PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	DEVON ENERGY PRODUCTION
LEASE NO.:	NMNM097151
WELL NAME & NO.:	10H –FLAGLER 8 FED COM
SURFACE HOLE FOOTAGE:	180'/S & 380'/W
BOTTOM HOLE FOOTAGE	330'/N & 980'/W
LOCATION:	Section 8.,T25S., R.33E., NMP
COUNTY:	LEA County, New Mexico

Potash	◉ None	○ Secretary	○ R-111-P
Cave/Karst Potential	◉ Low	○ Medium	○ High
Variance	○ None	◉ Flex Hose	○ Other
Wellhead	○ Conventional	◉ Multibowl	
Other	☐4 String Area	☐Capitan Reef	☐WIPP

A. Hydrogen Sulfide

1. Hydrogen Sulfide (H2S) monitors shall be installed prior to drilling out the surface shoe. If H2S is detected in concentrations greater than 100 ppm, the Hydrogen Sulfide area shall meet Onshore Order 6 requirements, which includes equipment and personnel/public protection items. If Hydrogen Sulfide is encountered, provide measured values and formations to the BLM.

B. CASING

Primary Design

1. The **10 3/4** inch surface casing shall be set at approximately **1150** feet (a minimum of 25 feet 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.

Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

2. The minimum required fill of cement behind the **7 5/8** inch intermediate casing is:

Option 1 (Single Stage):

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

Option 2:

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

a. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.

b. Second stage above DV tool:

- Cement to surface. If cement does not circulate, contact the appropriate BLM office.

In case of lost circulation, operator has proposed to pump down 7 5/8" X 10 3/4" annulus. Operator must run a CBL from TD of the 7 5/8'' casing to surface. Submit results to the BLM.

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

- Cement should tie-back at least **200** feet into previous casing string. Operator shall provide method of verification. **Excess calculates to negative 11% - additional cement will be required.**

Alternate Design

4. The **13 3/8** inch surface casing shall be set at approximately **1150** feet (a minimum of 25 feet into the Rustler Anhydrite and above the salt) and cemented to the surface.

e. 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.

f. 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).

g. 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.

h. If cement falls back, remedial cementing will be done prior to drilling out that string.

Intermediate casing must be kept fluid filled to meet BLM minimum collapse requirement.

5. The minimum required fill of cement behind the **9 5/8** inch intermediate casing is:

Option 1 (Single Stage):

- Cement to surface. If cement does not circulate see B.4.a, c-d above.

Option 2:

Operator has proposed a DV tool, the depth may be adjusted as long as the cement is changed proportionally. The DV tool may be cancelled if cement circulates to surface on the first stage.

c. First stage to DV tool: Cement to circulate. If cement does not circulate off the DV tool, contact the appropriate BLM office before proceeding with second stage cement job.

d. Second stage above DV tool:

- Cement to surface. If cement does not circulate, contact the appropriate BLM office.

6. The minimum required fill of cement behind the **5 1/2** inch production casing is:

- Cement should tie-back at least **200** feet into previous casing string. Operator shall provide method of verification. **Excess calculates to negative 52% - additional cement will be required.**

C. PRESSURE CONTROL

1. Variance approved to use flex line from BOP to choke manifold. Manufacturer's specification to be readily available. No external damage to flex line. Flex line to be installed as straight as possible (no hard bends).
2.

Option 1:

i. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be **5000 (5M)** psi.

ii. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the intermediate casing shoe shall be **10,000 (10M)** psi. **Variance is approved to use a 5M Annular which shall be tested to 5000 psi.**

Option 2:

Operator has proposed a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be 10,000 (10M) 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.**

Variance is approved to use a 5M Annular which shall be tested to 5000 psi.

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. When the Communitization Agreement number is known, it shall also be on the sign.

Waste Minimization Plan (WMP)

In the interest of resource development, submission of additional well gas capture development plan information is deferred but may be required by the BLM Authorized Officer at a later date.

MHH 08112018

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)

☒ Chaves and Roosevelt Counties
Call the Roswell Field Office, 2909 West Second St., Roswell NM 88201.
During office hours call (575) 627-0272.
After office hours call (575)

☒ 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.

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.

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: 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.

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.

Cementing Program (Alternate Casing Design)

Casing	# Sks	Wt. lb/ gal	H_2O gal/sk	Yld ft3/ sack	Slurry Description
17.5" Surf.	901	14.8	1.33	6.3 2	Lead: Class C Cement + 0.125 lbs/sack Poly-F-Flake
12.25" Inter.	511	10.3	3.65	22. 06	Lead: (50:50) Poz (Silica) 3 lbm/sk Kol-Seal, .125 lbm/sk Poly-E-Flake
	306	14.8	1.33	6.3 2	Tail: Class C Cement + 0.125 lbs/sack Poly-F-Flake
8.75" Prod.	457	9	3.27	13. 5	Lead: Tuned Light Cement

If a DV tool is used, depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. Lab reports with the 500 psi compressive strength time for the cement will be onsite for review.

Casing String	TOC	% Excess
13-3/8" Surface	0'	50%
9-5/8" Intermediate	0'	30%
5-1/2" Production Casing	4800'	25%

4. Pressure Control Equipment (Primary Casing Design)

N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
9-7/8"	13-5/8"	5M	Annular	X	50% of rated working pressure
			Blind Ram	X	5M
			Pipe Ram	X	
			Double Ram	X	
			Other*		

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6-3/4"	13-5/8"	~~5M~~ 10M	Annular	X	~~50% of rated working pressure~~ 5000 psi
			Blind Ram	X	~~5M~~ 10M
			Pipe Ram	X	
			Double Ram	X	
			Other *		
			Annular		
			Blind Ram		
			Pipe Ram		
			Double Ram		
			Other *		

*Specify if additional ram is utilized.

Pressure Control Equipment (Alternate Casing Design)

N	A variance is requested for the use of a diverter on the surface casing. See attached for schematic.

BOP installed and tested before drilling which hole?	Size?	Min. Required WP	Type	✓	Tested to:
12.25" Int	13-5/8"	5M	Annular	X	50% of rated working pressure
			Blind Ram	X	5M
			Pipe Ram	X	
			Double Ram	X	
			Other*		
8.75" Production	13-5/8"	~~5M~~ 10M	Annular	X	~~50% of rated working pressure~~ 5000 psi
			Blind Ram	X	~~5M~~ 10M
			Pipe Ram	X	
			Double Ram	X	
			Other *		
			Annular		
			Blind Ram		

BOP/BOPE will be tested by an independent service company to 250 psi low and the high pressure indicated above per Onshore Order 2 requirements. The System may be upgraded to a

higher pressure but still tested to the working pressure listed in the table above. If the system is upgraded all the components installed will be functional and tested.

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

Y	Formation integrity test will be performed per Onshore Order #2. On Exploratory wells or on that portion of any well approved for a 5M BOPE system or greater, a pressure integrity test of each casing shoe shall be performed. Will be tested in accordance with Onshore Oil and Gas Order #2 III.B.1.i.
Y	A variance is requested for the use of a flexible choke line from the BOP to Choke Manifold. See attached for specs and hydrostatic test chart.
Y	Are anchors required by manufacturer?
Y	A multibowl wellhead may be used. The BOP will be tested per Onshore Order #2 after installation on the surface casing which will cover testing requirements for a maximum of 30 days. If any seal subject to test pressure is broken the system must be tested. Devon proposes using a multi-bowl wellhead assembly. This assembly will only be tested when installed on the surface casing. Minimum working pressure of the blowout preventer (BOP) and related equipment (BOPE) required for drilling below the surface casing shoe shall be ~~5000 (5M) psi~~. 10,000 (10M) psi • Wellhead will be installed by wellhead representatives. • If the welding is performed by a third party, the wellhead representative will monitor the temperature to verify that it does not exceed the maximum temperature of the seal. • Wellhead representative will install the test plug for the initial BOP test. • Wellhead company will install a solid steel body pack-off to completely isolate the lower head after cementing intermediate casing. After installation of the pack-off, the pack-off and the lower flange will be tested to ~~3M~~ 10M as shown on the attached schematic. Everything above the pack-off will not have been altered whatsoever from the initial nipple up. Therefore the BOP components will not be retested at that time. • If the cement does not circulate and one inch operations would have been possible with a standard wellhead, the well head will be cut and top out operations will be conducted. • Devon will pressure test all seals above and below the mandrel (but still above the casing) to full working pressure rating. • Devon will test the casing to 0.22 psi/ft or 1500 psi, whichever is greater, as per Onshore Order #2. After running the 10-3/4" surface casing, a 13-5/8" BOP/BOPE system with a minimum rating of 5M will be installed on the wellhead system and will undergo a 250 psi low pressure test followed by a 5,000 psi high pressure test. The 5,000 psi high and 250 psi

	low test will cover testing requirements a maximum of 30 days, as per Onshore Order #2. If the well is not complete within 30 days of this BOP test, another full BOP test will be conducted, as per Onshore Order #2. The pipe rams will be operated and checked each 24 hour period and each time the drill pipe is out of the hole. These tests will be logged in the daily driller's log. A 2" kill line and 3" choke line will be incorporated into the drilling spool below the ram BOP. In addition to the rams and annular preventer, additional BOP accessories include a kelly cock, floor safety valve, choke lines, and choke manifold rated at ~~5,000~~ 10,000 psi WP. Devon's proposed wellhead manufactures will be FMC Technologies, Cactus Wellhead, or Cameron. Devon requests a variance to use a flexible line with flanged ends between the BOP and the choke manifold (choke line). The line will be kept as straight as possible with minimal turns.

5. Mud Program (Primary Casing Design)

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	1150'	FW Gel	8.6-8.8	28-34	N/C
1150'	10,610'	OBM/Cut Brine	9-10	34-65	N/C - 6
10,610'	16,989'	Oil Based Mud	9-11	45-65	N/C - 6

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

Mud Program (Alternate Casing Design)

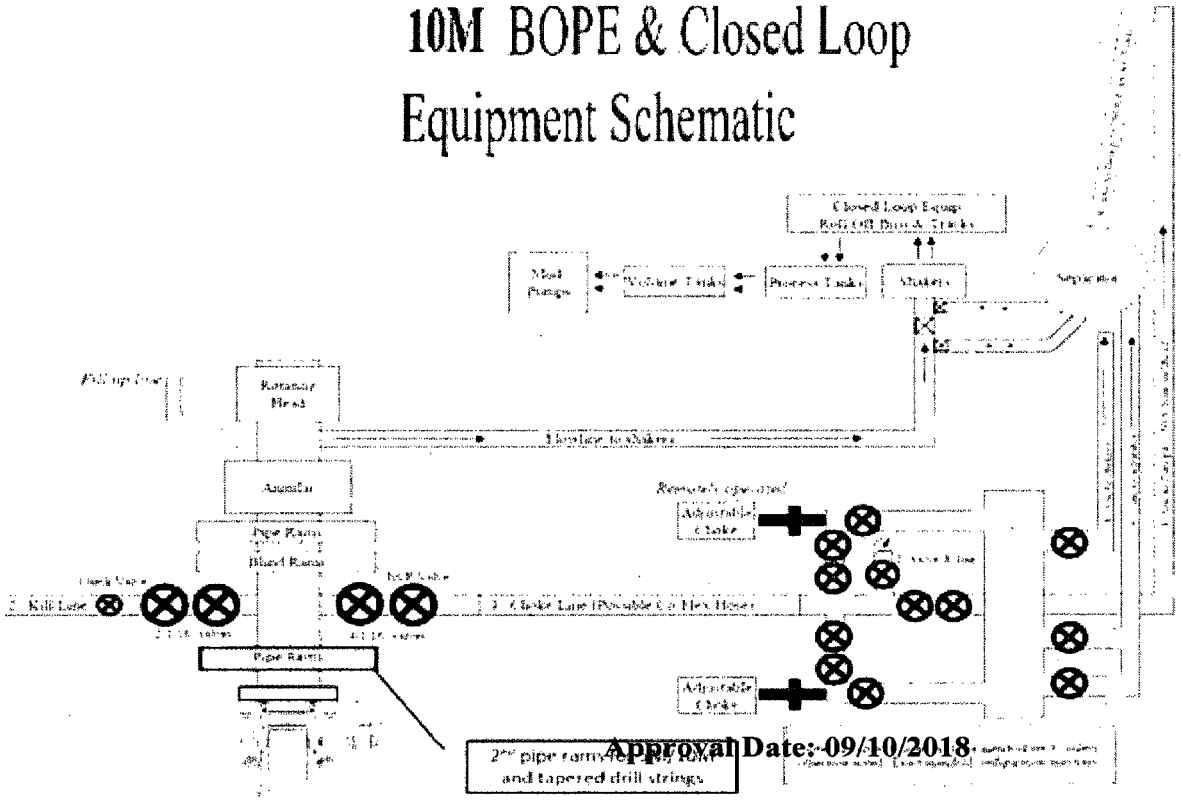
Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	1150'	FW Gel	8.6-8.8	28-34	N/C
1150'	5,000'	Brine	9-10	28-34	N/C
5,000'	16,989'	Cut Brine	8.5-10	28-34	N/C

