Form 3160-3
(June 2015)

OCD – HOBBS
10/21/2020
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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.
NMLC0065525

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.

8. Lease Name and Well No.
LABRADOR FED COM
17H [329755]

2. Name of Operator
SHERIDAN PRODUCTION COMPANY LLC [252496]

9. API Well No. 30-025-47880

3a. Address
1360 Post Oak Blvd., Suite 2500 HOUSTON TX 77056

3b. Phone No. *(include area code)*
(713)548-1000

10. Field and Pool, or Exploratory
LITTMAN; SAN ANDRES [39330]

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface SENE / 2018 FNL / 269 FEL / LAT 32.49525 / LONG -103.074699
At proposed prod. zone SENE / 2410 FNL / 991 FEL / LAT 32.479655 / LONG -103.077047

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 8 / T21S / R38E / NMP

14. Distance in miles and direction from nearest town or post office*
6 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)
269 feet

16. No of acres in lease
1928.48

17. Spacing Unit dedicated to this well
160

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

19. Proposed Depth
4498 feet / 9823 feet

20. BLM/BIA Bond No. in file
FED: NMB001020

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3565 feet

22. Approximate date work will start*
06/01/2019

23. Estimated duration
30 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	Name *(Printed/Typed)*	Date
(Electronic Submission)	BRIAN WOOD / Ph: (505)466-8120	03/25/2019

Title
President

Approved by *(Signature)*	Name *(Printed/Typed)*	Date
(Electronic Submission)	Cody Layton / Ph: (575)234-5959	09/09/2020

Title	Office
Assistant Field Manager Lands & Minerals	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 10/21/2020

NSL

APPROVED WITH CONDITIONS

KZ 10/22/2020

REQUIRES NSL

(Continued on page 2)

*(Instructions on page 2)

Approval Date: 09/09/2020

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**SHERIDAN PRODUCTION COMPANY LLC**
LEASE NO.:	**NMLC0065525**
WELL NAME & NO.:	LABRADOR FED COM 17H
SURFACE HOLE FOOTAGE:	2018'/N & 269'/E
BOTTOM HOLE FOOTAGE	2410'/N & 991'/E
LOCATION:	Section 08, T.21 S., R.38 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	[x] COM	[ ] Unit

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the San Andres formations. 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 **9-5/8** inch surface casing shall be set at approximately **1690** 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 **5-1/2** inch production casing is:

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

C. PRESSURE CONTROL

1. 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.

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.

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Carlsbad Field Office, 620 E Greene St. Carlsbad, New Mexico 88220, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all

such owners and will make those signatures available to the BLM immediately upon request.

- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. <u>When the Communitization Agreement number is known, it shall also be on the sign.</u>

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.

OTA09042020

APD ID: 10400040269 **Submission Date:** 03/25/2019

Operator Name: SHERIDAN PRODUCTION COMPANY LLC

Well Name: LABRADOR FED COM **Well Number:** 17H

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
426130	QUATERNARY	3565	0	0	OTHER : Caliche	USEABLE WATER	N
426131	RUSTLER ANHYDRITE	1945	1620	1620		NONE	N
426132	---	1865	1700	1700	OTHER : Salt	NONE	N
426133	YATES	650	2915	2929	SANDSTONE	NONE	N
426134	SAN ANDRES	-740	4305	4524	DOLOMITE	NATURAL GAS, OIL	Y

Section 2 - Blowout Prevention

Pressure Rating (PSI): 5M **Rating Depth:** 5000

Equipment: A 5000-psi 5000' rated BOP stack consisting of Schaffer type double ram (blind and pipe) and annular preventer will be used from surface casing setting depth to TD. BOPE accessories will include a Kelly cock in the drill string at all times, a full opening drill pipe stabbing valve with the appropriate connections on the rig floor at all times, and a choke manifold and choke lines having the same BOP stack work pressure rating. Rig will have full opening safety valves, TIW valves, and their respective wrenches ready available on the rig floor.

Requesting Variance? NO

Variance request:

Testing Procedure: BOPE will be inspected and operated as required in Onshore Order 2. 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. Pressure tests will be conducted before drilling out from under all casing strings. BOP will be inspected and operated as required by Onshore Order 2. Kelly cock and sub equipped with a full opening valve sized to fit the drill pipe and collars will be available on the rig floor in the open position. After surface casing is set and the BOP is nipped up, then the BOP pressure tests will be made to 250 psi low and 2000 psi high. Intermediate pressure tests will be made to 250 psi low and 3000 psi high. Annular preventer will be tested to 250 psi low and 1000 psi high on the surface casing, and 250 psi low and 2500 psi high on the intermediate casing.

Choke Diagram Attachment:

Lab_17H_BOP_Choke_20190324092012.pdf

BOP Diagram Attachment:

Lab_17H_BOP_Choke_20190324092021.pdf

Operator Name: SHERIDAN PRODUCTION COMPANY LLC

Well Name: LABRADOR FED COM **Well Number:** 17H

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	13.5	9.625	NEW	API	N	0	1550	0	1550	3565		1550	J-55	36	LT&C	1.125	1.125	DRY	1.8	DRY	1.8
2	PRODUCTION	8.75	5.5	NEW	API	N	0	4389	0	4236	3565		4389	L-80	20	LT&C	1.125	1.125	DRY	1.8	DRY	1.8
3	PRODUCTION	8.75	7.0	NEW	API	Y	4389	4889	4236	4468			500	L-80	32	LT&C	1.125	1.125	DRY	1.8	DRY	1.8
4	PRODUCTION	8.75	5.5	NEW	API	Y	4889	9823	4468	4498			4934	L-80	20	LT&C	1.125	1.125	DRY	1.8	DRY	1.8

Casing Attachments

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

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Lab_17H_Casing_Design_Assumptions_20190324092156.pdf

Operator Name: SHERIDAN PRODUCTION COMPANY LLC

Well Name: LABRADOR FED COM **Well Number:** 17H

Casing Attachments

Casing ID: 2 **String Type:** PRODUCTION

Inspection Document:

Spec Document:

Tapered String Spec:

Casing Design Assumptions and Worksheet(s):

Lab_17H_Casing_Design_Assumptions_20190324092338.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Lab_17H_Casing_Design_Assumptions_20190324092444.pdf

Casing Design Assumptions and Worksheet(s):

Lab_17H_Casing_Design_Assumptions_20190324092513.pdf

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

Inspection Document:

Spec Document:

Tapered String Spec:

Lab_17H_Casing_Design_Assumptions_20190324092630.pdf

Casing Design Assumptions and Worksheet(s):

Lab_17H_Casing_Design_Assumptions_20190324092801.pdf

Section 4 - Cement

Operator Name: SHERIDAN PRODUCTION COMPANY LLC

Well Name: LABRADOR FED COM **Well Number:** 17H

String Type	Lead/Tail	Stage Tool Depth	Top MD	Bottom MD	Quantity(sx)	Yield	Density	Cu Ft	Excess%	Cement type	Additives
SURFACE	Lead		0	1550	717	1.84	12.8	1319	100	65% Class C + 35% poz	35% poz + 6% gel + 2% CaCl2 + 0.25 #/sk cello flake + 0.75 gal/100 sx CF-41L + 9.77 gps fresh water
SURFACE	Tail		0	1550	253	1.35	13.5	341	100	100% Class C	2% CaCl2 + 0.75 gal/100 sx CF-41L
PRODUCTION	Lead		0	4389	1162	2.39	11.8	2777	35	50% poz + 50% Class C, CJ010;CJ912	2% CJ111 (BWOW)
PRODUCTION	Tail		0	4389	1538	1.29	14.2	1984	35	50% poz + 50% Class C, CJ010;CJ912	2% CJ020 + 0.25% CJ511 + 6.15 gps fresh water
PRODUCTION	Lead		0	4889	1162	2.39	11.8	2777	35	50% poz + 50% Class C, CJ010;CJ912	2% CJ111 (BWOW)
PRODUCTION	Tail		0	4889	1538	1.29	14.2	1984	35	50% poz + 50% Class C, CJ010;CJ912 + 2% CJ020 + 0.25% CJ511	2% CJ020 + 0.25% CJ511 + 6.15 gps fresh water
PRODUCTION	Lead		0	9823	1162	2.39	11.8	2777	35	50% poz + 50% Class C, CJ010;CJ912	2% CJ111 (BWOW)
PRODUCTION	Tail		0	9823	1538	1.29	14.2	1984	335	50% poz + 50% Class C, CJ010;CJ912	2% CJ020 + 0.25% CJ511 + 6.15 gps fresh water

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: All necessary mud products (LCM) will be on site to handle any abnormal hole condition that may be encountered while drilling this well.

