during construction to ensure compliance with all stipulations.

Holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer:

1. Holder shall indemnify the United States against any liability for damage to life or property arising from the occupancy or use of public lands under this grant.

2. Holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, Holder shall comply with the Toxic Substances Control Act of 1976 as amended, 15 USC § 2601 *et seq*. (1982) with regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant (*see* 40 CFR, Part 702-799 and in particular, provisions on polychlorinated biphenyls, 40 CFR 761.1-761.193). Additionally, any release of toxic substances (leaks, spills, etc.) in excess of the reportable quantity established by 40 CFR, Part 117 shall be reported as required by the Comprehensive Environmental Response, Compensation, and Liability Act, section 102b. A copy of any report required or requested by any Federal agency or State government as a result of a reportable release or spill of any toxic substances shall be furnished to the Authorized Officer concurrent with the filing of the reports to the involved Federal agency or State government.

3. Holder agrees to indemnify the United States against any liability arising from the release of any hazardous substance or hazardous waste (as these terms are defined in the Comprehensive Environmental Response, Compensation and Liability Act of 1980, 42 U.S.C. § 9601, *et seq*. or the Resource Conservation and Recovery Act, 42 U.S.C. 6901, *et seq*.) on the Right-of-Way (unless the release or threatened release is wholly unrelated to activity of the Right-of-Way Holder's activity on the Right-of-Way), or resulting from the

activity of the Right-of-Way Holder on the Right-of-Way. This provision applies without regard to whether a release is caused by Holder, its agent, or unrelated third parties.

4. Holder shall be liable for damage or injury to the United States to the extent provided by 43 CFR Sec. 2883.1-4. Holder shall be held to a standard of strict liability for damage or injury to the United States resulting from pipe rupture, fire, or spills caused or substantially aggravated by any of the following within the right-of-way or permit area:

a. Activities of Holder including, but not limited to: construction, operation, maintenance, and termination of the facility;

b. Activities of other parties including, but not limited to:
    (1) Land clearing
    (2) Earth-disturbing and earth-moving work
    (3) Blasting
    (4) Vandalism and sabotage;

c. Acts of God.

The maximum limitation for such strict liability damages shall not exceed one million dollars ($1,000,000) for any one event, and any liability in excess of such amount shall be determined by the ordinary rules of negligence of the jurisdiction in which the damage or injury occurred.

This section shall not impose strict liability for damage or injury resulting primarily from an act of war or from the negligent acts or omissions of the United States.

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil, salt water, or other pollutant, wherever found, shall be the responsibility of Holder, regardless of fault. Upon failure of Holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he/she deems necessary to control and clean up the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of Holder. Such action by the Authorized Officer shall not relieve Holder of any responsibility as provided herein.

6. All construction and maintenance activity shall be confined to the authorized right-of-way width of **20** feet. If the pipeline route follows an existing road or buried pipeline right-of-way, the surface pipeline shall be installed no farther than 10 feet from the edge of the road or buried pipeline right-of-way. If existing surface pipelines prevent this distance, the proposed surface pipeline shall be installed immediately adjacent to the outer surface pipeline. All construction and maintenance activity shall be confined to existing roads or right-of-ways.

7. No blading or clearing of any vegetation shall be allowed unless approved in writing by the Authorized Officer.

8. Holder shall install the pipeline on the surface in such a manner that will minimize suspension of the pipeline across low areas in the terrain. In hummocky of duney areas, the pipeline shall be "snaked" around hummocks and dunes rather than suspended across these features.

9. The pipeline shall be buried with a minimum of **24** inches under all roads, "two-tracks," and trails. Burial of the pipe will continue for 20 feet on each side of each crossing. The condition of the road, upon completion of construction, shall be returned to at least its former state with no bumps or dips remaining in the road surface.

10. The holder shall minimize disturbance to existing fences and other improvements on public lands. The holder is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the owner of any improvements prior to disturbing them. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

11. In those areas where erosion control structures are required to stabilize soil conditions, the holder will install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound resource management practices.

12. Excluding the pipe, all above-ground structures not subject to safety requirement shall be painted by the holder to blend with the natural color of the landscape. The paint used shall be a color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2; designated by the Rocky Mountain Five State Interagency Committee.

13. The pipeline will be identified by signs at the point of origin and completion of the right-of-way and at all road crossings. At a minimum, signs will state the holder's name, BLM serial number, and the product being transported. Signs will be maintained in a legible condition for the life of the pipeline.

14. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway.

15. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the authorized officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the authorized officer. An evaluation of the discovery will be made by the authorized

officer to determine appropriate cultural or scientific values. The holder will be responsible for the cost of evaluation and any decision as to proper mitigation measures will be made by the authorized officer after consulting with the holder.

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

17. Surface pipelines shall be less than or equal to 4 inches and a working pressure below 125 psi.

VIII. INTERIM RECLAMATION

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

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

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

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

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

IX. FINAL ABANDONMENT & RECLAMATION

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

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

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

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

Ground-level Abandoned Well Marker to avoid raptor perching: Upon the plugging and subsequent abandonment of the well, the well marker will be installed at ground level on a plate containing the pertinent information for the plugged well.

Seed Mixture 2, for Sandy Sites

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

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

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

Species	lb/acre
Sand dropseed (Sporobolus cryptandrus)	1.0
Sand love grass (Eragrostis trichodes)	1.0
Plains bristlegrass (Setaria macrostachya)	2.0

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