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

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

6. Logging and Testing Procedures

10M BOPE & Closed Loop Equipment Schematic



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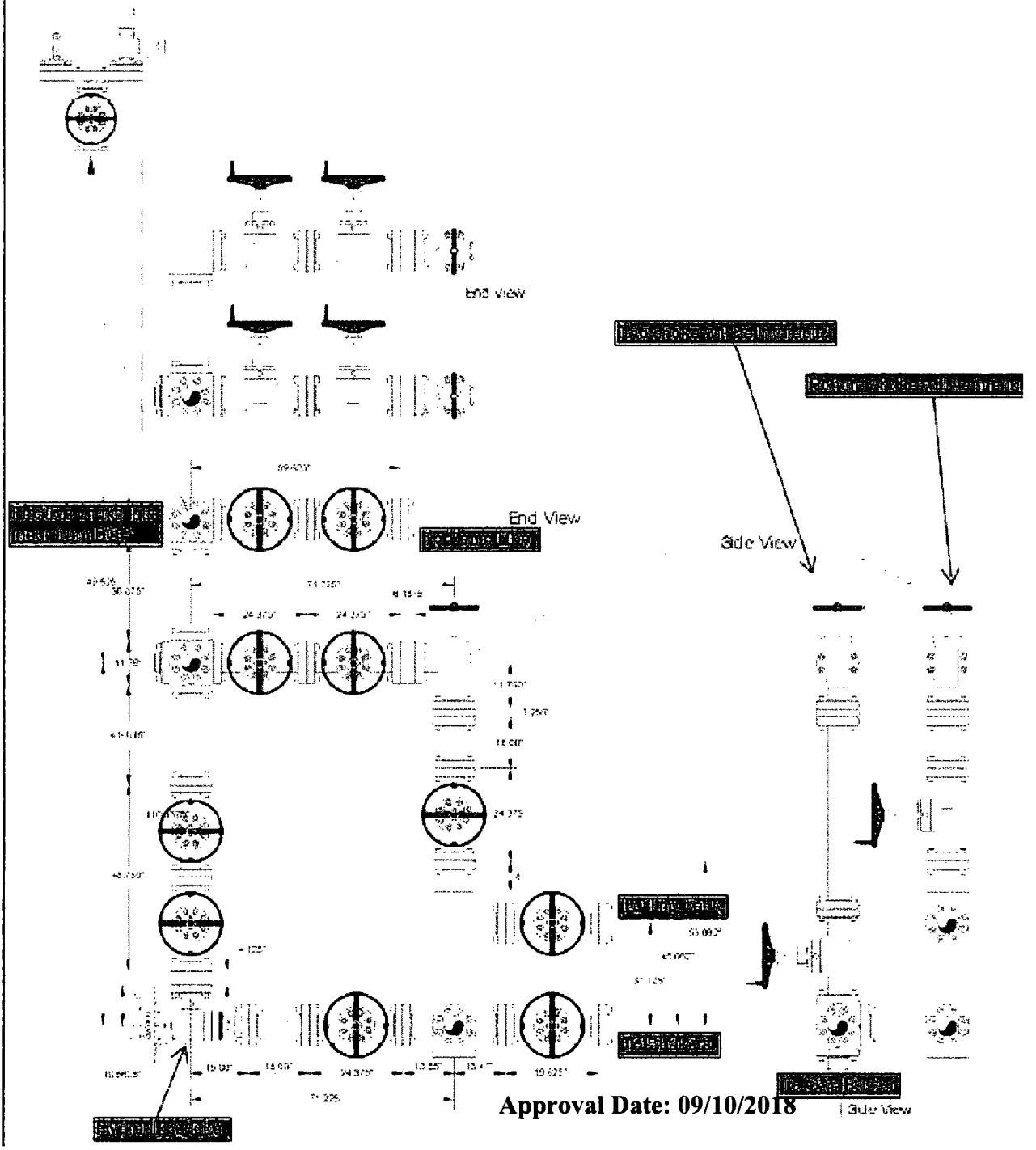

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VAM® TOP HT
Connection Data Sheet

OD	Weight	Wall Th.	Grade	API Drift	Connection
5 1/2 in.	20.00 lb/ft	0.361 in.	P110 EC	4.653 in.	VAM® TOP HT

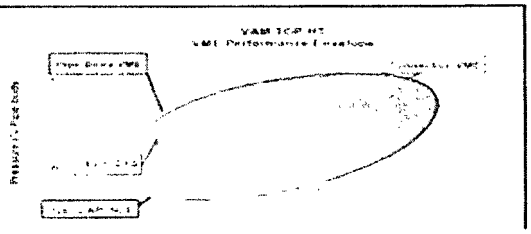
PIPE PROPERTIES	
Nominal OD	5.500 in
Nominal ID	4.778 in
Nominal Cross Section Area	5.828 sqin
Grade Type	High Yield
Min. Yield Strength	125 ksi
Max. Yield Strength	140 ksi
Min. Ultimate Tensile Strength	135 ksi

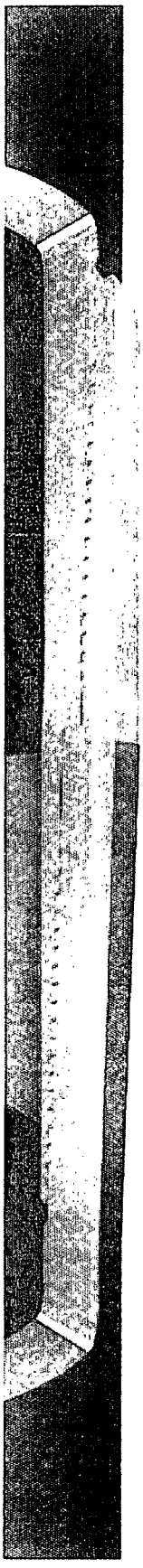
CONNECTION PROPERTIES	
Connection Type	Premium T&C
Connection OD (nom)	5.571 in
Connection ID (nom)	4.715 in
Make-up Loss	4.382 in
Coupling Length	10.748 in
Critical Cross Section	5.828 sqin
Tension Efficiency	100 % of pipe
Compression Efficiency	80 % of pipe
Internal Pressure Efficiency	100 % of pipe
External Pressure Efficiency	100 % of pipe

CONNECTION PERFORMANCES	
Tensile Yield Strength	729 klb
Compression Resistance	583 klb
Internal Yield Pressure	14360 psi
External Pressure Resistance	12090 psi
Max. Bending with Sealability (CAL IV)	20 °/100 ft
Max. Load on Coupling Face	995 klb

FIELD TORQUE VALUES	
Min. Make-up torque	10850 ft lb
Opti. Make-up torque	11940 ft lb
Max. Make-up torque	13050 ft lb
Field Liner Max.	15660 ft lb

VAM® TOP HT (High Torque) is a T&C connection based on the main features of the VAM® TOP connection.
This connection provides reinforced torque capability for liners and where High Torque is anticipated due to string rotation during running operations (torque rotating liner while running, rotating casing when cementing). It has been tested as per ISO 13679 CAL IV requirements.
VAM® TOP HT is interchangeable with VAM® Full product line with the exception of 4 1/2" size.





Issued on: 18 Jul. 2016

VAM SG Connection Data Sheet

OD	Weight	Wall Th.	Grade	API Drift	Connection
5 1/2 in.	20.00 lb/ft	0.361 in.	P110 EC	4.653 in.	VAM® SG

PIPE PROPERTIES

Nominal OD	5.500 in.
Nominal ID	4.778 in.
Nominal Cross Section Area	5.828 sqin.
Grade Type	High Yield
Min. Yield Strength	125 ksi
Max. Yield Strength	140 ksi
Min. Ultimate Tensile Strength	135 ksi

CONNECTION PROPERTIES

Connection Type	Premium integral semi-flush
Connection OD (nom)	5.697 in.
Connection ID (nom)	4.711 in.
Make-up Loss	6.336 in.
Tension Efficiency	87 % of pipe
Compression Efficiency	61 % of pipe
Internal Pressure Efficiency	100 % of pipe
External Pressure Efficiency	70 % of pipe

CONNECTION PERFORMANCES

Tensile Yield Strength	634 klb
Compression Resistance	446 klb
Internal Yield Pressure	14360 psi
External Pressure Resistance	9463 psi
Max. Bending with Sealability	40 °/100 ft

FIELD TORQUE VALUES

Min. Make-up torque	8100 ft.lb
Opti. Make-up torque	9800 ft.lb
Max. Make-up torque	11500 ft.lb
Maximum Torque with Sealability	12500 ft.lb

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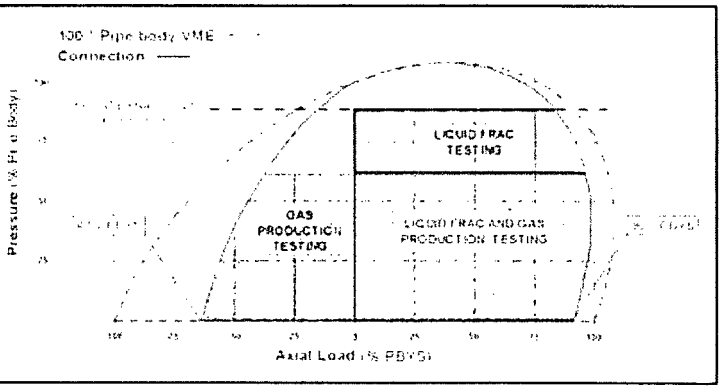

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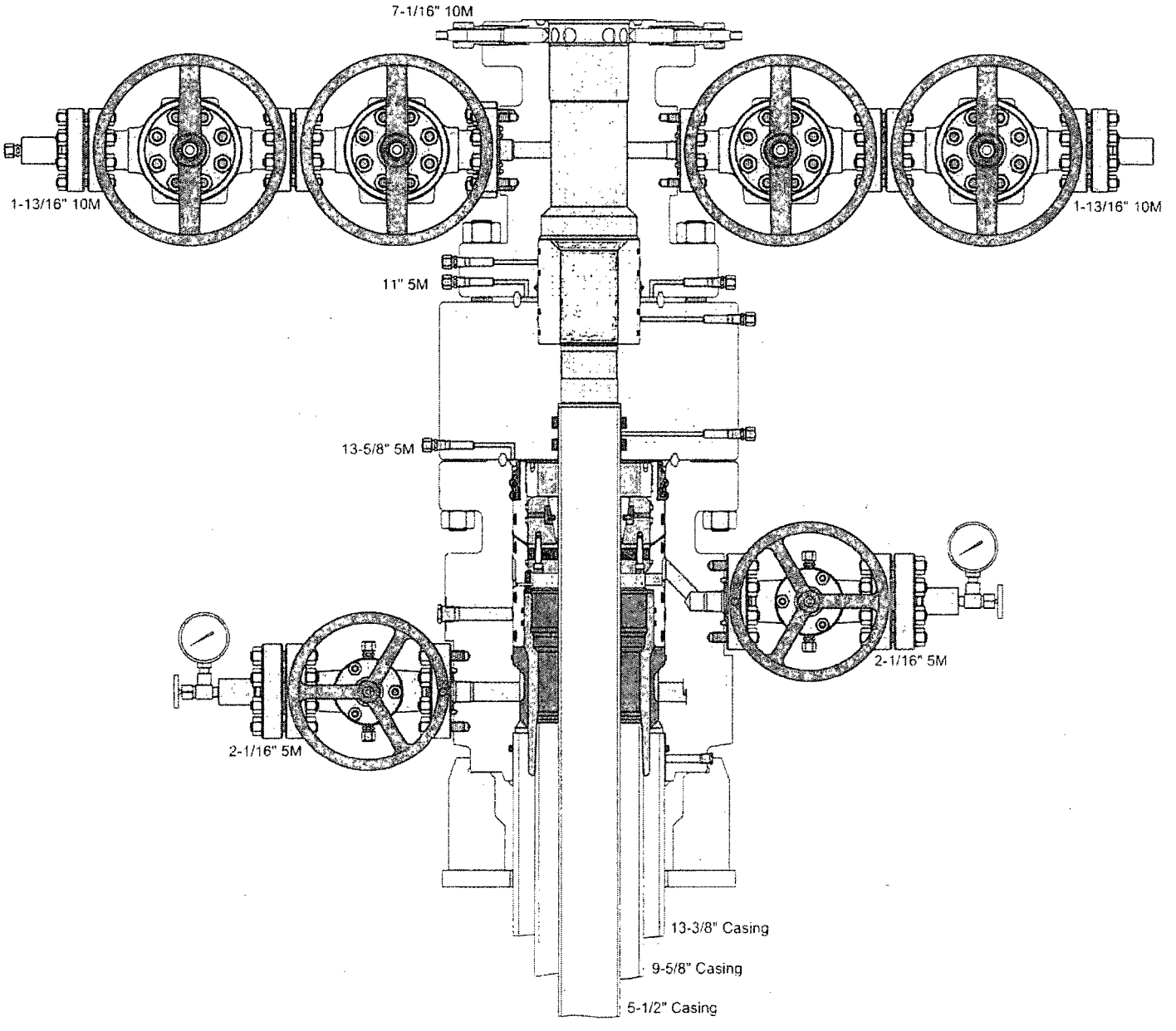

Approval Date: 09/10/2018

Devon Energy Annular Preventer Summary

1. Component and Preventer Compatibility Table

The table below, which covers the drilling and casing of the 10M MASP portion of the well, outlines the tubulars and the compatible preventers in use. This table, combined with the mud program, documents that two barriers to flow can be maintained at all times, independent of the rating of the annular preventer.

6-3/4" Production hole section, 10M requirement

Component	OD	Preventer	RWP
Drillpipe	4.5"	Fixed lower 4.5" Upper 4.5-7" VBR	10M
HWDP	4.5"	Fixed lower 4.5" Upper 4.5-7" VBR	10M
Drill collars and MWD tools	4.75"	Upper 4.5-7" VBR	10M
Mud Motor	4.75"	Upper 4.5-7" VBR	10M
Production casing	5.5"	Upper 4.5-7" VBR	10M
ALL	0-13-5/8"	Annular	5M
Open-hole	-	Blind Rams	10M

VBR = Variable Bore Ram. Compatible range listed in chart.

2. Well Control Procedures

Well control procedures are specific to the rig equipment and the operation at the time the kick occurs. Below are the minimal high-level tasks prescribed to assure a proper shut-in while drilling, tripping, running casing, pipe out of the hole (open hole), and moving the BHA through the BOPs. The pressure at which control is swapped from the annular to another compatible ram is variable, but the operator will document in the submission their operating pressure limit. The operator may chose an operating pressure less than or equal to RWP, but in no case will it exceed the RWP of the annular preventer.

General Procedure While Drilling

1. Sound alarm (alert crew)
2. Space out drill string
3. Shut down pumps (stop pumps and rotary)
4. Shut-in Well (uppermost applicable BOP, typically annular preventer first. HCR and choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
    a. SIDPP and SICP
    b. Pit gain
    c. Time
8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach the RWP of the annular preventer, confirm spacing and swap to the upper pipe ram.

Devon Energy Annular Preventer Summary

General Procedure While Tripping

1. Sound alarm (alert crew)
2. Stab full opening safety valve and close
3. Space out drill string
4. Shut-in (uppermost applicable BOP, typically annular preventer first. HCR and choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
    a. SIDPP and SICP
    b. Pit gain
    c. Time
8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach the RWP of the annular preventer, confirm spacing and swap to the upper pipe ram.

General Procedure While Running Casing

1. Sound alarm (alert crew)
2. Stab crossover and full opening safety valve and close
3. Space out string
4. Shut-in (uppermost applicable BOP, typically annular preventer first. HCR and choke will already be in the closed position.)
5. Confirm shut-in
6. Notify toolpusher/company representative
7. Read and record the following:
    a. SIDPP and SICP
    b. Pit gain
    c. Time
8. Regroup and identify forward plan
9. If pressure has built or is anticipated during the kill to reach the RWP of the annular preventer, confirm spacing and swap to compatible pipe ram.