Describe the mud monitoring system utilized: An electronic/mechanical mud monitor with a minimum pit volume totalizer, stroke counter, and flow sensor will be used.

Circulating Medium Table

Operator Name: SHERIDAN PRODUCTION COMPANY LLC

Well Name: LABRADOR FED COM **Well Number:** 17H

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	1550	OTHER : Fresh water	8.3	9.2							
1550	9823	OTHER : Brine water with polymer sweeps	10.2	10.2							

Section 6 - Test, Logging, Coring

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

A MWD gamma ray log will be run in the production interval.

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

GR

Coring operation description for the well:

No core or drill stem test is planned.

Section 7 - Pressure

Anticipated Bottom Hole Pressure: 1934 **Anticipated Surface Pressure:** 944.44

Anticipated Bottom Hole Temperature(F): 95

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:

Lab_17H_H2S_Plan_20190324095002.pdf

Operator Name: SHERIDAN PRODUCTION COMPANY LLC

Well Name: LABRADOR FED COM **Well Number:** 17H

Section 8 - Other Information

Proposed horizontal/directional/multi-lateral plan submission:

Lab_17H_Horizontal_Drill_Plan_20190324095044.pdf

Other proposed operations facets description:

Other proposed operations facets attachment:

Lab_17H_Drill_Plan_20190324095100.pdf

Other Variance attachment:

Drilling Program

1. ESTIMATED TOPS

Formation/Lithology	TVD	MD	Contents
Quaternary caliche	000'	000'	water
Rustler anhydrite	1620'	1620'	barren
Salt	1700'	1700'	barren
Yates sandstone	2915'	2929'	barren
(KOP	3705'	3730'	barren
San Andres dolomite	4305'	4524'	hydrocarbons
TD	4498'	9823'	hydrocarbons

2. NOTABLE ZONES

San Andres is the goal. Closest water well (CP 00442 POD 1) is 0.65 mile north-northwest. Water bearing strata were found from 18' to 463' in the 532' deep well.

3. PRESSURE CONTROL

A 5000-psi 5000' rated BOP stack consisting of Schaffer type double ram (blind and pipe) and annular preventer will be used from surface casing setting depth to TD. See attached BOP and 5000-psi choke manifold diagrams.

BOPE will be inspected and operated as required in Onshore Order 2. 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.

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

After surface casing is set and the BOP is nippled up, then the BOP pressure tests will be made to 250 psi low and 2000 psi high. Intermediate pressure tests will be made to 250 psi low and 3000 psi high. Annular preventer will be tested to 250 psi low and 1000 psi high on the surface casing, and 250 psi low and 2500 psi high on the intermediate casing.

BOPE accessories will include a Kelly cock in the drill string at all times, a full opening drill pipe stabbing valve with the appropriate connections on the rig floor at all times, and a choke manifold and choke lines having the same BOP stack work pressure rating. Rig will have full opening safety valves, TIW valves, and their respective wrenches ready available on the rig floor.

4. CASING & CEMENT

All casing will be new and API.

Hole O. D.	Set MD	Set TVD	Casing O. D.	Weight (lb/ft)	Grade	Joint	Collapse	Burst	Tension
13.5"	0' - 1550'	0' - 1550'	Surface 9.625"	36	J-55	LTC	1.125	1.125	1.8
8.75"	0' - 4389'	0' - 4236'	Prod. 1 5.5"	20	L-80	LTC	1.125	1.125	1.8
8.75"	4389' - 4889'	4236' - 4468'	Prod. 2 7"	32	L-80	LTC	1.125	1.125	1.8
8.75"	4889' - 9823'	4468' - 4498'	Prod. 3 5.5"	20	L-80	LTC	1.125	1.125	1.8

Casing Name	Type	Sacks	Yield	Cu. Ft.	Weight	Blend
Surface	Lead	717	1.84	1319	12.8	65% Class C + 35% poz + 6% gel + 2% $CaCl_2$ + 0.25 #/sk cello flake + 0.75 gal/100 sx CF-41L + 9.77 gps fresh water
	Tail	253	1.35	341	13.5	100% Class C + 2% $CaCl_2$ + 0.75 gal/100 sx CF-41L
TOC = GL		>100% Excess			Centralizers will be installed on the bottom 3 joints (minimum 1 centralizer/joint) starting with shoe joint	
Production	Lead	1162	2.39	2777	11.8	50% poz + 50% Class C, CJ010;CJ912 + 2% CJ111 (BWOW) + 10% CJ020 + 0.4% CJ210F + 0.1% CJ701 + 13.98 gps fresh water
	Tail	1538	1.29	1984	14.2	50% poz + 50% Class C, CJ010;CJ912 + 2% CJ020 + 0.25% CJ511 + 6.15 gps fresh water
TOC = GL		>35% Excess				

5. MUD PROGRAM

An electronic/mechanical mud monitor with a minimum pit volume totalizer, stroke counter, and flow sensor will be used. All necessary mud products (LCM) will be on site to handle any abnormal hole condition that may be encountered while drilling this well. A closed loop system will be used.

Type	Interval (MD)	lb/gal
fresh water based	0' - 1550'	8.3 – 9.2
brine with polymer sweeps	1550' - 9823'	10.2

6. CORES, TESTS, & LOGS

No core or drill stem test is planned.

A MWD gamma ray log will be run in the production interval.

7. DOWN HOLE CONDITIONS

No abnormal pressure or temperature is expected. Maximum expected bottom hole pressure is ≈1934 psi. Expected bottom hole temperature is ≈95˚ F.

A Hydrogen Sulfide Drilling Operation Plan is attached.

8. OTHER INFORMATION

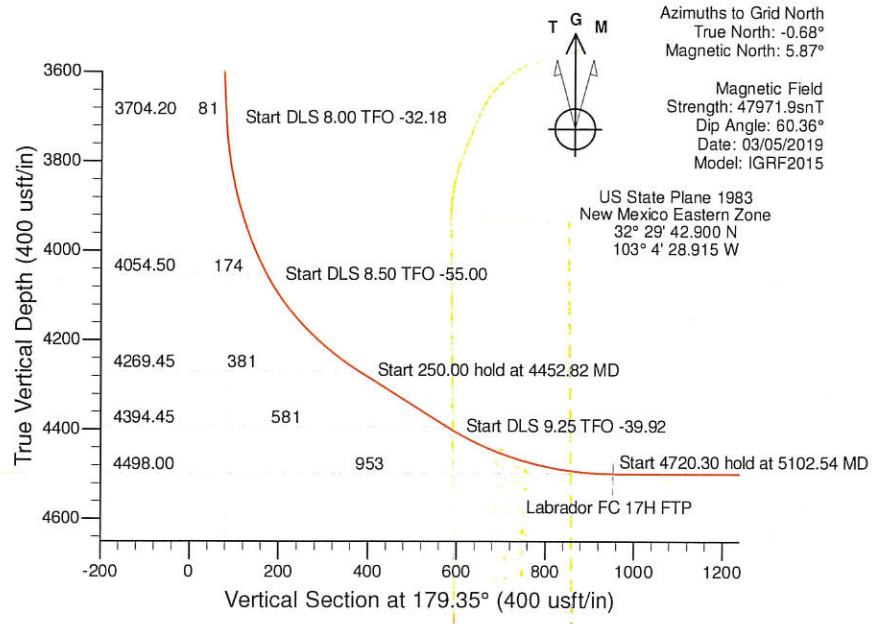
Anticipated spud date is upon approval. It is expected it will take ≈1 month to drill and complete the well.