General Procedure With No Pipe In Hole (Open Hole)

1. Sound alarm (alert crew)
2. Shut-in with blind rams or BSR. (HCR and choke will already be in the closed position.)
3. Confirm shut-in
4. Notify toolpusher/company representative
5. Read and record the following:
    a. SICP
    b. Pit gain
    c. Time
6. Regroup and identify forward plan

Devon Energy Annular Preventer Summary

General Procedures While Pulling BHA thru Stack

1. PRIOR to pulling last joint of drillpipe thru the stack.
    a. Perform flowcheck, if flowing:
    b. Sound alarm (alert crew)
    c. Stab full opening safety valve and close
    d. Space out drill string with tool joint just beneath the upper pipe ram.
    e. Shut-in using upper pipe ram. (HCR and choke will already be in the closed position.)
    f. Confirm shut-in
    g. Notify toolpusher/company representative
    h. Read and record the following:
        i. SIDPP and SICP
        ii. Pit gain
        iii. Time
    i. Regroup and identify forward plan

2. With BHA in the stack and compatible ram preventer and pipe combo immediately available.
    a. Sound alarm (alert crew)
    b. Stab crossover and full opening safety valve and close
    c. Space out drill string with upset just beneath the compatible pipe ram.
    d. Shut-in using compatible pipe ram. (HCR and choke will already be in the closed position.)
    e. Confirm shut-in
    f. Notify toolpusher/company representative
    g. Read and record the following:
        i. SIDPP and SICP
        ii. Pit gain
        iii. Time
    h. Regroup and identify forward plan

3. With BHA in the stack and NO compatible ram preventer and pipe combo immediately available.
    a. Sound alarm (alert crew)
    b. If possible to pick up high enough, pull string clear of the stack and follow "Open Hole" scenario.
    c. If impossible to pick up high enough to pull the string clear of the stack:
    d. Stab crossover, make up one joint/stand of drillpipe, and full opening safety valve and close
    e. Space out drill string with tooljoint just beneath the upper pipe ram.
    f. Shut-in using upper pipe ram. (HCR and choke will already be in the closed position.)
    g. Confirm shut-in
    h. Notify toolpusher/company representative
    i. Read and record the following:
        i. SIDPP and SICP
        ii. Pit gain
        iii. Time
    j. Regroup and identify forward plan

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	DEVON ENERGY PRODUCTION
LEASE NO.:	NMNM097151
WELL NAME & NO.:	10H –FLAGLER 8 FED COM
SURFACE HOLE FOOTAGE:	180'/S & 380'/W
BOTTOM HOLE FOOTAGE	330'/N & 980'/W
LOCATION:	Section 8.,T25S., R.33E., NMP
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.

☐ **General Provisions**
☐ **Permit Expiration**
☐ **Archaeology, Paleontology, and Historical Sites**
☐ **Noxious Weeds**
☒ **Special Requirements**
- Lesser Prairie-Chicken Timing Stipulations
- Ground-level Abandoned Well Marker
- Range

☐ **Construction**
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- Closed Loop System
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☐ **Road Section Diagram**
☒ **Production (Post Drilling)**
- Well Structures & Facilities
- Pipelines
- Electric Lines

☐ **Interim Reclamation**
☐ **Final Abandonment & Reclamation**

I. GENERAL PROVISIONS

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

II. PERMIT EXPIRATION

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

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

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

IV. NOXIOUS WEEDS

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

V. SPECIAL REQUIREMENT(S)

In May 2008, the Pecos District Special Status Species Resource Management Plan Amendment (RMPA) was approved and is being implemented. In addition to the standard practices that minimize impacts, as listed above, the following COA will apply:

- Timing Limitation Stipulation / Condition of Approval for lesser prairie-chicken, to minimize noise associated impacts which could disrupt breeding and nesting activities.
- Upon abandonment, a low profile abandoned well marker will be installed to prevent raptor perching.
- Devon would need to construct and maintain escape ramps according to the following criteria:
    - Earthen escape ramps would be required to be constructed to sufficiently support livestock at no more than a 30-degree slope and spaced no more than 500 feet apart.
    - If trench is left open under an 8-hour time period, it would not be required to have an escape ramp; however, before the trench is backfilled, Devon would inspect the trench for wildlife and remove any species that are trapped at a distance of at least 100 yards away from the trench.

Raptor Nest Mitigation

- A BLM Wildlife Biologist must be contacted by the operator prior to construction activities to determine if the raptor nest is active.
- Raptor nests on special, natural habitat features, such as trees, large brush, cliff faces and escarpments, will be protected by not allowing surface disturbance within up to 200 meters of nests or by delaying activity for up to 90 days, or a combination of both. Exceptions to this requirement for raptor nests will be considered if the nests expected to be disturbed are inactive, the proposed activity is of short duration (e.g. habitat enhancement projects, fences, pipelines), and will not result in continuing activity in proximity to the nest.
- Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

Power lines shall be constructed and designed in accordance to standards outlined in "Suggested Practices for Avian Protection on Power lines: The State of the Art in 2006" Edison Electric Institute, APLIC, and the California Energy Commission 2006. The holder shall assume the burden and expense of proving that pole designs not shown in the above publication deter raptor perching, roosting, and nesting. Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all power line structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. The holder without liability or expense shall make such modifications and/or additions to the United States.

Temporary Fence Crossing Requirement

Where entry is granted across a fence line, the fence must be braced and tied off on both sides of the passageway with H-braces prior to cutting. Once the work is completed, the fence will be restored to its prior condition, or better. Devon shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

Cattle Guard Requirement

Where entry is granted across a fence line for an access road, the fence must be braced and tied off on both sides of the passageway with H-braces prior to cutting. Once the work is completed,

the fence will be restored to its prior condition with an appropriately sized cattle guard sufficient to carry out the project. Any new or existing cattle guards on the access route shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. Devon shall be responsible for the condition of the existing cattle guards that are in place and are utilized during lease operations. Once the road is abandoned, the fence would be restored to its prior condition, or better. Devon shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

Livestock Watering Requirement

Devon must contact the allotment holder prior to construction to identify the location of the pipeline. Devon must take measures to protect the pipeline from compression or other damages. If the pipeline is damaged or compromised in any way near the proposed project as a result of oil and gas activity, the operator is responsible for repairing the pipeline immediately. Devon 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.

During construction, Devon shall minimize disturbance to existing fences, water lines, troughs, windmills, and other improvements on public lands. Devon is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the grazing permittee/allottee prior to disturbing any range improvement projects. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

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.

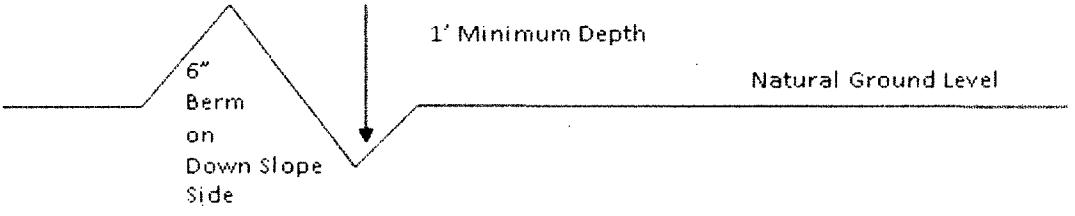
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

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

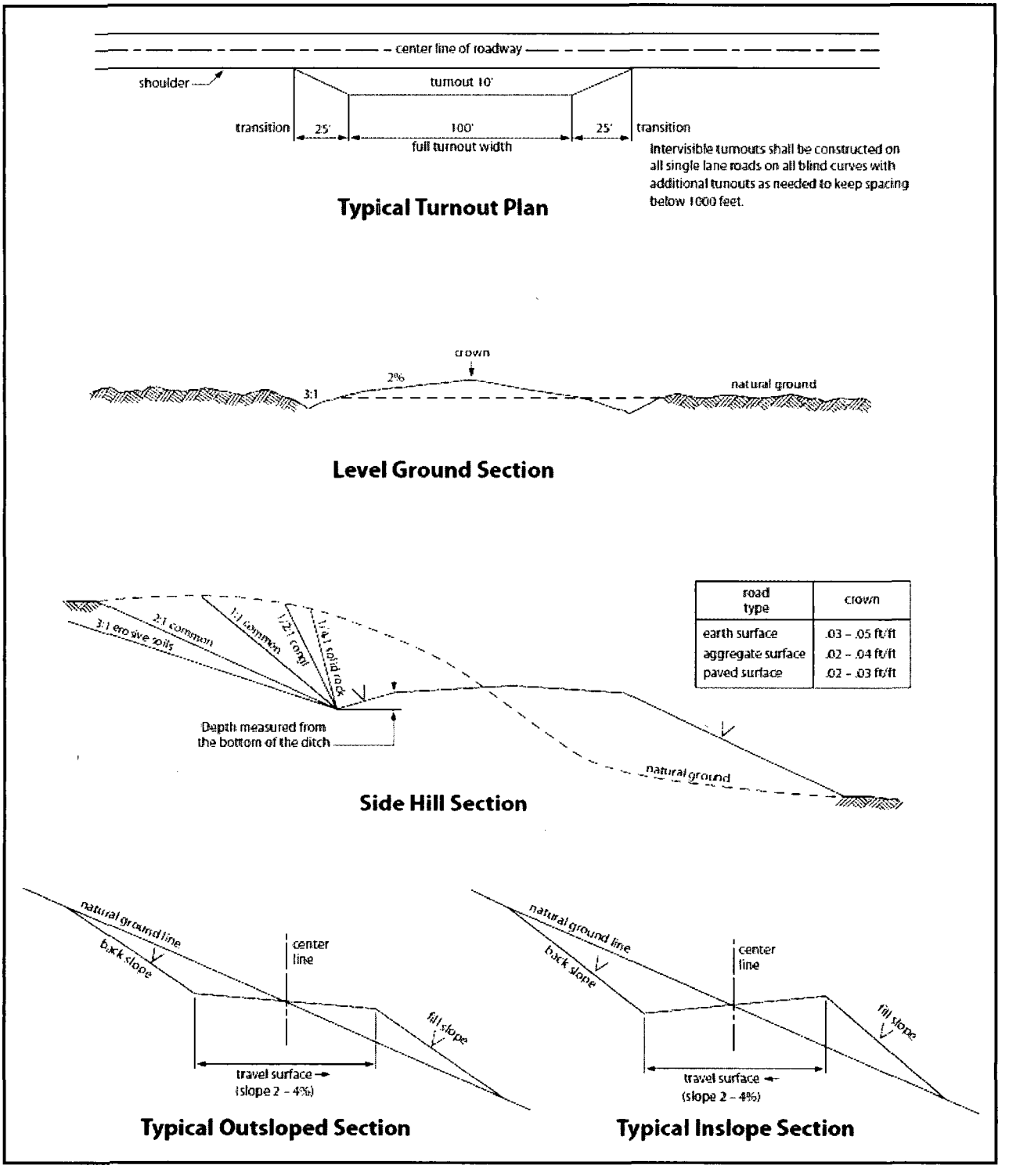


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

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. PIPELINES

BURIED PIPELINE STIPULATIONS

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

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

1. 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.

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 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR Part 702-799 and 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), or resulting from the activity of the Right-of-Way holder 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 pipeline, any oil or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil or other pollutant, wherever found, shall be the responsibility of holder, regardless of fault. Upon failure of holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve holder of any responsibility as provided herein.

5. All construction and maintenance activity will be confined to the authorized right-of-way.

6. The pipeline will be buried with a minimum cover of **36** inches between the top of the pipe and ground level.

7. The maximum allowable disturbance for construction in this right-of-way will be **30** feet:

- Blading of vegetation within the right-of-way will be allowed: maximum width of blading operations will not exceed **20** feet. The trench is included in this area. (*Blading is defined as the complete removal of brush and ground vegetation.*)

- Clearing of brush species within the right-of-way will be allowed: maximum width of clearing operations will not exceed **30** feet. The trench and bladed area are included in this area. (*Clearing is defined as the removal of brush while leaving ground vegetation (grasses, weeds, etc.) intact. Clearing is best accomplished by holding the blade 4 to 6 inches above the ground surface.*)

- The remaining area of the right-of-way (if any) shall only be disturbed by compressing the vegetation. (*Compressing can be caused by vehicle tires, placement of equipment, etc.*)

8. The holder shall stockpile an adequate amount of topsoil where blading is allowed. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be segregated from other spoil piles from trench construction. The topsoil will be evenly distributed over the bladed area for the preparation of seeding.

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

10. Vegetation, soil, and rocks left as a result of construction or maintenance activity will be randomly scattered on this right-of-way and will not be left in rows, piles, or berms, unless otherwise approved by the Authorized Officer. The entire right-of-way shall be recontoured to match the surrounding landscape. The backfilled soil shall be compacted and a 6 inch berm will be left over the ditch line to allow for settling back to grade.

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

12. 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

13. 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 color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2.

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

15. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder before maintenance begins. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway. As determined necessary during the life of the pipeline, the Authorized Officer may ask the holder to construct temporary deterrence structures.

16. Any cultural and/or paleontological resources (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate 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 proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

17. 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 associated roads, 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.

18. Escape Ramps - The operator will construct and maintain pipeline/utility trenches that are not otherwise fenced, screened, or netted to prevent livestock, wildlife, and humans from becoming entrapped. At a minimum, the operator will construct and maintain escape ramps, ladders, or

other methods of avian and terrestrial wildlife escape in the trenches according to the following criteria:

a. Any trench left open for eight (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, the contractor/operator shall inspect the trench for wildlife, remove all trapped wildlife, and release them at least 100 yards from the trench.
b. For trenches left open for eight (8) hours or more, earthen escape ramps (built at no more than a 30 degree slope and spaced no more than 500 feet apart) shall be placed in the trench.

19. Special Stipulations:

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 pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

C. ELECTRIC LINES

STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES

A copy of the grant and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

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

1. 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.

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 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and 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), or resulting from the activity of the Right-of-Way holder 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. There will be no clearing or blading of the right-of-way unless otherwise agreed to in writing by the Authorized Officer.

5. Power lines shall be constructed and designed in accordance to standards outlined in "Suggested Practices for Avian Protection on Power lines: The State of the Art in 2006" Edison Electric Institute, APLIC, and the California Energy Commission 2006 . The holder shall assume the burden and expense of proving that pole designs not shown in the above publication deter raptor perching, roosting, and nesting. Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all powerline structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States.

Raptor deterrence will consist of but not limited to the following: triangle perch discouragers shall be placed on each side of the cross arms and a nonconductive perching deterrence shall be placed on all vertical poles that extend past the cross arms.

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

7. The BLM serial number assigned to this authorization shall be posted in a permanent, conspicuous manner where the power line crosses roads and at all serviced facilities. Numbers will be at least two inches high and will be affixed to the pole nearest the road crossing and at the facilities served.

8. Upon cancellation, relinquishment, or expiration of this grant, the holder shall comply with those abandonment procedures as prescribed by the Authorized Officer.

9. All surface structures (poles, lines, transformers, etc.) shall be removed within 180 days of abandonment, relinquishment, or termination of use of the serviced facility or facilities or within 180 days of abandonment, relinquishment, cancellation, or expiration of this grant, whichever comes first. This will not apply where the power line extends service to an active, adjoining facility or facilities.

10. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate 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 proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

11. Special Stipulations:
- For reclamation remove poles, lines, transformer, etc. and dispose of properly.
- Fill in any holes from the poles removed.

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, 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. 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 ft. from the source of the noise.

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:

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.

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

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	DEVON ENERGY PRODUCTION
LEASE NO.:	NMNM097151
WELL NAME & NO.:	10H –FLAGLER 8 FED COM
SURFACE HOLE FOOTAGE:	180'/S & 380'/W
BOTTOM HOLE FOOTAGE	330'/N & 980'/W
LOCATION:	Section 8.,T25S., R.33E., NMP
COUNTY:	LEA County, New Mexico

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

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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)

In May 2008, the Pecos District Special Status Species Resource Management Plan Amendment (RMPA) was approved and is being implemented. In addition to the standard practices that minimize impacts, as listed above, the following COA will apply:

- Timing Limitation Stipulation / Condition of Approval for lesser prairie-chicken, to minimize noise associated impacts which could disrupt breeding and nesting activities.
- Upon abandonment, a low profile abandoned well marker will be installed to prevent raptor perching.
- Devon would need to construct and maintain escape ramps according to the following criteria:
    - Earthen escape ramps would be required to be constructed to sufficiently support livestock at no more than a 30-degree slope and spaced no more than 500 feet apart.
    - If trench is left open under an 8-hour time period, it would not be required to have an escape ramp; however, before the trench is backfilled, Devon would inspect the trench for wildlife and remove any species that are trapped at a distance of at least 100 yards away from the trench.

Raptor Nest Mitigation

- A BLM Wildlife Biologist must be contacted by the operator prior to construction activities to determine if the raptor nest is active.
- Raptor nests on special, natural habitat features, such as trees, large brush, cliff faces and escarpments, will be protected by not allowing surface disturbance within up to 200 meters of nests or by delaying activity for up to 90 days, or a combination of both. Exceptions to this requirement for raptor nests will be considered if the nests expected to be disturbed are inactive, the proposed activity is of short duration (e.g. habitat enhancement projects, fences, pipelines), and will not result in continuing activity in proximity to the nest.
- Exhaust noise from pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

Power lines shall be constructed and designed in accordance to standards outlined in "Suggested Practices for Avian Protection on Power lines: The State of the Art in 2006" Edison Electric Institute, APLIC, and the California Energy Commission 2006. The holder shall assume the burden and expense of proving that pole designs not shown in the above publication deter raptor perching, roosting, and nesting. Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all power line structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. The holder without liability or expense shall make such modifications and/or additions to the United States.

Temporary Fence Crossing Requirement

Where entry is granted across a fence line, the fence must be braced and tied off on both sides of the passageway with H-braces prior to cutting. Once the work is completed, the fence will be restored to its prior condition, or better. Devon shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

Cattle Guard Requirement

Where entry is granted across a fence line for an access road, the fence must be braced and tied off on both sides of the passageway with H-braces prior to cutting. Once the work is completed,

the fence will be restored to its prior condition with an appropriately sized cattle guard sufficient to carry out the project. Any new or existing cattle guards on the access route shall be repaired or replaced if they are damaged or have deteriorated beyond practical use. Devon shall be responsible for the condition of the existing cattle guards that are in place and are utilized during lease operations. Once the road is abandoned, the fence would be restored to its prior condition, or better. Devon shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

Livestock Watering Requirement

Devon must contact the allotment holder prior to construction to identify the location of the pipeline. Devon must take measures to protect the pipeline from compression or other damages. If the pipeline is damaged or compromised in any way near the proposed project as a result of oil and gas activity, the operator is responsible for repairing the pipeline immediately. Devon 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.

During construction, Devon shall minimize disturbance to existing fences, water lines, troughs, windmills, and other improvements on public lands. Devon is required to promptly repair improvements to at least their former state. Functional use of these improvements will be maintained at all times. The holder will contact the grazing permittee/allottee prior to disturbing any range improvement projects. When necessary to pass through a fence line, the fence shall be braced on both sides of the passageway prior to cutting of the fence. No permanent gates will be allowed unless approved by the Authorized Officer.

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.

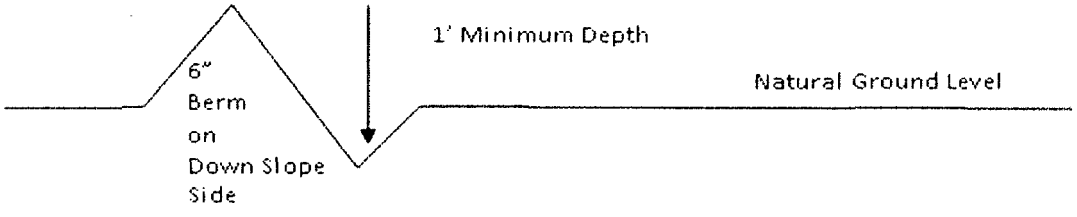
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

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:

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

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

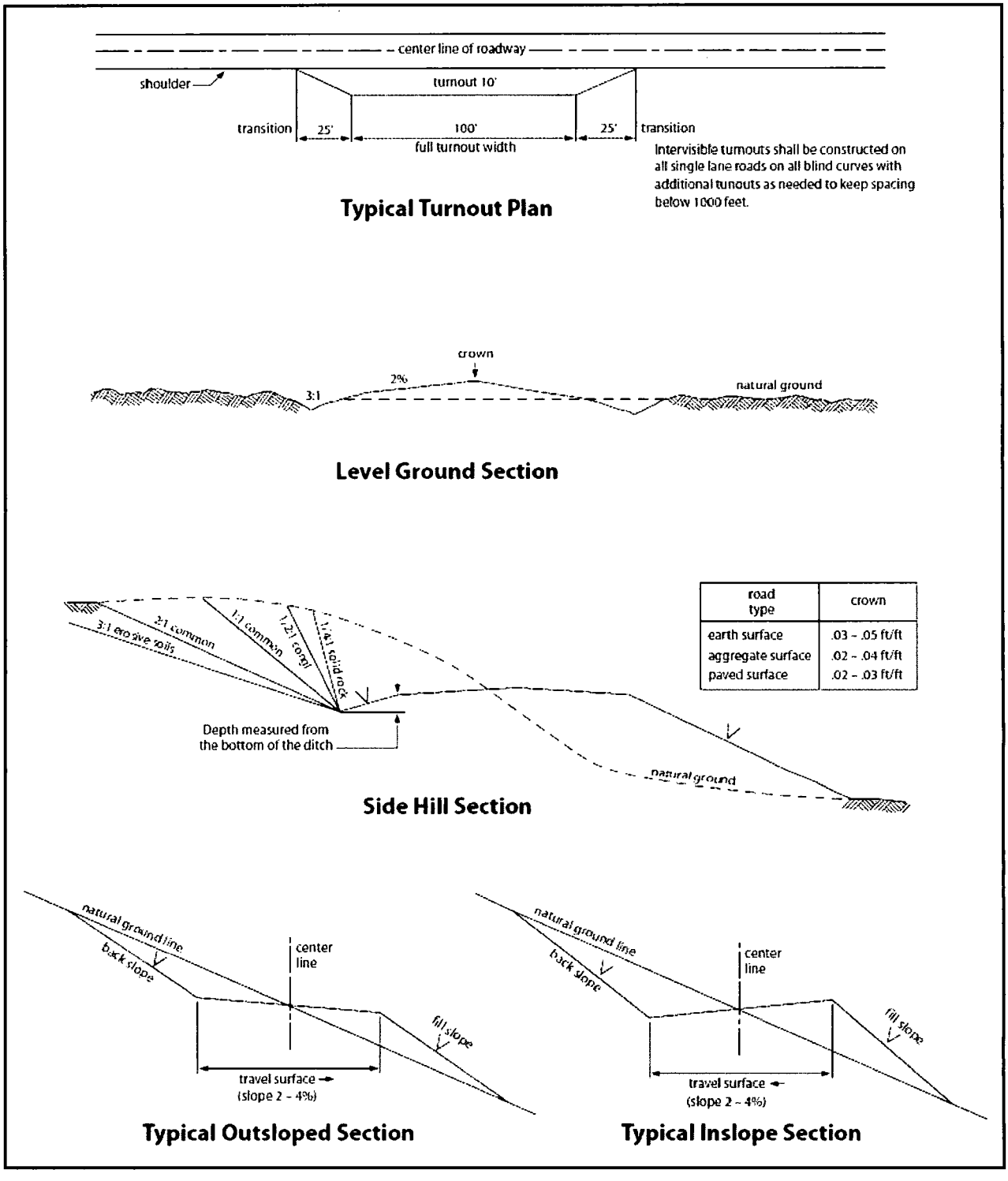


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

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. PIPELINES

BURIED PIPELINE STIPULATIONS

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

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

1. 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.

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 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR Part 702-799 and 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), or resulting from the activity of the Right-of-Way holder 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 pipeline, any oil or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil or other pollutant, wherever found, shall be the responsibility of holder, regardless of fault. Upon failure of holder to control, dispose of, or clean up such discharge on or affecting Federal lands, or to repair all damages resulting therefrom, on the Federal lands, the Authorized Officer may take such measures as he deems necessary to control and clean up the discharge and restore the area, including where appropriate, the aquatic environment and fish and wildlife habitats, at the full expense of the holder. Such action by the Authorized Officer shall not relieve holder of any responsibility as provided herein.

5. All construction and maintenance activity will be confined to the authorized right-of-way.

6. The pipeline will be buried with a minimum cover of **36** inches between the top of the pipe and ground level.

7. The maximum allowable disturbance for construction in this right-of-way will be **30** feet:

- Blading of vegetation within the right-of-way will be allowed: maximum width of blading operations will not exceed **20** feet. The trench is included in this area. (*Blading is defined as the complete removal of brush and ground vegetation.*)

- Clearing of brush species within the right-of-way will be allowed: maximum width of clearing operations will not exceed **30** feet. The trench and bladed area are included in this area. (*Clearing is defined as the removal of brush while leaving ground vegetation (grasses, weeds, etc.) intact. Clearing is best accomplished by holding the blade 4 to 6 inches above the ground surface.*)

- The remaining area of the right-of-way (if any) shall only be disturbed by compressing the vegetation. (*Compressing can be caused by vehicle tires, placement of equipment, etc.*)

8. The holder shall stockpile an adequate amount of topsoil where blading is allowed. The topsoil to be stripped is approximately 6 inches in depth. The topsoil will be segregated from other spoil piles from trench construction. The topsoil will be evenly distributed over the bladed area for the preparation of seeding.

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

10. Vegetation, soil, and rocks left as a result of construction or maintenance activity will be randomly scattered on this right-of-way and will not be left in rows, piles, or berms, unless otherwise approved by the Authorized Officer. The entire right-of-way shall be recontoured to match the surrounding landscape. The backfilled soil shall be compacted and a 6 inch berm will be left over the ditch line to allow for settling back to grade.

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

12. 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

13. 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 color which simulates "Standard Environmental Colors" – **Shale Green**, Munsell Soil Color No. 5Y 4/2.

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

15. The holder shall not use the pipeline route as a road for purposes other than routine maintenance as determined necessary by the Authorized Officer in consultation with the holder before maintenance begins. The holder will take whatever steps are necessary to ensure that the pipeline route is not used as a roadway. As determined necessary during the life of the pipeline, the Authorized Officer may ask the holder to construct temporary deterrence structures.

16. Any cultural and/or paleontological resources (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate 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 proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

17. 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 associated roads, 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.

18. Escape Ramps - The operator will construct and maintain pipeline/utility trenches that are not otherwise fenced, screened, or netted to prevent livestock, wildlife, and humans from becoming entrapped. At a minimum, the operator will construct and maintain escape ramps, ladders, or

other methods of avian and terrestrial wildlife escape in the trenches according to the following criteria:

a. Any trench left open for eight (8) hours or less is not required to have escape ramps; however, before the trench is backfilled, the contractor/operator shall inspect the trench for wildlife, remove all trapped wildlife, and release them at least 100 yards from the trench.
b. For trenches left open for eight (8) hours or more, earthen escape ramps (built at no more than a 30 degree slope and spaced no more than 500 feet apart) shall be placed in the trench.

19. Special Stipulations:

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 pump jack engines must be muffled or otherwise controlled so as not to exceed 75 db measured at 30 ft. from the source of the noise.

C. ELECTRIC LINES

STANDARD STIPULATIONS FOR OVERHEAD ELECTRIC DISTRIBUTION LINES

A copy of the grant and attachments, including stipulations, survey plat and/or map, will be on location during construction. BLM personnel may request to you a copy of your permit during construction to ensure compliance with all stipulations.

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

1. 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.

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 USC 2601 et seq. (1982) with regards to any toxic substances that are used, generated by or stored on the right-of-way or on facilities authorized under this right-of-way grant. (See 40 CFR, Part 702-799 and 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), or resulting from the activity of the Right-of-Way holder 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. There will be no clearing or blading of the right-of-way unless otherwise agreed to in writing by the Authorized Officer.

5. Power lines shall be constructed and designed in accordance to standards outlined in "Suggested Practices for Avian Protection on Power lines: The State of the Art in 2006" Edison Electric Institute, APLIC, and the California Energy Commission 2006 . The holder shall assume the burden and expense of proving that pole designs not shown in the above publication deter raptor perching, roosting, and nesting. Such proof shall be provided by a raptor expert approved by the Authorized Officer. The BLM reserves the right to require modification or additions to all powerline structures placed on this right-of-way, should they be necessary to ensure the safety of large perching birds. Such modifications and/or additions shall be made by the holder without liability or expense to the United States.

Raptor deterrence will consist of but not limited to the following: triangle perch discouragers shall be placed on each side of the cross arms and a nonconductive perching deterrence shall be placed on all vertical poles that extend past the cross arms.

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

7. The BLM serial number assigned to this authorization shall be posted in a permanent, conspicuous manner where the power line crosses roads and at all serviced facilities. Numbers will be at least two inches high and will be affixed to the pole nearest the road crossing and at the facilities served.

8. Upon cancellation, relinquishment, or expiration of this grant, the holder shall comply with those abandonment procedures as prescribed by the Authorized Officer.

9. All surface structures (poles, lines, transformers, etc.) shall be removed within 180 days of abandonment, relinquishment, or termination of use of the serviced facility or facilities or within 180 days of abandonment, relinquishment, cancellation, or expiration of this grant, whichever comes first. This will not apply where the power line extends service to an active, adjoining facility or facilities.

10. Any cultural and/or paleontological resource (historic or prehistoric site or object) discovered by the holder, or any person working on his behalf, on public or Federal land shall be immediately reported to the Authorized Officer. Holder shall suspend all operations in the immediate area of such discovery until written authorization to proceed is issued by the Authorized Officer. An evaluation of the discovery will be made by the Authorized Officer to determine appropriate 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 proper mitigation measures will be made by the Authorized Officer after consulting with the holder.

11. Special Stipulations:
- For reclamation remove poles, lines, transformer, etc. and dispose of properly.
- Fill in any holes from the poles removed.

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, 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. 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 ft. from the source of the noise.

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:

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.