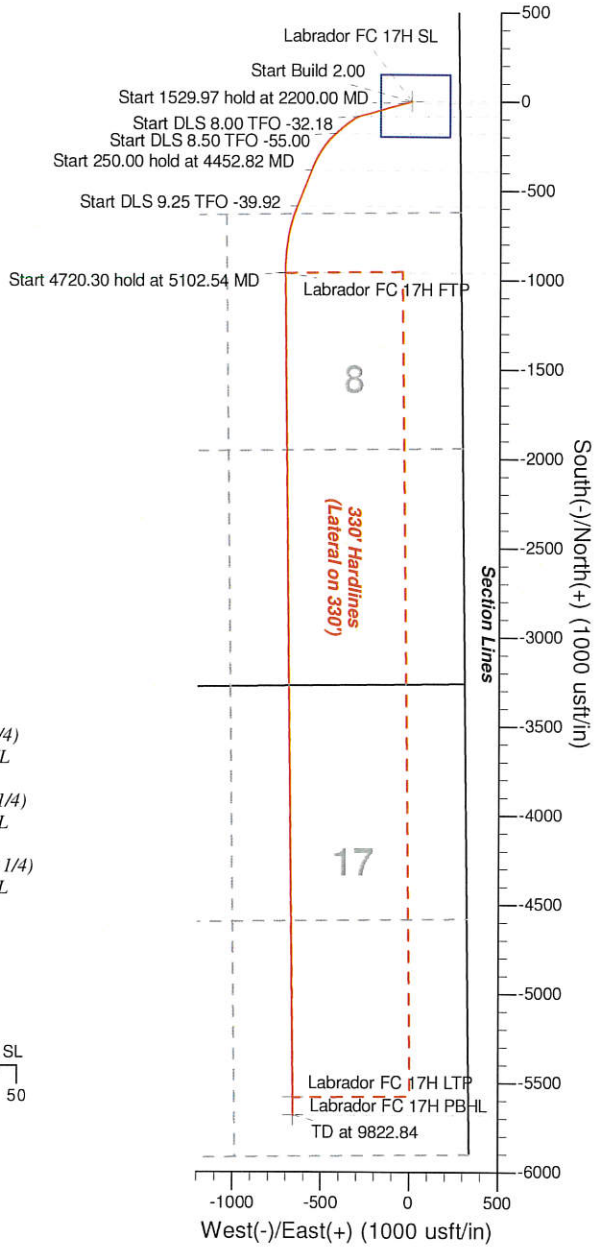
Sheridan has operating rights in NMLC-0057443A and NMLC-0065525.

SHERIDAN

Project: Permian NM E'83
County: Lea
Site: Labrador 17-18 Pad
Well: Labrador Fed Com 17H
Wellbore: #17H OH
Design: Plan #2a

TITAN Directional Drilling

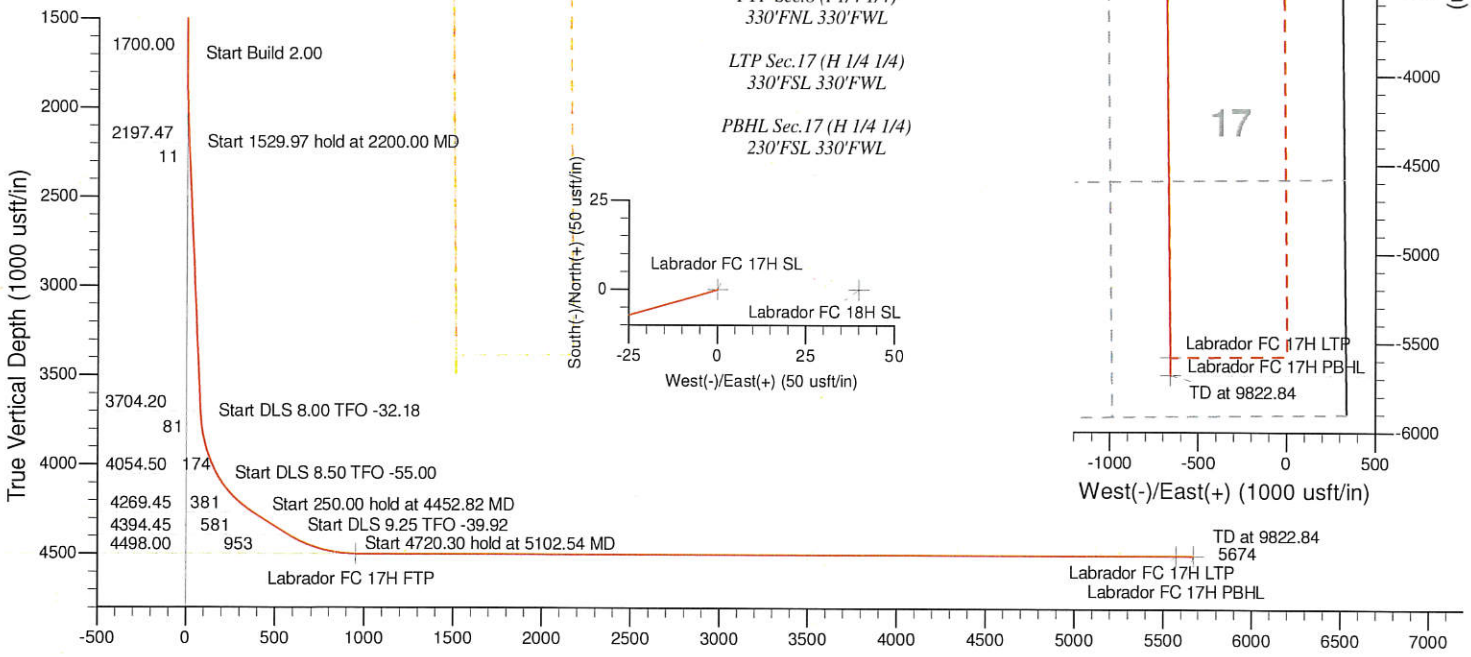




FTP Sec.8 (I 1/4 1/4)
330'FNL 330'FWL

LTP Sec.17 (H 1/4 1/4)
330'FSL 330'FWL

PBHL Sec.17 (H 1/4 1/4)
230'FSL 330'FWL



DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Labrador FC 17H SL	0.00	0.00	0.00	546192.77	929400.78	32° 29' 42.900 N	103° 4' 28.915 W
Labrador FC 17H FTP	4498.00	-961.68	-710.80	545231.01	928689.93	32° 29' 33.468 N	103° 4' 37.346 W
Labrador FC 17H LTP	4498.00	-5581.48	-658.28	540610.83	928742.45	32° 28' 47.753 N	103° 4' 37.368 W
Labrador FC 17H PBHL	4498.00	-5681.47	-657.14	540510.84	928743.59	32° 28' 46.763 N	103° 4' 37.368 W

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Target
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	1700.00	0.00	0.00	1700.00	0.00	0.00	0.00	0.00	0.00	
3	2200.00	10.00	254.10	2197.47	-11.92	-41.86	2.00	254.10	11.45	
4	3729.97	10.00	254.10	3704.20	-84.71	-297.37	0.00	0.00	81.32	
5	4120.18	40.00	228.67	4054.50	-179.15	-427.36	8.00	-32.18	174.29	
6	4452.82	60.00	202.05	4269.45	-387.50	-564.52	8.50	-55.00	381.06	
7	4702.82	60.00	202.05	4394.45	-588.16	-645.81	0.00	0.00	580.78	
8	5102.54	90.00	179.35	4498.00	-961.47	-710.80	9.25	-39.92	953.33	
9	9822.84	90.00	179.35	4498.00	-5681.47	-657.14	0.00	0.00	5673.63	Labrador FC 17H PBHL

Titan Directional Drilling

Survey Report

Company:	Sheridan Production Company	**Local Co-ordinate Reference:**	Well Labrador Fed Com 17H
Project:	Permian NM E'83	**TVD Reference:**	GL+KB @ 3578.00usft (planning)
Site:	Labrador 17-18 Pad	**MD Reference:**	GL+KB @ 3578.00usft (planning)
Well:	Labrador Fed Com 17H	**North Reference:**	Grid
Wellbore:	#17H OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #2a	**Database:**	EDM 5k-14

Project	Permian NM E'83		
Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		Using geodetic scale factor