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

devon

Devon Energy Center
333 West Sheridan Avenue
Oklahoma City, Oklahoma 73102-5015

Hydrogen Sulfide (H_2S) Contingency Plan

For

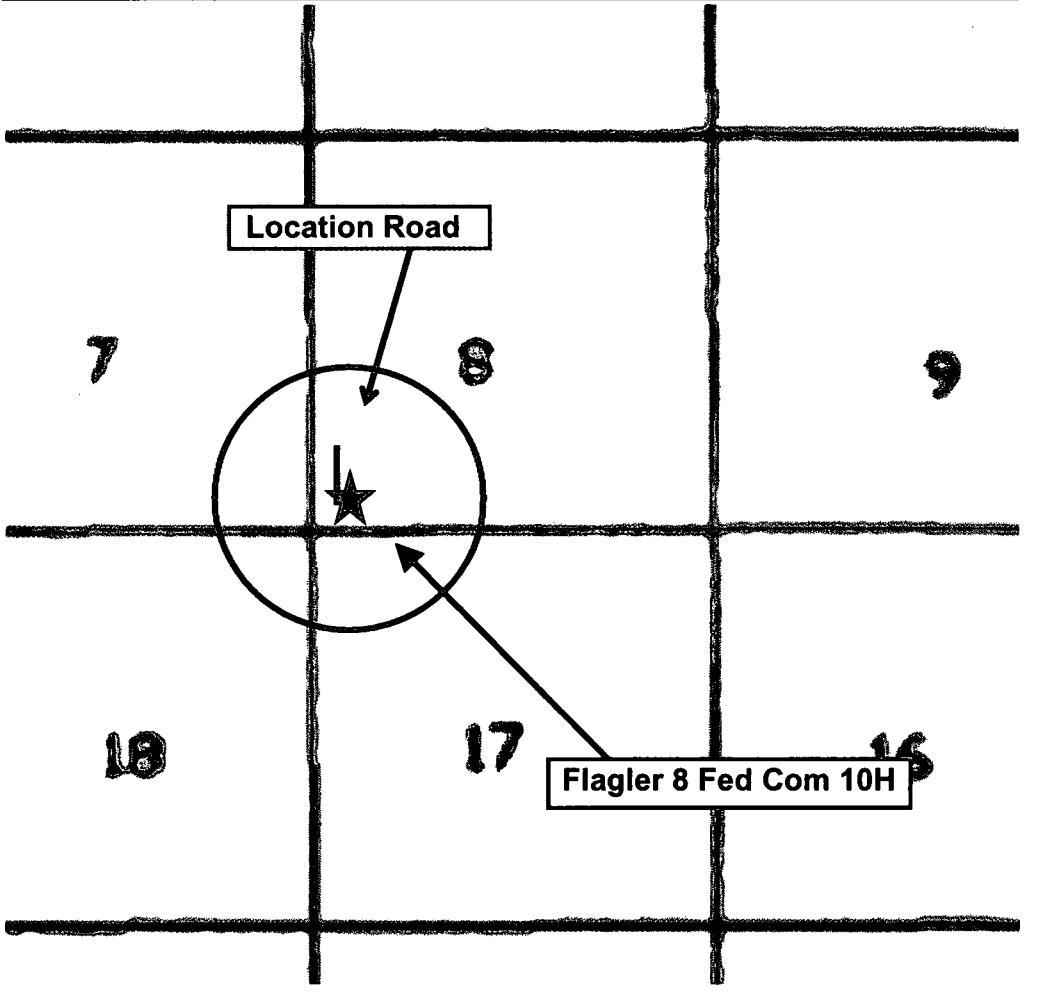
Flagler 8 Fed Com 10H

Sec-8 T-25S R-33E
180' FSL & 380' FWL
LAT. = 32.1383519' N (NAD83)
LONG = 103.6016108' W

Lea County NM

Flagler 8 Fed Com 10H

This is an open drilling site. H_2S monitoring equipment and emergency response equipment will be used within 500' of zones known to contain H_2S, including warning signs, wind indicators and H_2S monitor.



Assumed 100 ppm ROE = 3000' (Radius of Exposure)
100 ppm H2S concentration shall trigger activation of this plan.

Escape

Crews shall escape upwind of escaping gas in the event of an emergency release of gas. Escape can be facilitated from the location entrance road. Crews should then block the entrance to the location from the lease road so as not to allow anyone traversing into a hazardous area. The blockade should be at a safe distance outside of the ROE. There are no homes or buildings in or near the ROE.

Assumed 100 ppm ROE = 3000'

100 ppm H_2S concentration shall trigger activation of this plan.

Emergency Procedures

In the event of a release of gas containing H_2S, the first responder(s) must

- **Isolate the area and prevent entry by other persons into the 100 ppm ROE.**
- **Evacuate any public places encompassed by the 100 ppm ROE.**
- **Be equipped with H_2S monitors and air packs in order to control the release.**
- **Use the "buddy system" to ensure no injuries occur during the response**
- **Take precautions to avoid personal injury during this operation.**
- **Contact operator and/or local officials to aid in operation. See list of phone numbers attached.**
- **Have received training in the**
  - **Detection of H_2S, and**
  - **Measures for protection against the gas,**
  - **Equipment used for protection and emergency response.**

Ignition of Gas Source

Should control of the well be considered lost and ignition considered, take care to protect against exposure to Sulfur Dioxide (SO_2). Intentional ignition must be coordinated with the NMOCD and local officials. Additionally the NM State Police may become involved. NM State Police shall be the Incident Command on scene of any major release. Take care to protect downwind whenever there is an ignition of the gas

Characteristics of H_2S and SO_2

Common Name	Chemical Formula	Specific Gravity	Threshold Limit	Hazardous Limit	Lethal Concentration
Hydrogen Sulfide	H_2S	1.189 Air = 1	10 ppm	100 ppm/hr	600 ppm
Sulfur Dioxide	SO_2	2.21 Air = 1	2 ppm	N/A	1000 ppm

Contacting Authorities

Devon Energy Corp. personnel must liaison with local and state agencies to ensure a proper response to a major release. Additionally, the OCD must be notified of the release as soon as possible but no later than 4 hours. Agencies will ask for information such as type and volume of release, wind direction, location of release, etc. Be prepared with all information available. The following call list of essential and potential responders has been prepared for use during a release. Devon Energy Corp. Company response must be in coordination with the State of New Mexico's 'Hazardous Materials Emergency Response Plan' (HMER)

Hydrogen Sulfide Drilling Operation Plan

I. HYDROGEN SULFIDE (H_2S) TRAINING

All personnel, whether regularly assigned, contracted, or employed on an unscheduled basis, will receive training from a qualified instructor in the following areas prior to commencing drilling operations on this well:

1. The hazards and characteristics of hydrogen sulfide (H_2S)
2. The proper use and maintenance of personal protective equipment and life support systems.
3. The proper use of H_2S detectors, alarms, warning systems, briefing areas, evacuation procedures, and prevailing winds.
4. The proper techniques for first aid and rescue procedures.

In addition, supervisory personnel will be trained in the following areas:

1. The effects of H_2S metal components. If high tensile tubulars are to be used, personnel will be trained in their special maintenance requirements.
2. Corrective action and shut-in procedures when drilling or reworking a well and blowout prevention and well control procedures.
3. The contents and requirements of the H_2S Drilling Operations Plan and Public Protection Plan.

There will be an initial training session just prior to encountering a known or probable H_2S zone (within 3 days or 500 feet) and weekly H_2S and well control drills for all personnel in each crew. The initial training session shall include a review of the site specific H_2S Drilling Operations Plan and the Public Protection Plan.

II. HYDROGEN SULFIDE TRAINING

Note: All H_2S safety equipment and systems will be installed, tested, and operational when drilling reaches a depth of 500 feet above, or three days prior to penetrating the first zone containing or reasonably expected to contain H_2S.

1. **Well Control Equipment**

   A. Flare line

   B. Choke manifold – Remotely Operated

   C. Blind rams and pipe rams to accommodate all pipe sizes with properly sized closing unit

   D. Auxiliary equipment may include if applicable: annular preventer and rotating head.

   E. Mud/Gas Separator

2. **Protective equipment for essential personnel:**

   30-minute SCBA units located at briefing areas, as indicated on well site diagram, with escape units available in the top doghouse. As it may be difficult to communicate audibly while wearing these units, hand signals shall be utilized.

3. **H_2S detection and monitoring equipment:**

   Portable H_2S monitors positioned on location for best coverage and response. These units have warning lights which activate when H_2S levels reach 10 ppm and audible sirens which activate at 15 ppm. Sensor locations:

   - **Bell nipple**
   - **Rig floor**
   - **Cellar**
   - **Possum Belly/Shale shaker**
   - **Choke manifold**

   Visual warning systems:

   A. Wind direction indicators as shown on well site diagram

   B. Caution/ Danger signs shall be posted on roads providing direct access to locations. Signs will be painted a high visibility yellow with black lettering of sufficient size to be reasonable distance from the immediate location. Bilingual signs will be used when appropriate.

4. **Mud program:**

   The mud program has been designed to minimize the volume of H_2S circulated to surface. Proper mud weight, safe drilling practices and the use of H_2S scavengers will minimize hazards when penetrating H_2S bearing zones.

5. **Metallurgy:**

   A. All drill strings, casings, tubing, wellhead, blowout preventer, drilling spool, kill lines, choke manifold lines, and valves shall be H_2S trim.

   B. All elastomers used for packing and seals shall be H_2S trim.

6. **Communication:**

   A. Company personnel have/use cellular telephones in the field.

   B. Land line (telephone) communications at Office

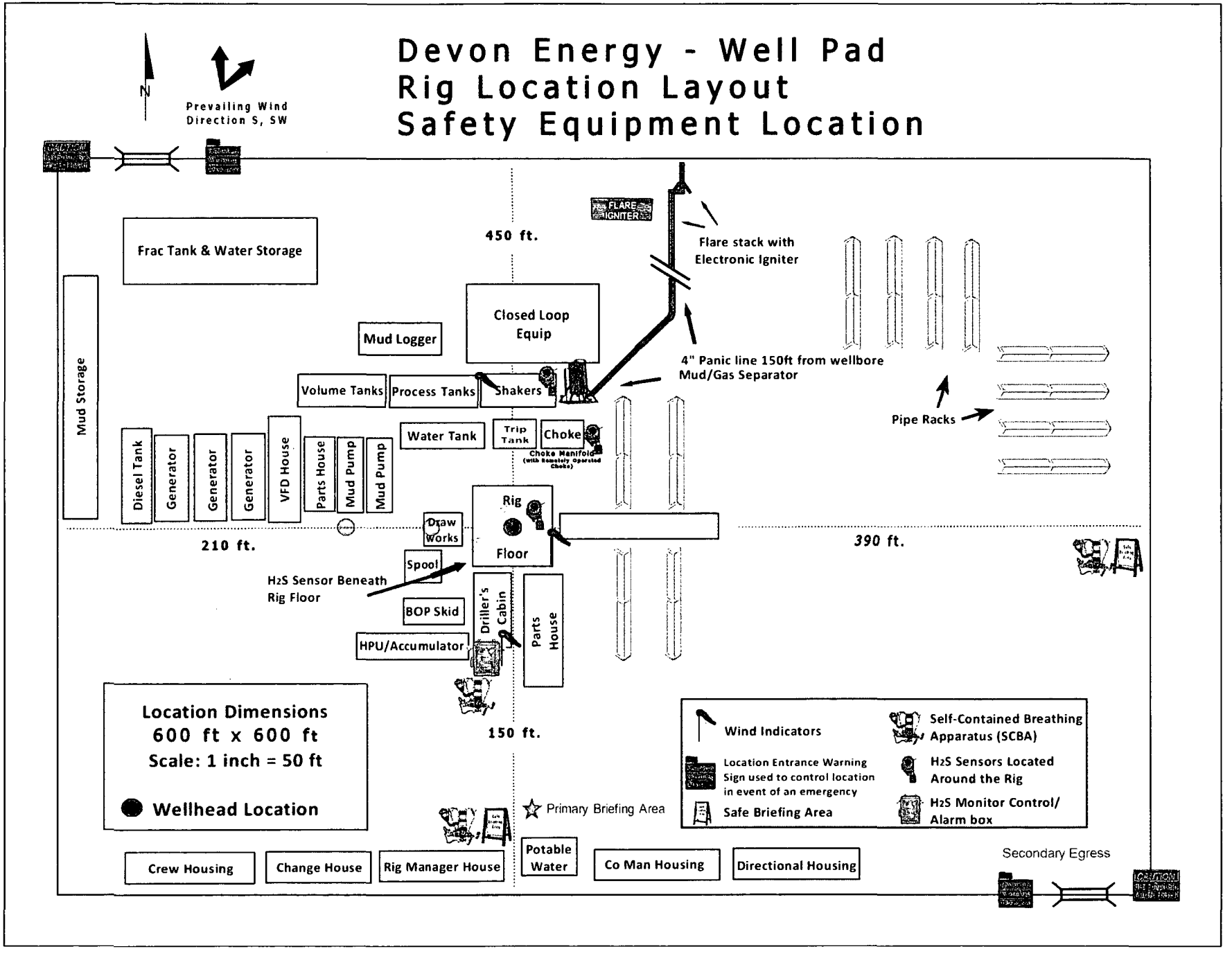
7. **Well testing:**

   A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity, which are necessary to safety and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill-stem-testing operations conducted in an H_2S environment will use the closed chamber method of testing.

   B. There will be no drill stem testing.

Devon Energy Corp. Company Call List		
Drilling Supervisor – Basin – Mark Kramer		405-823-4796
EHS Professional – Laura Wright		405-439-8129
Agency Call List		
Lea County (575)	**Hobbs**	
	Lea County Communication Authority	393-3981
	State Police	392-5588
	City Police	397-9265
	Sheriff's Office	393-2515
	Ambulance	**911**
	Fire Department	397-9308
	LEPC (Local Emergency Planning Committee)	393-2870
	NMOCD	393-6161
	US Bureau of Land Management	393-3612
Eddy County (575)	**Carlsbad**	
	State Police	885-3137
	City Police	885-2111
	Sheriff's Office	887-7551
	Ambulance	**911**
	Fire Department	885-3125
	LEPC (Local Emergency Planning Committee)	887-3798
	US Bureau of Land Management	887-6544
	NM Emergency Response Commission (Santa Fe)	(505) 476-9600
	24 HR	(505) 827-9126
	National Emergency Response Center	(800) 424-8802
	National Pollution Control Center: Direct	(703) 872-6000
	For Oil Spills	(800) 280-7118
	Emergency Services	
	Wild Well Control	(281) 784-4700
	Cudd Pressure Control (915) 699-0139	(915) 563-3356
	Halliburton	(575) 746-2757
	B. J. Services	(575) 746-3569
Give GPS position:	Native Air – Emergency Helicopter – Hobbs	(575) 392-6429
	Flight For Life - Lubbock, TX	(806) 743-9911
	Aerocare - Lubbock, TX	(806) 747-8923
	Med Flight Air Amb - Albuquerque, NM	(575) 842-4433
	Lifeguard Air Med Svc. Albuquerque, NM	(800) 222-1222
	Poison Control (24/7)	(575) 272-3115
	Oil & Gas Pipeline 24 Hour Service	(800) 364-4366
	NOAA – Website - www.nhc.noaa.gov	

Prepared in conjunction with
Dave Small SHARP COMMUNICATIONS & CONSULTING, LLC


Devon Energy - Well Pad
Rig Location Layout
Safety Equipment Location
N
Prevailing Wind
Direction S, SW
FLARE IGNITER
Flare stack with
Electronic Igniter
450 ft.
Frac Tank & Water Storage
Mud Storage
Closed Loop
Equip
Mud Logger
4" Panic line 150ft from wellbore
Mud/Gas Separator
Volume Tanks
Process Tanks
Shakers
Pipe Racks
Water Tank
Trip
Tank
Choke
Choke Manifold
(with Remotely Operated
Chokes)
Diesel Tank
Generator
Generator
Generator
VFD House
Parts House
Mud Pump
Mud Pump
Rig
Floor
Draw
Works
210 ft.
390 ft.
Spool
H2S Sensor Beneath
Rig Floor
BOP Skid
Driller's
Cabin
Parts
House
HPU/Accumulator
150 ft.
Location Dimensions
600 ft x 600 ft
Scale: 1 inch = 50 ft
Wellhead Location
Wind Indicators
Self-Contained Breathing
Apparatus (SCBA)
Location Entrance Warning
Sign used to control location
in event of an emergency
H2S Sensors Located
Around the Rig
Safe Briefing Area
H2S Monitor Control/
Alarm box
Primary Briefing Area
Potable
Water
Crew Housing
Change House
Rig Manager House
Co Man Housing
Directional Housing
Secondary Egress
CAUTION

WCDSC Permian NM

Lea County (NAD83 New Mexico East)
Sec 08-T25S-R33E
Flagler 8 Fed Com 10H

Wellbore #1

Plan: Permit Plan 3

Standard Planning Report - Geographic

20 March, 2018

Database:	EDM r5000.141_Prod US	**Local Co-ordinate Reference:**	Well Flagler 8 Fed Com 10H
Company:	WCDSC Permian NM	**TVD Reference:**	RKB @ 3498.70ft
Project:	Lea County (NAD83 New Mexico East)	**MD Reference:**	RKB @ 3498.70ft
Site:	Sec 08-T25S-R33E	**North Reference:**	Grid
Well:	Flagler 8 Fed Com 10H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permit Plan 3		

Project	Lea County (NAD83 New Mexico East)		
Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Eastern Zone		

Site	Sec 08-T25S-R33E				
Site Position:		**Northing:**	419,281.82 usft	**Latitude:**	32.150539
From:	Map	**Easting:**	769,381.69 usft	**Longitude:**	-103.596481
Position Uncertainty:	0.00 ft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.39 °

Well	Flagler 8 Fed Com 10H					
Well Position	**+N/-S**	0.00 ft	**Northing:**	414,837.45 usft	**Latitude:**	32.138352
	+E/-W	0.00 ft	**Easting:**	767,824.19 usft	**Longitude:**	-103.601611
Position Uncertainty		0.50 ft	**Wellhead Elevation:**		**Ground Level:**	3,466.70 ft

Wellbore	Wellbore #1				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	IGRF2015	2/15/2018	6.89	59.97	47,815.29613674

Design	Permit Plan 3				
Audit Notes:					
Version:		**Phase:**	PLAN	**Tie On Depth:**	0.00
Vertical Section:	**Depth From (TVD) (ft)**	**+N/-S (ft)**	**+E/-W (ft)**	**Direction (°)**	
	0.00	0.00	0.00	6.78	

Plan Survey Tool Program **Date** 3/20/2018

	Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	16,989.88	Permit Plan 3 (Wellbore #1)	MWD+IGRF OWSG MWD + IGRF or WMM	

Plan Sections

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,000.00	0.00	0.00	5,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
5,489.87	7.35	102.54	5,488.53	-6.81	30.62	1.50	1.50	0.00	102.54	
9,546.12	7.35	102.54	9,511.47	-119.44	537.03	0.00	0.00	0.00	0.00	
10,036.00	0.00	0.00	10,000.00	-126.25	567.65	1.50	-1.50	0.00	180.00	Vertical Point - Permit
11,763.04	0.00	0.00	11,727.04	-126.25	567.65	0.00	0.00	0.00	0.00	
12,663.04	90.00	0.00	12,300.00	446.71	567.65	10.00	10.00	0.00	0.00	PBHL - Flagler 8 Fed
16,989.88	90.00	0.00	12,300.00	4,773.55	567.65	0.00	0.00	0.00	0.00	PBHL - Flagler 8 Fed

Database:	EDM r5000.141_Prod US	**Local Co-ordinate Reference:**	Well Flagler 8 Fed Com 10H
Company:	WCDSC Permian NM	**TVD Reference:**	RKB @ 3498.70ft
Project:	Lea County (NAD83 New Mexico East)	**MD Reference:**	RKB @ 3498.70ft
Site:	Sec 08-T25S-R33E	**North Reference:**	Grid
Well:	Flagler 8 Fed Com 10H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permit Plan 3		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
100.00	0.00	0.00	100.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
200.00	0.00	0.00	200.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
300.00	0.00	0.00	300.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
400.00	0.00	0.00	400.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
500.00	0.00	0.00	500.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
600.00	0.00	0.00	600.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
700.00	0.00	0.00	700.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
800.00	0.00	0.00	800.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
900.00	0.00	0.00	900.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
1,000.00	0.00	0.00	1,000.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
1,100.00	0.00	0.00	1,100.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
1,200.00	0.00	0.00	1,200.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
1,300.00	0.00	0.00	1,300.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
1,400.00	0.00	0.00	1,400.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
1,500.00	0.00	0.00	1,500.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
1,600.00	0.00	0.00	1,600.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
1,700.00	0.00	0.00	1,700.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
1,800.00	0.00	0.00	1,800.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
1,900.00	0.00	0.00	1,900.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
2,000.00	0.00	0.00	2,000.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
2,100.00	0.00	0.00	2,100.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
2,200.00	0.00	0.00	2,200.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
2,300.00	0.00	0.00	2,300.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
2,400.00	0.00	0.00	2,400.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
2,500.00	0.00	0.00	2,500.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
2,600.00	0.00	0.00	2,600.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
2,700.00	0.00	0.00	2,700.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
2,800.00	0.00	0.00	2,800.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
2,900.00	0.00	0.00	2,900.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
3,000.00	0.00	0.00	3,000.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
3,100.00	0.00	0.00	3,100.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
3,200.00	0.00	0.00	3,200.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
3,300.00	0.00	0.00	3,300.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
3,400.00	0.00	0.00	3,400.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
3,500.00	0.00	0.00	3,500.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
3,600.00	0.00	0.00	3,600.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
3,700.00	0.00	0.00	3,700.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
3,800.00	0.00	0.00	3,800.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
3,900.00	0.00	0.00	3,900.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
4,000.00	0.00	0.00	4,000.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
4,100.00	0.00	0.00	4,100.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
4,200.00	0.00	0.00	4,200.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
4,300.00	0.00	0.00	4,300.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
4,400.00	0.00	0.00	4,400.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
4,500.00	0.00	0.00	4,500.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
4,600.00	0.00	0.00	4,600.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
4,700.00	0.00	0.00	4,700.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
4,800.00	0.00	0.00	4,800.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
4,900.00	0.00	0.00	4,900.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
5,000.00	0.00	0.00	5,000.00	0.00	0.00	414,837.45	767,824.19	32.138352	-103.601611
Begin Nudge									
5,100.00	1.50	102.54	5,099.99	-0.28	1.28	414,837.17	767,825.46	32.138351	-103.601607
5,200.00	3.00	102.54	5,199.91	-1.14	5.11	414,836.31	767,829.30	32.138349	-103.601595

Database:	EDM r5000.141_Prod US	**Local Co-ordinate Reference:**	Well Flagler 8 Fed Com 10H
Company:	WCDSC Permian NM	**TVD Reference:**	RKB @ 3498.70ft
Project:	Lea County (NAD83 New Mexico East)	**MD Reference:**	RKB @ 3498.70ft
Site:	Sec 08-T25S-R33E	**North Reference:**	Grid
Well:	Flagler 8 Fed Com 10H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permit Plan 3		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,300.00	4.50	102.54	5,299.69	-2.56	11.49	414,834.89	767,835.68	32.138345	-103.601574
5,400.00	6.00	102.54	5,399.27	-4.54	20.43	414,832.91	767,844.61	32.138339	-103.601545
5,489.87	7.35	102.54	5,488.53	-6.81	30.62	414,830.64	767,854.81	32.138333	-103.601512
5,500.00	7.35	102.54	5,498.58	-7.09	31.89	414,830.36	767,856.07	32.138332	-103.601508
5,508.94	7.35	102.54	5,507.44	-7.34	33.00	414,830.11	767,857.19	32.138331	-103.601505
EOB									
5,600.00	7.35	102.54	5,597.75	-9.87	44.37	414,827.58	767,868.56	32.138324	-103.601468
5,700.00	7.35	102.54	5,696.93	-12.65	56.85	414,824.80	767,881.04	32.138316	-103.601428
5,800.00	7.35	102.54	5,796.11	-15.42	69.34	414,822.03	767,893.53	32.138308	-103.601387
5,900.00	7.35	102.54	5,895.29	-18.20	81.82	414,819.25	767,906.01	32.138300	-103.601347
6,000.00	7.35	102.54	5,994.47	-20.98	94.31	414,816.47	767,918.50	32.138293	-103.601307
6,100.00	7.35	102.54	6,093.65	-23.75	106.79	414,813.70	767,930.98	32.138285	-103.601267
6,200.00	7.35	102.54	6,192.83	-26.53	119.28	414,810.92	767,943.46	32.138277	-103.601226
6,300.00	7.35	102.54	6,292.01	-29.31	131.76	414,808.14	767,955.95	32.138269	-103.601186
6,400.00	7.35	102.54	6,391.18	-32.08	144.25	414,805.37	767,968.43	32.138261	-103.601146
6,500.00	7.35	102.54	6,490.36	-34.86	156.73	414,802.59	767,980.92	32.138253	-103.601105
6,600.00	7.35	102.54	6,589.54	-37.64	169.22	414,799.81	767,993.40	32.138245	-103.601065
6,700.00	7.35	102.54	6,688.72	-40.41	181.70	414,797.04	768,005.89	32.138237	-103.601025
6,800.00	7.35	102.54	6,787.90	-43.19	194.19	414,794.26	768,018.37	32.138230	-103.600985
6,900.00	7.35	102.54	6,887.08	-45.97	206.67	414,791.48	768,030.86	32.138222	-103.600944
7,000.00	7.35	102.54	6,986.26	-48.74	219.15	414,788.71	768,043.34	32.138214	-103.600904
7,100.00	7.35	102.54	7,085.44	-51.52	231.64	414,785.93	768,055.83	32.138206	-103.600864
7,200.00	7.35	102.54	7,184.61	-54.30	244.12	414,783.15	768,068.31	32.138198	-103.600824
7,300.00	7.35	102.54	7,283.79	-57.07	256.61	414,780.38	768,080.80	32.138190	-103.600783
7,400.00	7.35	102.54	7,382.97	-59.85	269.09	414,777.60	768,093.28	32.138182	-103.600743
7,500.00	7.35	102.54	7,482.15	-62.63	281.58	414,774.82	768,105.76	32.138175	-103.600703
7,600.00	7.35	102.54	7,581.33	-65.40	294.06	414,772.05	768,118.25	32.138167	-103.600663
7,700.00	7.35	102.54	7,680.51	-68.18	306.55	414,769.27	768,130.73	32.138159	-103.600622
7,800.00	7.35	102.54	7,779.69	-70.96	319.03	414,766.49	768,143.22	32.138151	-103.600582
7,900.00	7.35	102.54	7,878.87	-73.73	331.52	414,763.72	768,155.70	32.138143	-103.600542
8,000.00	7.35	102.54	7,978.04	-76.51	344.00	414,760.94	768,168.19	32.138135	-103.600501
8,100.00	7.35	102.54	8,077.22	-79.29	356.49	414,758.16	768,180.67	32.138127	-103.600461
8,200.00	7.35	102.54	8,176.40	-82.06	368.97	414,755.39	768,193.16	32.138120	-103.600421
8,300.00	7.35	102.54	8,275.58	-84.84	381.45	414,752.61	768,205.64	32.138112	-103.600381
8,400.00	7.35	102.54	8,374.76	-87.62	393.94	414,749.83	768,218.13	32.138104	-103.600340
8,500.00	7.35	102.54	8,473.94	-90.39	406.42	414,747.06	768,230.61	32.138096	-103.600300
8,600.00	7.35	102.54	8,573.12	-93.17	418.91	414,744.28	768,243.10	32.138088	-103.600260
8,700.00	7.35	102.54	8,672.30	-95.95	431.39	414,741.50	768,255.58	32.138080	-103.600220
8,800.00	7.35	102.54	8,771.47	-98.72	443.88	414,738.73	768,268.06	32.138072	-103.600179
8,900.00	7.35	102.54	8,870.65	-101.50	456.36	414,735.95	768,280.55	32.138064	-103.600139
9,000.00	7.35	102.54	8,969.83	-104.28	468.85	414,733.17	768,293.03	32.138057	-103.600099
9,100.00	7.35	102.54	9,069.01	-107.05	481.33	414,730.40	768,305.52	32.138049	-103.600058
9,200.00	7.35	102.54	9,168.19	-109.83	493.82	414,727.62	768,318.00	32.138041	-103.600018
9,300.00	7.35	102.54	9,267.37	-112.61	506.30	414,724.84	768,330.49	32.138033	-103.599978
9,400.00	7.35	102.54	9,366.55	-115.38	518.79	414,722.07	768,342.97	32.138025	-103.599938
9,500.00	7.35	102.54	9,465.73	-118.16	531.27	414,719.29	768,355.46	32.138017	-103.599897
9,529.71	7.35	102.54	9,495.19	-118.98	534.98	414,718.47	768,359.17	32.138015	-103.599885
EOH									
9,546.12	7.35	102.54	9,511.47	-119.44	537.03	414,718.01	768,361.21	32.138014	-103.599879
9,600.00	6.54	102.54	9,564.95	-120.85	543.39	414,716.60	768,367.57	32.138010	-103.599858
9,700.00	5.04	102.54	9,664.44	-123.04	553.23	414,714.41	768,377.42	32.138003	-103.599827
9,800.00	3.54	102.54	9,764.15	-124.67	560.54	414,712.78	768,384.72	32.137999	-103.599803
9,900.00	2.04	102.54	9,864.03	-125.72	565.29	414,711.73	768,389.47	32.137996	-103.599788
10,000.00	0.54	102.54	9,964.01	-126.21	567.48	414,711.24	768,391.67	32.137994	-103.599781