Site	Labrador 17-18 Pad, Centered on prestake estimated #17 FTP				
Site Position:		**Northing:**	545,209.42 usft	**Latitude:**	32° 29' 33.255 N
From:	Map	**Easting:**	928,681.15 usft	**Longitude:**	103° 4' 37.451 W
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.67 °

Well	Labrador Fed Com 17H, formerly named McNeill Ranch					
Well Position	**+N/-S**	0.00 usft	**Northing:**	546,192.77 usft	**Latitude:**	32° 29' 42.900 N
	+E/-W	0.00 usft	**Easting:**	929,400.78 usft	**Longitude:**	103° 4' 28.915 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**	usft	**Ground Level:**	3,565.00 usft

Wellbore	#17H OH			
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2015	03/05/19	6.55	60.36	47,971.94164796

Design	Plan #2a			
Audit Notes:	p2a for name update from staked location & elevation			
Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00

Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**
	0.00	0.00	0.00	179.35

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
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	2.00	254.10	1,799.98	-0.48	-1.68	0.46	2.00	2.00	0.00
1,900.00	4.00	254.10	1,899.84	-1.91	-6.71	1.84	2.00	2.00	0.00
2,000.00	6.00	254.10	1,999.45	-4.30	-15.09	4.13	2.00	2.00	0.00
2,100.00	8.00	254.10	2,098.70	-7.64	-26.81	7.33	2.00	2.00	0.00
2,200.00	10.00	254.10	2,197.47	-11.92	-41.86	11.45	2.00	2.00	0.00
2,300.00	10.00	254.10	2,295.95	-16.68	-58.56	16.01	0.00	0.00	0.00
2,400.00	10.00	254.10	2,394.43	-21.44	-75.26	20.58	0.00	0.00	0.00
2,500.00	10.00	254.10	2,492.91	-26.20	-91.96	25.15	0.00	0.00	0.00
2,600.00	10.00	254.10	2,591.39	-30.95	-108.66	29.72	0.00	0.00	0.00
2,700.00	10.00	254.10	2,689.87	-35.71	-125.36	34.28	0.00	0.00	0.00
2,800.00	10.00	254.10	2,788.35	-40.47	-142.06	38.85	0.00	0.00	0.00
2,900.00	10.00	254.10	2,886.83	-45.22	-158.76	43.42	0.00	0.00	0.00
3,000.00	10.00	254.10	2,985.31	-49.98	-175.46	47.98	0.00	0.00	0.00

Titan Directional Drilling

Survey Report

Company:	Sheridan Production Company	**Local Co-ordinate Reference:**	Well Labrador Fed Com 17H
Project:	Permian NM E'83	**TVD Reference:**	GL+KB @ 3578.00usft (planning)
Site:	Labrador 17-18 Pad	**MD Reference:**	GL+KB @ 3578.00usft (planning)
Well:	Labrador Fed Com 17H	**North Reference:**	Grid
Wellbore:	#17H OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #2a	**Database:**	EDM 5k-14

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)
3,100.00	10.00	254.10	3,083.79	-54.74	-192.16	52.55	0.00	0.00	0.00
3,200.00	10.00	254.10	3,182.27	-59.50	-208.86	57.12	0.00	0.00	0.00
3,300.00	10.00	254.10	3,280.75	-64.25	-225.56	61.69	0.00	0.00	0.00
3,400.00	10.00	254.10	3,379.23	-69.01	-242.26	66.25	0.00	0.00	0.00
3,500.00	10.00	254.10	3,477.72	-73.77	-258.96	70.82	0.00	0.00	0.00
3,600.00	10.00	254.10	3,576.20	-78.52	-275.66	75.39	0.00	0.00	0.00
3,700.00	10.00	254.10	3,674.68	-83.28	-292.36	79.95	0.00	0.00	0.00
3,729.97	10.00	254.10	3,704.20	-84.71	-297.37	81.32	0.00	0.00	0.00
3,750.00	11.39	249.78	3,723.87	-85.87	-300.90	82.44	8.00	6.93	-21.59
3,800.00	15.04	242.54	3,772.55	-90.57	-311.29	87.02	8.00	7.30	-14.47
3,850.00	18.83	238.12	3,820.37	-97.82	-323.90	94.13	8.00	7.58	-8.84
3,900.00	22.69	235.15	3,867.12	-107.60	-338.67	103.74	8.00	7.72	-5.94
3,950.00	26.59	233.01	3,912.56	-119.84	-355.53	115.79	8.00	7.80	-4.28
4,000.00	30.51	231.38	3,956.47	-134.50	-374.39	130.24	8.00	7.85	-3.25
4,050.00	34.45	230.10	3,998.64	-151.50	-395.17	147.00	8.00	7.88	-2.57
4,100.00	38.40	229.05	4,038.86	-170.76	-417.76	166.00	8.00	7.90	-2.10
4,120.18	40.00	228.67	4,054.50	-179.15	-427.36	174.29	8.00	7.91	-1.85
4,150.00	41.50	225.54	4,077.09	-192.40	-441.61	187.37	8.50	5.02	-10.51
4,200.00	44.18	220.69	4,113.76	-217.23	-464.80	211.93	8.50	5.37	-9.69
4,250.00	47.05	216.30	4,148.74	-245.20	-487.01	239.65	8.50	5.74	-8.77
4,300.00	50.08	212.32	4,181.83	-276.16	-508.10	270.37	8.50	6.05	-7.97
4,350.00	53.23	208.68	4,212.86	-309.95	-527.97	303.93	8.50	6.30	-7.28
4,400.00	56.48	205.33	4,241.65	-346.37	-546.50	340.14	8.50	6.50	-6.70
4,452.83	60.00	202.05	4,269.45	-387.50	-564.52	381.06	8.50	6.67	-6.20
4,500.00	60.00	202.05	4,293.04	-425.36	-579.86	418.74	0.00	0.00	0.00
4,600.00	60.00	202.05	4,343.04	-505.63	-612.38	498.64	0.00	0.00	0.00
4,702.83	60.00	202.05	4,394.45	-588.16	-645.81	580.78	0.00	0.00	0.00
4,750.00	63.38	198.92	4,416.83	-627.06	-660.33	619.52	9.25	7.17	-6.64
4,800.00	67.04	195.80	4,437.79	-670.38	-673.85	662.68	9.25	7.31	-6.24
4,850.00	70.75	192.85	4,455.79	-715.57	-685.37	707.73	9.25	7.43	-5.91
4,900.00	74.51	190.02	4,470.72	-762.33	-694.82	754.38	9.25	7.52	-5.65
4,950.00	78.31	187.30	4,482.46	-810.36	-702.13	802.33	9.25	7.59	-5.44
5,000.00	82.13	184.65	4,490.96	-859.35	-707.25	851.26	9.25	7.64	-5.30
5,050.00	85.96	182.05	4,496.15	-908.98	-710.16	900.85	9.25	7.67	-5.20
5,102.54	90.00	179.35	4,498.00	-961.47	-710.80	953.33	9.25	7.69	-5.15
5,200.00	90.00	179.35	4,498.00	-1,058.93	-709.69	1,050.79	0.00	0.00	0.00
5,300.00	90.00	179.35	4,498.00	-1,158.92	-708.55	1,150.79	0.00	0.00	0.00
5,400.00	90.00	179.35	4,498.00	-1,258.91	-707.42	1,250.79	0.00	0.00	0.00
5,500.00	90.00	179.35	4,498.00	-1,358.91	-706.28	1,350.79	0.00	0.00	0.00
5,600.00	90.00	179.35	4,498.00	-1,458.90	-705.14	1,450.79	0.00	0.00	0.00
5,700.00	90.00	179.35	4,498.00	-1,558.89	-704.01	1,550.79	0.00	0.00	0.00
5,800.00	90.00	179.35	4,498.00	-1,658.89	-702.87	1,650.79	0.00	0.00	0.00
5,900.00	90.00	179.35	4,498.00	-1,758.88	-701.73	1,750.79	0.00	0.00	0.00
6,000.00	90.00	179.35	4,498.00	-1,858.87	-700.60	1,850.79	0.00	0.00	0.00

Titan Directional Drilling

Survey Report

Company:	Sheridan Production Company	**Local Co-ordinate Reference:**	Well Labrador Fed Com 17H
Project:	Permian NM E'83	**TVD Reference:**	GL+KB @ 3578.00usft (planning)
Site:	Labrador 17-18 Pad	**MD Reference:**	GL+KB @ 3578.00usft (planning)
Well:	Labrador Fed Com 17H	**North Reference:**	Grid
Wellbore:	#17H OH	**Survey Calculation Method:**	Minimum Curvature
Design:	Plan #2a	**Database:**	EDM 5k-14

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)
6,100.00	90.00	179.35	4,498.00	-1,958.87	-699.46	1,950.79	0.00	0.00	0.00
6,200.00	90.00	179.35	4,498.00	-2,058.86	-698.32	2,050.79	0.00	0.00	0.00
6,300.00	90.00	179.35	4,498.00	-2,158.85	-697.19	2,150.79	0.00	0.00	0.00
6,400.00	90.00	179.35	4,498.00	-2,258.85	-696.05	2,250.79	0.00	0.00	0.00
6,500.00	90.00	179.35	4,498.00	-2,358.84	-694.91	2,350.79	0.00	0.00	0.00
6,600.00	90.00	179.35	4,498.00	-2,458.84	-693.78	2,450.79	0.00	0.00	0.00
6,700.00	90.00	179.35	4,498.00	-2,558.83	-692.64	2,550.79	0.00	0.00	0.00
6,800.00	90.00	179.35	4,498.00	-2,658.82	-691.50	2,650.79	0.00	0.00	0.00
6,900.00	90.00	179.35	4,498.00	-2,758.82	-690.37	2,750.79	0.00	0.00	0.00
7,000.00	90.00	179.35	4,498.00	-2,858.81	-689.23	2,850.79	0.00	0.00	0.00
7,100.00	90.00	179.35	4,498.00	-2,958.80	-688.09	2,950.79	0.00	0.00	0.00
7,200.00	90.00	179.35	4,498.00	-3,058.80	-686.95	3,050.79	0.00	0.00	0.00
7,300.00	90.00	179.35	4,498.00	-3,158.79	-685.82	3,150.79	0.00	0.00	0.00
7,400.00	90.00	179.35	4,498.00	-3,258.78	-684.68	3,250.79	0.00	0.00	0.00
7,500.00	90.00	179.35	4,498.00	-3,358.78	-683.54	3,350.79	0.00	0.00	0.00
7,600.00	90.00	179.35	4,498.00	-3,458.77	-682.41	3,450.79	0.00	0.00	0.00
7,700.00	90.00	179.35	4,498.00	-3,558.76	-681.27	3,550.79	0.00	0.00	0.00
7,800.00	90.00	179.35	4,498.00	-3,658.76	-680.13	3,650.79	0.00	0.00	0.00
7,900.00	90.00	179.35	4,498.00	-3,758.75	-679.00	3,750.79	0.00	0.00	0.00
8,000.00	90.00	179.35	4,498.00	-3,858.74	-677.86	3,850.79	0.00	0.00	0.00
8,100.00	90.00	179.35	4,498.00	-3,958.74	-676.72	3,950.79	0.00	0.00	0.00
8,200.00	90.00	179.35	4,498.00	-4,058.73	-675.59	4,050.79	0.00	0.00	0.00
8,300.00	90.00	179.35	4,498.00	-4,158.73	-674.45	4,150.79	0.00	0.00	0.00
8,400.00	90.00	179.35	4,498.00	-4,258.72	-673.31	4,250.79	0.00	0.00	0.00
8,500.00	90.00	179.35	4,498.00	-4,358.71	-672.18	4,350.79	0.00	0.00	0.00
8,600.00	90.00	179.35	4,498.00	-4,458.71	-671.04	4,450.79	0.00	0.00	0.00
8,700.00	90.00	179.35	4,498.00	-4,558.70	-669.90	4,550.79	0.00	0.00	0.00
8,800.00	90.00	179.35	4,498.00	-4,658.69	-668.77	4,650.79	0.00	0.00	0.00
8,900.00	90.00	179.35	4,498.00	-4,758.69	-667.63	4,750.79	0.00	0.00	0.00
9,000.00	90.00	179.35	4,498.00	-4,858.68	-666.49	4,850.79	0.00	0.00	0.00
9,100.00	90.00	179.35	4,498.00	-4,958.67	-665.36	4,950.79	0.00	0.00	0.00
9,200.00	90.00	179.35	4,498.00	-5,058.67	-664.22	5,050.79	0.00	0.00	0.00
9,300.00	90.00	179.35	4,498.00	-5,158.66	-663.08	5,150.79	0.00	0.00	0.00
9,400.00	90.00	179.35	4,498.00	-5,258.65	-661.95	5,250.79	0.00	0.00	0.00
9,500.00	90.00	179.35	4,498.00	-5,358.65	-660.81	5,350.79	0.00	0.00	0.00
9,600.00	90.00	179.35	4,498.00	-5,458.64	-659.67	5,450.79	0.00	0.00	0.00
9,700.00	90.00	179.35	4,498.00	-5,558.64	-658.54	5,550.79	0.00	0.00	0.00
9,800.00	90.00	179.35	4,498.00	-5,658.63	-657.40	5,650.79	0.00	0.00	0.00
9,822.84	90.00	179.35	4,498.00	-5,681.47	-657.14	5,673.63	0.00	0.00	0.00

H_2S Drilling Operations Plan
Sheridan Production Company, LLC
Labrador Fed Com 17H & 18H
SENE 8-21s-38e Le County NM

a. At least 500' before drilling into the Yates Formation (2915' TVD), all personnel will be trained to work in H_2S conditions as required by Onshore Order 6.

b. Two briefing areas will be established. Each will be ≥150' from the wellhead, perpendicular from one another, and easily entered and exited. See attached diagram for more details.

c. H_2S Safety Equipment/Systems:

i. Well Control Equipment

- Flare line will be ≥150' from the wellhead and ignited by a flare gun.
- Beware of SO_2 created by flaring.
- Choke manifold will include a remotely operated choke.
- Mud gas separator

ii. Protective Equipment for Personnel

- Each person will wear a personal H_2S and SO_2 monitor at all times while on site. Monitors will not be worn on hats. Monitors will be worn on the front of the waist or chest.
- One self-contained breathing apparatus (SCBA) 30-minute rescue pack will be at each briefing area. Two 30-minute SCBA packs will be stored in the safety trailer.
- Four work/escape packs will be on the rig floor. Each pack will have a long enough hose to allow unimpaired work activity.
- Four emergency escape packs will be in the doghouse for emergency evacuation.
- Hand signals will be used when wearing protective breathing apparatus.
- Stokes litter or stretcher
- Two full OSHA compliant body harnesses
- A 100-foot long x 5/8" OSHA compliant rope
- One 20-pound ABC fire extinguisher

iii. H_2S Detection & Monitoring Equipment

- Each person will wear a personal H_2S and SO_2 monitor at all times while on site. Monitors will not be worn on hats. Monitors will be worn on the front of the waist or chest.
- A stationary detector with 3 sensors will be in the doghouse.
- Sensors will be installed on the rig floor, bell nipple, and at the end of the flow line or where drilling fluids are discharged.
- Visual alarm will be triggered at 10 ppm.
- Audible alarm will be triggered at 10 ppm.
- Calibration will occur at least every 30 days. Gas sample tubes will be kept in the safety trailer.

iv. Visual Warning System

- Color-coded H_2S condition sign will be set at the entrance to the pad.
- Color-coded condition flag will be installed to indicate current H_2S conditions.
- Two wind socks will be installed that will be visible from all sides.

v. Mud Program

- A water based mud with a pH of $\geq$10 will be maintained to control corrosion, H_2S gas returns to the surface, and minimize sulfide stress cracking and embrittlement.
- Drilling mud containing H_2S gas will be degassed at an optimum location for the rig configuration.
- This gas will be piped into the flare system.
- Enough mud additives will be on location to scavenge and/or neutralize H_2S where formation pressures are unknown.

vi. Metallurgy

- All equipment that has the potential to be exposed to H_2S will be suitable for H_2S service.
- Equipment that will meet these metallurgical standards include the drill string, casing, wellhead, BOP assembly, casing head and spool, rotating head, kill lines, choke, choke manifold and lines, valves, mud-gas separators, DST tools, test units, tubing, flanges, and other related equipment (elastomer packing and seals).

vii. Communication

- Cell phones and/or 2-way radios will be used to communicate from the well site.

d. A remote-controlled choke, mud-gas separator, and a rotating head will be installed before drilling or testing any formation expected to contain H_2S.