Database:	EDM r5000.141_Prod US	**Local Co-ordinate Reference:**	Well Flagler 8 Fed Com 10H
Company:	WCDSC Permian NM	**TVD Reference:**	RKB @ 3498.70ft
Project:	Lea County (NAD83 New Mexico East)	**MD Reference:**	RKB @ 3498.70ft
Site:	Sec 08-T25S-R33E	**North Reference:**	Grid
Well:	Flagler 8 Fed Com 10H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permit Plan 3		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
10,036.00	0.00	0.00	10,000.00	-126.25	567.65	414,711.20	768,391.84	32.137994	-103.599780
10,038.65	0.00	0.00	10,002.65	-126.25	567.65	414,711.20	768,391.84	32.137994	-103.599780
Drop to Vertical									
10,100.00	0.00	0.00	10,064.00	-126.25	567.65	414,711.20	768,391.84	32.137994	-103.599780
10,200.00	0.00	0.00	10,164.00	-126.25	567.65	414,711.20	768,391.84	32.137994	-103.599780
10,300.00	0.00	0.00	10,264.00	-126.25	567.65	414,711.20	768,391.84	32.137994	-103.599780
10,400.00	0.00	0.00	10,364.00	-126.25	567.65	414,711.20	768,391.84	32.137994	-103.599780
10,500.00	0.00	0.00	10,464.00	-126.25	567.65	414,711.20	768,391.84	32.137994	-103.599780
10,600.00	0.00	0.00	10,564.00	-126.25	567.65	414,711.20	768,391.84	32.137994	-103.599780
10,700.00	0.00	0.00	10,664.00	-126.25	567.65	414,711.20	768,391.84	32.137994	-103.599780
10,800.00	0.00	0.00	10,764.00	-126.25	567.65	414,711.20	768,391.84	32.137994	-103.599780
10,900.00	0.00	0.00	10,864.00	-126.25	567.65	414,711.20	768,391.84	32.137994	-103.599780
11,000.00	0.00	0.00	10,964.00	-126.25	567.65	414,711.20	768,391.84	32.137994	-103.599780
11,100.00	0.00	0.00	11,064.00	-126.25	567.65	414,711.20	768,391.84	32.137994	-103.599780
11,200.00	0.00	0.00	11,164.00	-126.25	567.65	414,711.20	768,391.84	32.137994	-103.599780
11,300.00	0.00	0.00	11,264.00	-126.25	567.65	414,711.20	768,391.84	32.137994	-103.599780
11,400.00	0.00	0.00	11,364.00	-126.25	567.65	414,711.20	768,391.84	32.137994	-103.599780
11,500.00	0.00	0.00	11,464.00	-126.25	567.65	414,711.20	768,391.84	32.137994	-103.599780
11,600.00	0.00	0.00	11,564.00	-126.25	567.65	414,711.20	768,391.84	32.137994	-103.599780
11,700.00	0.00	0.00	11,664.00	-126.25	567.65	414,711.20	768,391.84	32.137994	-103.599780
11,763.04	0.00	0.00	11,727.04	-126.25	567.65	414,711.20	768,391.84	32.137994	-103.599780
KOP @ 11763' MD, 54' FSL, 948' FWL									
11,800.00	3.70	0.00	11,763.98	-125.06	567.65	414,712.39	768,391.84	32.137998	-103.599780
11,900.00	13.70	0.00	11,862.70	-109.96	567.65	414,727.49	768,391.84	32.138039	-103.599780
12,000.00	23.70	0.00	11,957.31	-77.94	567.65	414,759.51	768,391.84	32.138127	-103.599779
12,100.00	33.70	0.00	12,044.91	-29.99	567.65	414,807.46	768,391.84	32.138259	-103.599778
12,200.00	43.70	0.00	12,122.86	32.45	567.65	414,869.90	768,391.84	32.138431	-103.599777
12,300.00	53.70	0.00	12,188.78	107.48	567.65	414,944.93	768,391.84	32.138637	-103.599775
12,351.15	58.81	0.00	12,217.19	150.00	567.65	414,987.45	768,391.84	32.138754	-103.599774
1st Take Point @ 12351' MD, 330' FSL, 948' FWL									
12,400.00	63.70	0.00	12,240.67	192.81	567.65	415,030.26	768,391.84	32.138871	-103.599773
12,500.00	73.70	0.00	12,276.96	285.86	567.65	415,123.31	768,391.84	32.139127	-103.599771
12,600.00	83.70	0.00	12,296.54	383.80	567.65	415,221.25	768,391.84	32.139396	-103.599769
12,663.04	90.00	0.00	12,300.00	446.71	567.65	415,284.16	768,391.84	32.139569	-103.599767
12,690.69	90.00	0.00	12,300.00	474.36	567.65	415,311.81	768,391.84	32.139645	-103.599767
Land Point									
12,700.00	90.00	0.00	12,300.00	483.67	567.65	415,321.12	768,391.84	32.139671	-103.599767
12,800.00	90.00	0.00	12,300.00	583.67	567.65	415,421.12	768,391.84	32.139946	-103.599764
12,900.00	90.00	0.00	12,300.00	683.67	567.65	415,521.12	768,391.84	32.140221	-103.599762
13,000.00	90.00	0.00	12,300.00	783.67	567.65	415,621.12	768,391.84	32.140495	-103.599760
13,100.00	90.00	0.00	12,300.00	883.67	567.65	415,721.12	768,391.84	32.140770	-103.599758
13,200.00	90.00	0.00	12,300.00	983.67	567.65	415,821.12	768,391.84	32.141045	-103.599756
13,300.00	90.00	0.00	12,300.00	1,083.67	567.65	415,921.12	768,391.84	32.141320	-103.599753
13,400.00	90.00	0.00	12,300.00	1,183.67	567.65	416,021.12	768,391.84	32.141595	-103.599751
13,500.00	90.00	0.00	12,300.00	1,283.67	567.65	416,121.12	768,391.84	32.141870	-103.599749
13,600.00	90.00	0.00	12,300.00	1,383.67	567.65	416,221.12	768,391.84	32.142145	-103.599747
13,700.00	90.00	0.00	12,300.00	1,483.67	567.65	416,321.12	768,391.84	32.142420	-103.599745
13,800.00	90.00	0.00	12,300.00	1,583.67	567.65	416,421.12	768,391.84	32.142694	-103.599742
13,900.00	90.00	0.00	12,300.00	1,683.67	567.65	416,521.12	768,391.84	32.142969	-103.599740
14,000.00	90.00	0.00	12,300.00	1,783.67	567.65	416,621.12	768,391.84	32.143244	-103.599738
14,100.00	90.00	0.00	12,300.00	1,883.67	567.65	416,721.12	768,391.84	32.143519	-103.599736
14,200.00	90.00	0.00	12,300.00	1,983.67	567.65	416,821.12	768,391.84	32.143794	-103.599734
14,300.00	90.00	0.00	12,300.00	2,083.67	567.65	416,921.12	768,391.84	32.144069	-103.599731
14,400.00	90.00	0.00	12,300.00	2,183.67	567.65	417,021.12	768,391.84	32.144344	-103.599729

Database:	EDM r5000.141_Prod US	**Local Co-ordinate Reference:**	Well Flagler 8 Fed Com 10H
Company:	WCDSC Permian NM	**TVD Reference:**	RKB @ 3498.70ft
Project:	Lea County (NAD83 New Mexico East)	**MD Reference:**	RKB @ 3498.70ft
Site:	Sec 08-T25S-R33E	**North Reference:**	Grid
Well:	Flagler 8 Fed Com 10H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Wellbore #1		
Design:	Permit Plan 3		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
14,500.00	90.00	0.00	12,300.00	2,283.67	567.65	417,121.12	768,391.84	32.144619	-103.599727
14,600.00	90.00	0.00	12,300.00	2,383.67	567.65	417,221.12	768,391.84	32.144893	-103.599725
14,700.00	90.00	0.00	12,300.00	2,483.67	567.65	417,321.12	768,391.84	32.145168	-103.599723
14,800.00	90.00	0.00	12,300.00	2,583.67	567.65	417,421.12	768,391.84	32.145443	-103.599720
14,900.00	90.00	0.00	12,300.00	2,683.67	567.65	417,521.12	768,391.84	32.145718	-103.599718
15,000.00	90.00	0.00	12,300.00	2,783.67	567.65	417,621.12	768,391.84	32.145993	-103.599716
15,100.00	90.00	0.00	12,300.00	2,883.67	567.65	417,721.12	768,391.84	32.146268	-103.599714
15,200.00	90.00	0.00	12,300.00	2,983.67	567.65	417,821.11	768,391.84	32.146543	-103.599712
15,300.00	90.00	0.00	12,300.00	3,083.67	567.65	417,921.11	768,391.84	32.146817	-103.599709
15,400.00	90.00	0.00	12,300.00	3,183.67	567.65	418,021.11	768,391.84	32.147092	-103.599707
15,500.00	90.00	0.00	12,300.00	3,283.67	567.65	418,121.11	768,391.84	32.147367	-103.599705
15,600.00	90.00	0.00	12,300.00	3,383.67	567.65	418,221.11	768,391.84	32.147642	-103.599703
15,700.00	90.00	0.00	12,300.00	3,483.67	567.65	418,321.11	768,391.84	32.147917	-103.599701
15,800.00	90.00	0.00	12,300.00	3,583.67	567.65	418,421.11	768,391.84	32.148192	-103.599698
15,900.00	90.00	0.00	12,300.00	3,683.67	567.65	418,521.11	768,391.84	32.148467	-103.599696
16,000.00	90.00	0.00	12,300.00	3,783.67	567.65	418,621.11	768,391.84	32.148742	-103.599694
16,100.00	90.00	0.00	12,300.00	3,883.67	567.65	418,721.11	768,391.84	32.149016	-103.599692
16,200.00	90.00	0.00	12,300.00	3,983.67	567.65	418,821.11	768,391.84	32.149291	-103.599690
16,300.00	90.00	0.00	12,300.00	4,083.67	567.65	418,921.11	768,391.84	32.149566	-103.599687
16,400.00	90.00	0.00	12,300.00	4,183.67	567.65	419,021.11	768,391.84	32.149841	-103.599685
16,500.00	90.00	0.00	12,300.00	4,283.67	567.65	419,121.11	768,391.84	32.150116	-103.599683
16,600.00	90.00	0.00	12,300.00	4,383.67	567.65	419,221.11	768,391.84	32.150391	-103.599681
16,700.00	90.00	0.00	12,300.00	4,483.67	567.65	419,321.11	768,391.84	32.150666	-103.599679
16,800.00	90.00	0.00	12,300.00	4,583.67	567.65	419,421.11	768,391.84	32.150941	-103.599676
16,900.00	90.00	0.00	12,300.00	4,683.67	567.65	419,521.11	768,391.84	32.151215	-103.599674
16,989.88	90.00	0.00	12,300.00	4,773.55	567.65	419,610.99	768,391.84	32.151462	-103.599672
PBHL; 330' FNL, 568' FWL									

Design Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
PBHL - Flagler 8 Fed Cc	0.00	0.00	0.00	4,773.55	567.65	419,610.99	768,391.84	32.151462	-103.599672
- plan misses target center by 4807.18ft at 0.00ft MD (0.00 TVD, 0.00 N, 0.00 E)									
- Point									
Vertical Point - Permit Pl	0.00	0.00	10,000.00	-126.25	567.65	414,711.20	768,391.84	32.137994	-103.599780
- plan hits target center									
- Point									

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
5,000.00	5,000.00	0.00	0.00	Begin Nudge
5,508.94	5,507.44	-7.34	33.00	EOB
9,529.71	9,495.19	-118.98	534.98	EOH
10,038.65	10,002.65	-126.25	567.65	Drop to Vertical
11,763.04	11,727.04	-126.25	567.65	KOP @ 11763' MD, 54' FSL, 948' FWL
12,351.15	12,217.19	150.00	567.65	1st Take Point @ 12351' MD, 330' FSL, 948' FWL
12,690.69	12,300.00	474.36	567.65	Land Point
16,989.88	12,300.00	4,773.55	567.65	PBHL; 330' FNL, 568' FWL

WCDSC Permian NM

WELL DETAILS: Flagler 8 Fed Com 10H

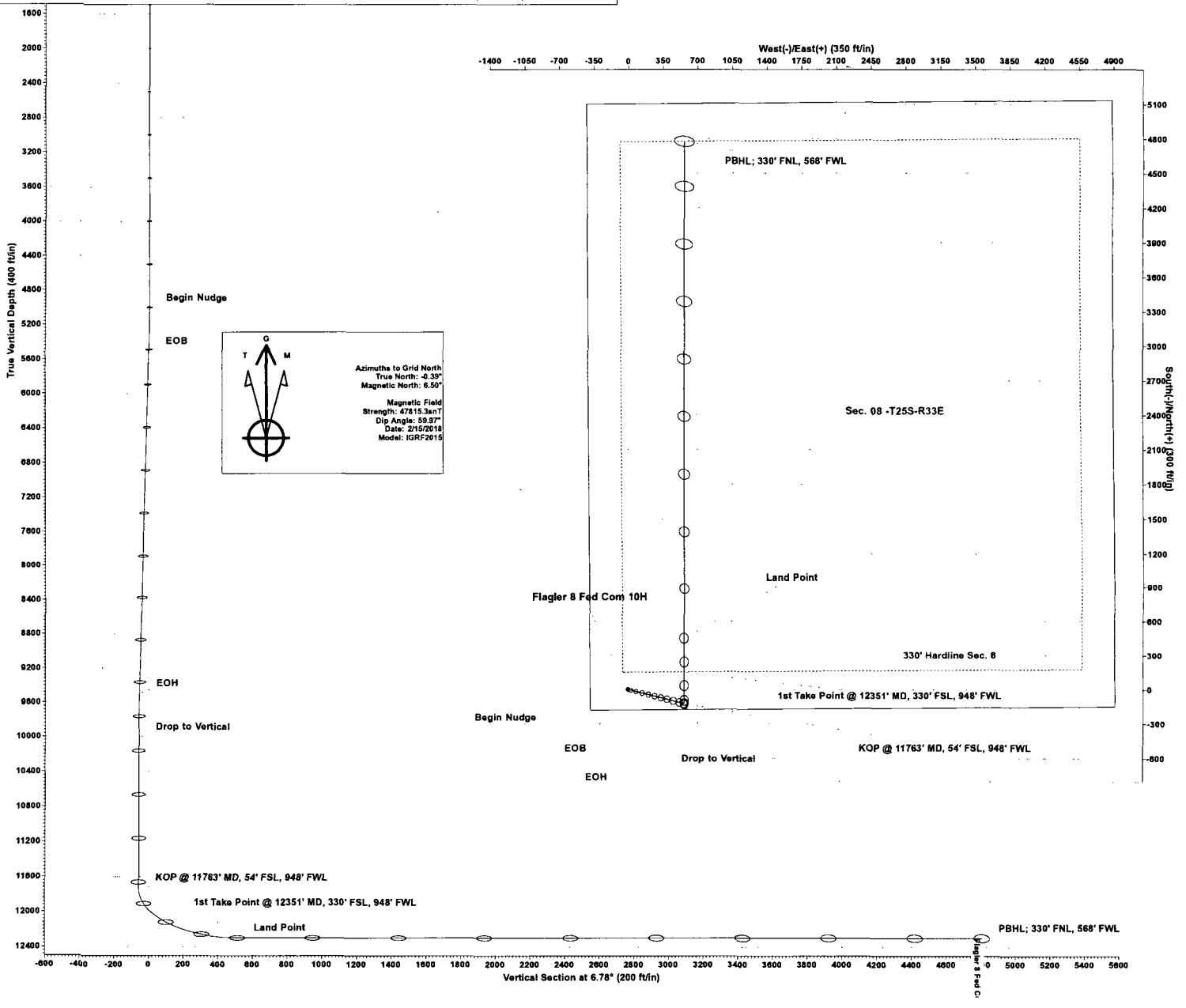
RKB @ 3498.70ft
3466.70

Northing	Easting	Latitude	Longitude
414837.45	767824.19	32.138352	-103.601611

devon

SECTION DETAILS Permit Plan 3

	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	VSect	Annotation
	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
	5000.00	0.00	0.00	5000.00	0.00	0.00	0.00	0.00	Begin Nudge
	5489.87	7.35	102.54	5488.53	-6.81	30.62	1.50	-3.15	
	9546.12	7.35	102.54	9511.47	-119.44	537.03	0.00	-55.19	
5	10036.00	0.00	0.00	10000.00	-126.25	567.65	1.50	-58.34	
6	11763.04	0.00	0.00	11727.04	-126.25	567.65	0.00	-58.34	KOP @ 11763' MD, 54' FSL, 948' FWL
7	12663.04	90.00	0.00	12300.00	446.71	567.65	10.00	510.61	Land Point
8	16989.88	90.00	0.00	12300.00	4773.55	567.65	0.00	4807.18	PBHL; 330' FNL, 568' FWL