Company (432 687-5100) Personnel to be Notified

Rachel Johnson, Senior EH&S Coordinator	Office: (432) 523-1004 Mobile: (432) 557-4645

Local & County Agencies

Eunice* Fire & Ambulance	911 or (575) 394-3258
Eunice* Police	911 or (575) 394-2112

*Well is outside city limits. Eunice is closest (6 air miles) city.

Hobbs Fire Marshal	(575) 391-8185
Lea County Sheriff (Lovington)	911 or (575) 396-3611
Lea County Emergency Management (Lovington)	(575) 396-8602
Lea Regional Medical Center Hospital (Hobbs)	(575) 492-5000

State Agencies

NM State Police (Hobbs)	(575) 392-5588
NM Oil Conservation (Hobbs)	(575) 370-3186
NM Oil Conservation (Santa Fe)	(505) 476-3440
NM Department of Transportation (Roswell)	(575) 637-7201

Federal Agencies

BLM Carlsbad Field Office	(575) 234-5972
BLM Hobbs Field Station	(575) 393-3612
National Response Center	(800) 424-8802

US EPA Region 6 (Dallas)	(800) 887-6063 (214) 665-6444

Veterinarians

Double J Animal Hospital (Hobbs)	(575) 738-0143
Hobbs Animal Clinic & Pet Care (Hobbs)	(575) 392-5563
Dal Paso Animal Hospital (Hobbs)	(575) 397-2286

Residents within 2 miles

none

Air Evacuation

Med Flight Air Ambulance (Albuquerque)	(800) 842-4431
Lifeguard (Albuquerque)	(888) 866-7256

Safety Contractors (Hobbs)

Callaway Safety Equipment Company	(575) 392-4990
DXP Safety	(575) 393-9188
Indian Fire & Safety	(575) 393-3093
Legacy Safety & Consulting	(575) 393-7233
Total Safety	(575) 392-2973

Form 3160-3
(June 2015)

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.
NMLC0065525

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.

8. Lease Name and Well No.
LABRADOR FED COM
17H

2. Name of Operator
SHERIDAN PRODUCTION COMPANY LLC

9. API Well No.

3a. Address
1360 Post Oak Blvd., Suite 2500 HOUSTON TX 77056

3b. Phone No. *(include area code)*
(713)548-1000

10. Field and Pool, or Exploratory
LITTMAN; SAN ANDRES

4. Location of Well *(Report location clearly and in accordance with any State requirements.*)*
At surface SENE / 2018 FNL / 269 FEL / LAT 32.49525 / LONG -103.074699
At proposed prod. zone SENE / 2410 FNL / 991 FEL / LAT 32.479655 / LONG -103.077047

11. Sec., T. R. M. or Blk. and Survey or Area
SEC 8 / T21S / R38E / NMP

14. Distance in miles and direction from nearest town or post office*
6 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)
269 feet

16. No of acres in lease
1928.48

17. Spacing Unit dedicated to this well
160

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

19. Proposed Depth
4498 feet / 9823 feet

20. BLM/BIA Bond No. in file
FED: NMB001020

21. Elevations (Show whether DF, KDB, RT, GL, etc.)
3565 feet

22. Approximate date work will start*
06/01/2019

23. Estimated duration
30 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)*
BRIAN WOOD / Ph: (505)466-8120

Date
03/25/2019

Title
President

Approved by *(Signature)*
(Electronic Submission)

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

Date
09/09/2020

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.

APPROVED WITH CONDITIONS

Approval Date: 09/09/2020

(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: SENE / 2018 FNL / 269 FEL / TWSP: 21S / RANGE: 38E / SECTION: 8 / LAT: 32.49525 / LONG: -103.074699 (TVD: 0 feet, MD: 0 feet)

   PPP: SENE / 2463 FNL / 857 FEL / TWSP: 21S / RANGE: 38E / SECTION: 8 / LAT: 32.4940316 / LONG: -103.0766062 (TVD: 4305 feet, MD: 4524 feet)

   PPP: NESE / 2640 FSL / 929 FEL / TWSP: 21S / RANGE: 38E / SECTION: 8 / LAT: 32.4935332 / LONG: -103.0768398 (TVD: 4417 feet, MD: 4750 feet)

   BHL: SENE / 2410 FNL / 991 FEL / TWSP: 21S / RANGE: 38E / SECTION: 17 / LAT: 32.479655 / LONG: -103.077047 (TVD: 4498 feet, MD: 9823 feet)

BLM Point of Contact

Name: Tenille Ortiz

Title: Legal Instruments Examiner

Phone: 5752342224

Email: tortiz@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.

PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	**SHERIDAN PRODUCTION COMPANY LLC**
LEASE NO.:	**NMLC0065525**
WELL NAME & NO.:	LABRADOR FED COM 17H
SURFACE HOLE FOOTAGE:	2018'/N & 269'/E
BOTTOM HOLE FOOTAGE	2410'/N & 991'/E
LOCATION:	Section 08, T.21 S., R.38 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	[x] COM	[ ] Unit

A. HYDROGEN SULFIDE

A Hydrogen Sulfide (H2S) Drilling Plan shall be activated 500 feet prior to drilling into the San Andres formations. 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 **9-5/8** inch surface casing shall be set at approximately **1690** 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 **5-1/2** inch production casing is:

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

C. PRESSURE CONTROL

1. 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.

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.

D. SPECIAL REQUIREMENT (S)

Communitization Agreement

- The operator will submit a Communitization Agreement to the Carlsbad Field Office, 620 E Greene St. Carlsbad, New Mexico 88220, at least 90 days before the anticipated date of first production from a well subject to a spacing order issued by the New Mexico Oil Conservation Division. The Communitization Agreement will include the signatures of all working interest owners in all Federal and Indian leases subject to the Communitization Agreement (i.e., operating rights owners and lessees of record), or certification that the operator has obtained the written signatures of all

such owners and will make those signatures available to the BLM immediately upon request.

- If the operator does not comply with this condition of approval, the BLM may take enforcement actions that include, but are not limited to, those specified in 43 CFR 3163.1.
- In addition, the well sign shall include the surface and bottom hole lease numbers. <u>When the Communitization Agreement number is known, it shall also be on the sign.</u>

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.

OTA09042020

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Sheridan Production Company LLC
WELL NAME & NO.:	Labrador Fed Com 17H
SURFACE HOLE FOOTAGE:	2018'/N & 269'/E
BOTTOM HOLE FOOTAGE	2410'/N & 991'/E
LOCATION:	Section 8, T.21 S., R.38 E., NMPM
COUNTY:	Lea County, New Mexico
OPERATOR'S NAME:	Sheridan Production Company LLC
WELL NAME & NO.:	Labrador Fed Com 18H
SURFACE HOLE FOOTAGE:	2018'/N & 229'/E
BOTTOM HOLE FOOTAGE	2411'/N & 330'/E
LOCATION:	Section 8, T.21 S., R.38 E., NMPM
COUNTY:	Lea County, New Mexico

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.

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 fourteen (14) feet in width. The maximum width of surface disturbance, when constructing the access road, shall not exceed twenty-five (25) feet.

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

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

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

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

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

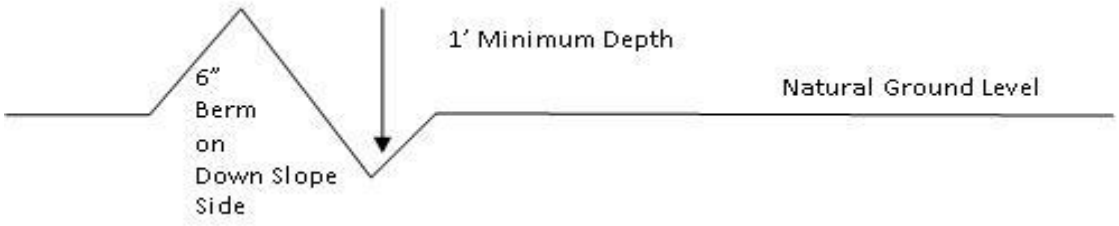
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

Drainage

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

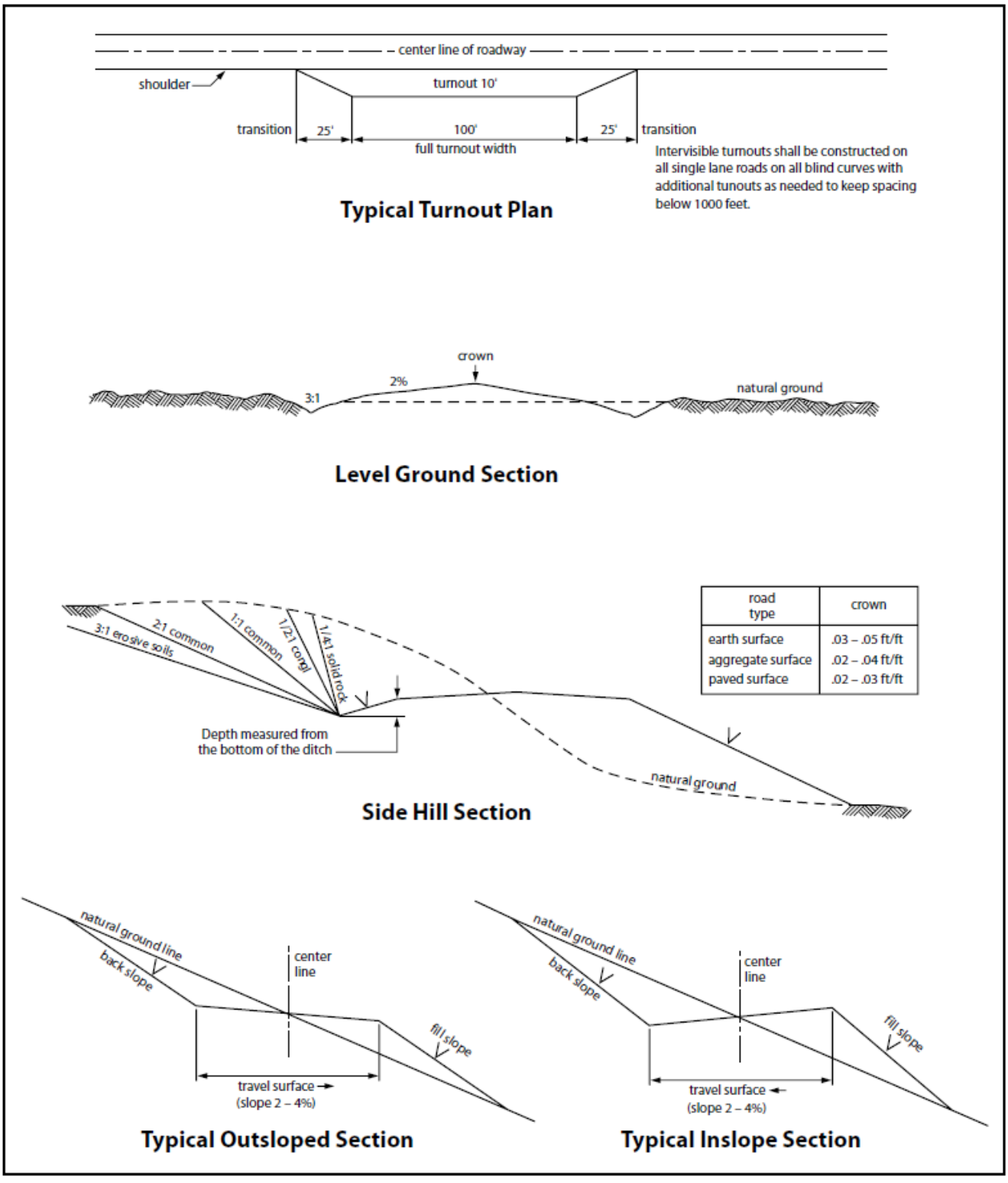


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

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. OIL AND GAS RELATED SITES

STANDARD STIPULATIONS FOR OIL AND GAS RELATED SITES

A copy of the application (Grant/Sundry Notice) and attachments, including stipulations and map, will be on location during construction. BLM personnel may request to view a copy of your permit during construction to ensure compliance with all stipulations.

The holder agrees to comply with the following stipulations to the satisfaction of the Authorized Officer, BLM.

1. The 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 and for all response costs, penalties, damages, claims, and other costs arising from the provisions of the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. Chap. 82, Section 6901 et. seq., from the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), 42 U.S.C. Chap. 109, Section 9601 et. seq., and from other applicable environmental statues.

2. The holder shall comply with all applicable Federal laws and regulations existing or hereafter enacted or promulgated. In any event, the holder shall comply with the Toxic Substances Control Act of 1976, as amended (15 U.S.C. 2601, et. seq.) with regard to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized by this grant. (See 40 CFR, Part 702-799 and especially, 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. The 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 the right-of-way holder's activity on the right-of-way). This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

4. If, during any phase of the construction, operation, maintenance, or termination of the site or related pipeline(s), any oil or other pollutant should be discharged from site facilities, the pipeline(s) or from containers or vehicles impacting Federal lands, the control and total removal, disposal, and cleanup of such oil of other pollutant, wherever found, shall be the responsibility of the holder, regardless of fault. Upon failure of the holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages to Federal lands resulting therefrom, the Authorized Officer may take such measures as deemed necessary to control and cleanup the discharge and restore the area, including, where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve the holder of any liability or responsibility.

5. Sites shall be maintained in an orderly, sanitary condition at all times. Waste materials, both liquid and solid, shall be disposed of promptly at an appropriate, authorized waste disposal facility in accordance with all applicable State and Federal laws. "Waste" means all discarded matter including, but not limited to, human waste, trash, garbage, refuse, petroleum products, brines, chemicals, oil drums, ashes, and equipment.

6. The operator will notify the Bureau of Land Management (BLM) authorized officer and nearest Fish and Wildlife Service (FWS) Law Enforcement office within 24 hours, if the operator discovers a dead or injured federally protected species (i.e., migratory bird species, bald or golden eagle, or species listed by the FWS as threatened or endangered) in or adjacent to a pit, trench, tank, exhaust stack, or fence. (If the operator is unable to contact the FWS Law Enforcement office, the operator must contact the nearest FWS Ecological Services office.)

7. All above-ground structures not subject to safety requirements 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" designated by the Rocky Mountain Five-State Interagency Committee. The color selected for this project is **Shale Green**, Munsell Soil Color Chart Number 5Y 4/2.

8. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on the holder's behalf, on public or Federal land shall be immediately reported to the Authorized Officer. The 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 actions to prevent the loss of

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

9. A sales contract for removal of mineral material (caliche, sand, gravel, fill dirt) from an authorized pit, site, or on location must be obtained from the BLM prior to commencing construction. There are several options available for purchasing mineral material: contact the BLM office (575-234-5972).

10. 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.

11. Once the site is no longer in service or use, the site must undergo final abandonment. At final abandonment, the site 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 the abandonment of the site. All pads and 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. 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).

12. The holder shall stockpile an adequate amount of topsoil where blading occurs. The topsoil to be stripped is approximately ___6___ inches in depth. The topsoil will be segregated from other spoil piles. The topsoil will be used for final reclamation.

13. The holder will reseed all disturbed areas. Seeding will be done according to the attached seeding requirements, using the following seed mix.

( ) seed mixture 1	( ) seed mixture 3
( ) seed mixture 2	( ) seed mixture 4
(X) seed mixture 2/LPC	( ) Aplomado Falcon Mixture

14. In those areas where erosion control structures are required to stabilize soil conditions, the holder shall install such structures as are suitable for the specific soil conditions being encountered and which are in accordance with sound management practices. Any earth work will require prior approval by the Authorized Officer.

15. Open-topped Tanks - 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

16. 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.

17. 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.

18. 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.

19. Special Stipulations:

Wildlife:

Lesser Prairie-Chicken

Oil and gas activities 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, geophysical exploration other than 3-D operations, and 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. Normal vehicle use on existing roads will not be restricted. Exhaust noise from permanent engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

This authorization is subject to your Certificate of Participation and/or Certificate of Inclusion under the New Mexico Candidate Conservation Agreement. Because it involves surface disturbing activities covered under your Certificate, your Habitat Conservation Fund Account with the Center of Excellence for Hazardous Materials Management (CEHMM) will be debited according to Exhibit B Part 2 of the Certificate of Participation.

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.

Range:

Cattleguards

Where a permanent cattlegaurd is approved, an appropriately sized cattleguard(s) sufficient to carry out the project shall be installed and maintained at fence crossing(s). Any existing cattleguard(s) on the access road 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 cattleguard(s) that are in place and are utilized during lease

operations. A gate shall be constructed on one side of the cattleguard and fastened securely to H-braces.

Fence Requirement
Where entry granted across a fence line, the fence must be braced and tied off on both sides of the passageway prior to cutting. Once the work is completed, the fence will be restored to its prior condition, or better. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fence(s).

Livestock Watering Requirement
Any damage to structures that provide water to livestock throughout the life of the well, caused by operations from the well site, must be immediately corrected by the operator. The operator must notify the BLM office (575-234-5972) and the private surface landowner or the grazing allotment holder if any damage occurs to structures that provide water to livestock.

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 for LPC Sand/Shinnery Sites

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 shall be done in accordance with State law(s) and within nine (9) months prior to purchase. Commercial seed shall be either certified or registered seed. The seed container shall 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). 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. Seeding shall be repeated until a satisfactory stand is established as determined by the Authorized Officer. Evaluation of growth may 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
Plains Bristlegrass	5lbs/A
Sand Bluestem	5lbs/A
Little Bluestem	3lbs/A
Big Bluestem	6lbs/A
Plains Coreopsis	2lbs/A
Sand Dropseed	1lbs/A

*Pounds of pure live seed:

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

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 Rd., 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 and Natural Resources Department

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, New Mexico 87505

Form C-102
Revised August 1, 2011

Submit one copy to appropriate District Office

OCD - HOBBS
10/21/2020
RECEIVED

WELL LOCATION AND ACREAGE DEDICATION PLAT

☐ AMENDED REPORT

API Number	Pool Code	Pool Name
30-025- 30-025-47880	39330	Littman; San Andres

Property Code	Property Name	Well Number
329755	LABRADOR FED COM	17H

OGRID No.	Operator Name	Elevation
252496	SHERIDAN PRODUCTION COMPANY, LLC.	3565'

Surface Location

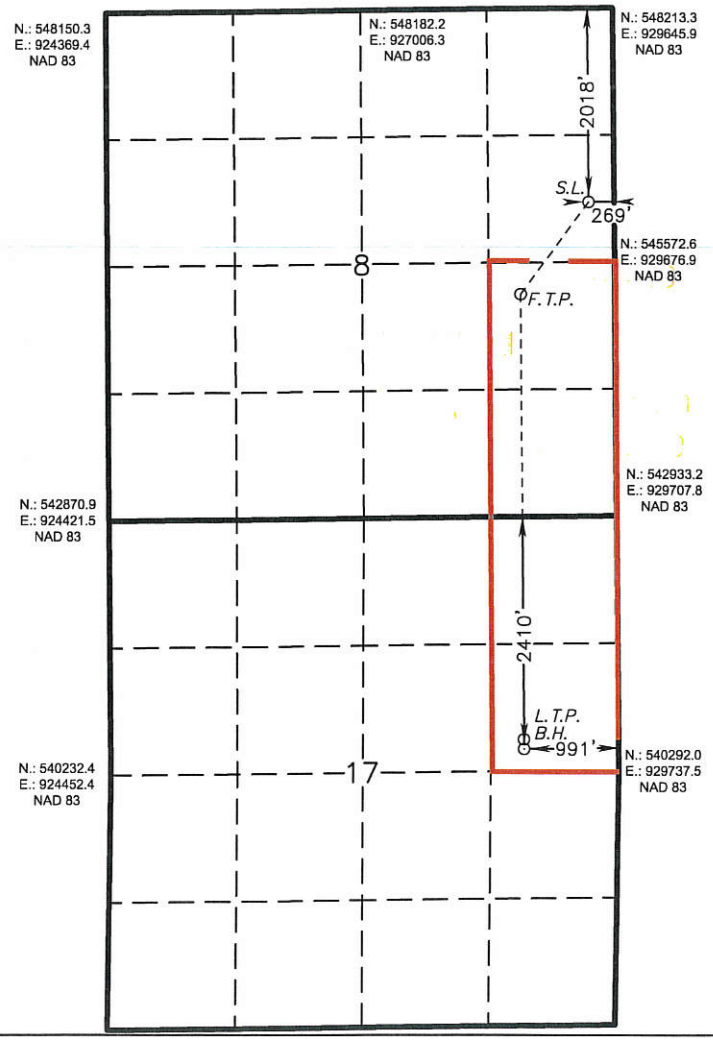
UL or lot No.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
H	8	21 S	38 E		2018	NORTH	269	EAST	LEA

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
H	17	21 S	38 E		2410	NORTH	991	EAST	LEA

Dedicated Acres	Joint or Infill	Consolidation Code	Order No.
160.00		C	

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



SURFACE LOCATION
Lat – N 32.495250°
Long – W 103.074699°
NMSPCE– N 546192.8
E 929400.8
(NAD-83)

FIRST TAKE POINT
2310 FSL & 991 FEL
Lat – N 32.492630°
Long – W 103.077041°
NMSPCE– N 545231.0
E 928689.9
(NAD-83)

LAST TAKE POINT
2310 FNL & 991 FEL
Lat – N 32.479931°
Long – W 103.077047°
NMSPCE– N 540610.8
E 928742.4
(NAD-83)

PROPOSED BOTTOM HOLE LOCATION
Lat – N 32.479656°
Long – W 103.077047°
NMSPCE– N 540510.8
E 928743.6
(NAD-83)

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.

Signature 3-15-19 Date

Brian Wood
Printed Name

brian@permitswest.com
Email Address 505 466-8120

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 supervison, and that the same is true and correct to the best of my belief.

OCTOBER 10, 2018
Date Surveyed

Signature & Seal of Professional Surveyor

GARY L. JONES
NEW MEXICO
7977
REGISTERED PROFESSIONAL LAND SURVEYOR

Certificate No. Gary Jones 7977
BASIN SURVEYS

0' 1000' 2000' 3000' 4000' N
SCALE: 1" = 2000'
WO Num.: 34086

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

OCD – HOBBS
10/21/2020
RECEIVED

GAS CAPTURE PLAN

Date: 3-11-19

X Original
□ Amended - Reason for Amendment:

Operator & OGRID No.: Sheridan Production Company, LLC (252496)

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: Form C-129 must be submitted and approved prior to exceeding 60 days allowed by Rule (Subsection A of 19.15.18.12 NMAC).

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 & Number	API	SHL (ULSTR)	SHL Footages	Expected MCF/D	Flare or Vent	Comments
Labrador Fed Com 17H	30-025-**30-025-47880**	H-8-21s-38e	2018' FNL & 269' FEL	150	<30 days	flare until well clean, then connect
Labrador Fed Com 18H	30-025-	H-8-21s-38e	2018' FNL & 229' FEL	150	<30 days	flare until well clean, then connect

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 not yet dedicated, but will be connected to a 3rd party gathering system located in Lea County, New Mexico. It will require an unknown length of pipeline to connect the facility to a gathering system. Sheridan Production Company, LLC provides (periodically) to Gas Transporter a drilling, completion and estimated first production date for wells that are scheduled to be drilled in the foreseeable future. In addition, Sheridan Production Company, LLC and Gas Transporter have periodic conference calls to discuss changes to drilling and completion schedules. Gas from these wells will be processed at an unknown Processing Plant located in Lea County, New Mexico. The actual flow of the gas will be based on compression operating parameters and gathering system pressures. Talks are underway with Targa. Targa has a pipeline in Section 8.

Flowback Strategy

After the fracture treatment/completion operations, well(s) will be produced to temporary production tanks 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 Gas Transporter system at that time. Based on current information, it is Sheridan Production Company, LLC'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