WCDSC Permian NM

Lea County (NAD83 New Mexico East)
Sec 08-T25S-R33E
Flagler 8 Fed Com 10H

Wellbore #1
Permit Plan 3

Anticollision Report

20 March, 2018

Anticollision Report

Company:	WCDSC Permian NM	**Local Co-ordinate Reference:**	Well Flagler 8 Fed Com 10H
Project:	Lea County (NAD83 New Mexico East)	**TVD Reference:**	RKB @ 3498.70ft
Reference Site:	Sec 08-T25S-R33E	**MD Reference:**	RKB @ 3498.70ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Flagler 8 Fed Com 10H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.50 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM r5000.141_Prod US
Reference Design:	Permit Plan 3	**Offset TVD Reference:**	Offset Datum

Reference	Permit Plan 3		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.00ft	**Error Model:**	ISCWSA
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 1,000.00 ft	**Error Surface:**	Pedal Curve
Warning Levels Evaluated at:	2.00 **Sigma**	**Casing Method:**	Not applied

Survey Tool Program **Date** 3/20/2018

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	16,989.88	Permit Plan 3 (Wellbore #1)	MWD+IGRF	OWSG MWD + IGRF or WMM

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Sec 08-T25S-R33E						
Flagler 8 Fed Com 14H - Wellbore #1 - Permit Plan 1	6,962.88	6,958.16	211.96	162.83	4.314	Alert, CC
Flagler 8 Fed Com 14H - Wellbore #1 - Permit Plan 1	7,000.00	7,005.30	212.06	162.64	4.291	Alert, ES
Flagler 8 Fed Com 14H - Wellbore #1 - Permit Plan 1	7,200.00	7,208.43	216.04	165.23	4.252	Alert, SF
Flagler 8 Fed Com 18H - Wellbore #1 - Permit Plan 1	5,160.49	5,156.97	198.38	162.01	5.455	CC
Flagler 8 Fed Com 18H - Wellbore #1 - Permit Plan 1	5,200.00	5,203.67	198.43	161.76	5.411	ES
Flagler 8 Fed Com 18H - Wellbore #1 - Permit Plan 1	5,500.00	5,506.27	204.66	165.88	5.277	SF
Flagler 8 Fed Com 23H - Wellbore #1 - Permit Plan 1	5,700.71	5,702.65	126.53	86.56	3.165	Alert, CC, ES
Flagler 8 Fed Com 23H - Wellbore #1 - Permit Plan 1	5,800.00	5,804.57	127.47	86.76	3.132	Alert, SF
Flagler 8 Fed Com 2H - Wellbore #1 - Permit Plan 2	11,700.00	11,705.98	0.06	-85.01	0.001	Collision, ES
Flagler 8 Fed Com 2H - Wellbore #1 - Permit Plan 2	11,713.64	11,719.61	0.00	-82.46	0.000	Collision, CC, SF
Flagler 8 Fed Com 30H - Wellbore #1 - Permit Plan 1	8,220.33	8,201.49	107.81	49.31	1.843	Minor Risk, CC
Flagler 8 Fed Com 30H - Wellbore #1 - Permit Plan 1	8,300.00	8,280.51	108.29	49.23	1.834	Minor Risk, ES, SF
Flagler 8 Fed Com 36H - Wellbore #1 - Permit Plan 1	6,933.49	6,918.72	116.10	67.47	2.387	Minor Risk, CC
Flagler 8 Fed Com 36H - Wellbore #1 - Permit Plan 1	7,000.00	6,984.71	116.40	67.29	2.370	Minor Risk, ES
Flagler 8 Fed Com 36H - Wellbore #1 - Permit Plan 1	7,100.00	7,083.93	117.95	68.13	2.368	Minor Risk, SF
Flagler 8 Fed Com 6H - Wellbore #1 - Permit Plan 2	5,000.00	5,000.40	59.99	24.60	1.695	Minor Risk, CC, ES, SF

Offset Design Sec 08-T25S-R33E - Flagler 8 Fed Com 14H - Wellbore #1 - Permit Plan 1 — **Offset Site Error:** 0.00 ft

Survey Program: 0-MWD+IGRF — **Offset Well Error:** 0.50 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	6.90	-6.90	0.50	0.50	41.61	201.12	178.63	268.99				
100.00	100.00	106.90	93.10	0.51	0.52	41.61	201.12	178.63	268.99	267.96	1.04	258.808	
200.00	200.00	206.90	193.10	0.69	0.72	41.61	201.12	178.63	268.99	267.58	1.41	190.367	
300.00	300.00	306.90	293.10	0.98	1.01	41.61	201.12	178.63	268.99	267.01	1.99	135.495	
400.00	400.00	406.90	393.10	1.30	1.33	41.61	201.12	178.63	268.99	266.37	2.63	102.299	
500.00	500.00	506.90	493.10	1.63	1.67	41.61	201.12	178.63	268.99	265.69	3.30	81.420	
600.00	600.00	606.90	593.10	1.98	2.01	41.61	201.12	178.63	268.99	265.00	3.99	67.366	
700.00	700.00	706.90	693.10	2.33	2.36	41.61	201.12	178.63	268.99	264.30	4.69	57.348	
800.00	800.00	806.90	793.10	2.68	2.71	41.61	201.12	178.63	268.99	263.60	5.39	49.877	
900.00	900.00	906.90	893.10	3.03	3.07	41.61	201.12	178.63	268.99	262.90	6.10	44.104	
1,000.00	1,000.00	1,006.90	993.10	3.39	3.42	41.61	201.12	178.63	268.99	262.19	6.81	39.515	
1,100.00	1,100.00	1,106.90	1,093.10	3.74	3.78	41.61	201.12	178.63	268.99	261.48	7.52	35.784	

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

Anticollision Report

Company:	WCDSC Permian NM	**Local Co-ordinate Reference:**	Well Flagler 8 Fed Com 10H
Project:	Lea County (NAD83 New Mexico East)	**TVD Reference:**	RKB @ 3498.70ft
Reference Site:	Sec 08-T25S-R33E	**MD Reference:**	RKB @ 3498.70ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Flagler 8 Fed Com 10H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.50 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM r5000.141_Prod US
Reference Design:	Permit Plan 3	**Offset TVD Reference:**	Offset Datum

Offset Design Sec 08-T25S-R33E - Flagler 8 Fed Com 14H - Wellbore #1 - Permit Plan 1

Offset Site Error: 0.00 ft

Survey Program: 0-MWD+IGRF

Offset Well Error: 0.50 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
1,200.00	1,200.00	1,206.90	1,193.10	4.10	4.13	41.61	201.12	178.63	268.99	260.77	8.23	32.691	
1,300.00	1,300.00	1,306.90	1,293.10	4.45	4.49	41.61	201.12	178.63	268.99	260.05	8.94	30.087	
1,400.00	1,400.00	1,406.90	1,393.10	4.81	4.85	41.61	201.12	178.63	268.99	259.34	9.65	27.866	
1,500.00	1,500.00	1,506.90	1,493.10	5.16	5.20	41.61	201.12	178.63	268.99	258.63	10.37	25.948	
1,600.00	1,600.00	1,606.90	1,593.10	5.52	5.56	41.61	201.12	178.63	268.99	257.91	11.08	24.277	
1,700.00	1,700.00	1,706.90	1,693.10	5.88	5.92	41.61	201.12	178.63	268.99	257.20	11.79	22.807	
1,800.00	1,800.00	1,806.90	1,793.10	6.24	6.27	41.61	201.12	178.63	268.99	256.49	12.51	21.504	
1,900.00	1,900.00	1,906.90	1,893.10	6.59	6.63	41.61	201.12	178.63	268.99	255.77	13.22	20.342	
2,000.00	2,000.00	2,006.90	1,993.10	6.95	6.99	41.61	201.12	178.63	268.99	255.06	13.94	19.298	
2,100.00	2,100.00	2,106.90	2,093.10	7.31	7.35	41.61	201.12	178.63	268.99	254.34	14.65	18.356	
2,200.00	2,200.00	2,206.90	2,193.10	7.67	7.70	41.61	201.12	178.63	268.99	253.63	15.37	17.502	
2,300.00	2,300.00	2,306.90	2,293.10	8.02	8.06	41.61	201.12	178.63	268.99	252.91	16.08	16.723	
2,400.00	2,400.00	2,406.90	2,393.10	8.38	8.42	41.61	201.12	178.63	268.99	252.19	16.80	16.011	
2,500.00	2,500.00	2,506.90	2,493.10	8.74	8.78	41.61	201.12	178.63	268.99	251.48	17.52	15.357	
2,600.00	2,600.00	2,606.90	2,593.10	9.10	9.13	41.61	201.12	178.63	268.99	250.76	18.23	14.754	
2,700.00	2,700.00	2,706.90	2,693.10	9.46	9.49	41.61	201.12	178.63	268.99	250.05	18.95	14.197	
2,800.00	2,800.00	2,806.90	2,793.10	9.81	9.85	41.61	201.12	178.63	268.99	249.33	19.66	13.680	
2,900.00	2,900.00	2,906.90	2,893.10	10.17	10.21	41.61	201.12	178.63	268.99	248.61	20.38	13.199	
3,000.00	3,000.00	3,006.90	2,993.10	10.53	10.57	41.61	201.12	178.63	268.99	247.90	21.10	12.751	
3,100.00	3,100.00	3,106.90	3,093.10	10.89	10.92	41.61	201.12	178.63	268.99	247.18	21.81	12.332	
3,200.00	3,200.00	3,206.90	3,193.10	11.25	11.28	41.61	201.12	178.63	268.99	246.47	22.53	11.940	
3,300.00	3,300.00	3,306.90	3,293.10	11.60	11.64	41.61	201.12	178.63	268.99	245.75	23.24	11.572	
3,400.00	3,400.00	3,406.90	3,393.10	11.96	12.00	41.61	201.12	178.63	268.99	245.03	23.96	11.226	
3,500.00	3,500.00	3,506.90	3,493.10	12.32	12.36	41.61	201.12	178.63	268.99	244.32	24.68	10.900	
3,600.00	3,600.00	3,606.90	3,593.10	12.68	12.72	41.61	201.12	178.63	268.99	243.60	25.39	10.593	
3,700.00	3,700.00	3,706.90	3,693.10	13.04	13.07	41.61	201.12	178.63	268.99	242.88	26.11	10.302	
3,800.00	3,800.00	3,806.90	3,793.10	13.39	13.43	41.61	201.12	178.63	268.99	242.17	26.83	10.027	
3,900.00	3,900.00	3,906.90	3,893.10	13.75	13.79	41.61	201.12	178.63	268.99	241.45	27.54	9.766	
4,000.00	4,000.00	4,006.90	3,993.10	14.11	14.15	41.61	201.12	178.63	268.99	240.74	28.26	9.519	
4,100.00	4,100.00	4,106.90	4,093.10	14.47	14.51	41.61	201.12	178.63	268.99	240.02	28.98	9.283	
4,200.00	4,200.00	4,206.90	4,193.10	14.83	14.86	41.61	201.12	178.63	268.99	239.30	29.69	9.059	
4,300.00	4,300.00	4,306.90	4,293.10	15.19	15.22	41.61	201.12	178.63	268.99	238.59	30.41	8.846	
4,400.00	4,400.00	4,406.90	4,393.10	15.54	15.58	41.61	201.12	178.63	268.99	237.87	31.13	8.642	
4,500.00	4,500.00	4,506.90	4,493.10	15.90	15.94	41.61	201.12	178.63	268.99	237.15	31.84	8.448	
4,600.00	4,600.00	4,606.90	4,593.10	16.26	16.30	41.61	201.12	178.63	268.99	236.44	32.56	8.262	
4,700.00	4,700.00	4,706.90	4,693.10	16.62	16.66	41.61	201.12	178.63	268.99	235.72	33.28	8.084	
4,800.00	4,800.00	4,806.90	4,793.10	16.98	17.01	41.61	201.12	178.63	268.99	235.00	33.99	7.913	
4,900.00	4,900.00	4,906.90	4,893.10	17.34	17.37	41.61	201.12	178.63	268.99	234.29	34.71	7.750	
5,000.00	5,000.00	5,006.90	4,993.10	17.69	17.73	41.61	201.12	178.63	268.99	233.57	35.43	7.593	
5,100.00	5,099.99	5,106.91	5,093.09	18.04	18.09	-61.18	201.12	178.63	268.36	232.23	36.13	7.427	
5,200.00	5,199.91	5,206.99	5,193.01	18.38	18.45	-61.94	201.12	178.63	266.49	229.66	36.83	7.236	
5,300.00	5,299.69	5,307.21	5,292.79	18.72	18.81	-63.24	201.12	178.63	263.47	225.95	37.52	7.021	
5,400.00	5,399.27	5,407.63	5,392.37	19.06	19.17	-65.09	201.12	178.63	259.47	221.25	38.23	6.788	
5,500.00	5,498.58	5,508.33	5,491.68	19.41	19.53	-67.53	201.12	178.63	254.73	215.80	38.93	6.543	
5,600.00	5,597.75	5,609.15	5,590.85	19.76	19.89	-70.22	201.12	178.63	250.08	210.44	39.64	6.309	
5,700.00	5,696.93	5,709.97	5,690.03	20.11	20.25	-73.00	201.12	178.63	246.02	205.66	40.35	6.097	
5,800.00	5,796.11	5,789.21	5,789.21	20.46	20.53	-75.87	201.12	178.63	242.56	201.57	40.99	5.917	
5,900.00	5,895.29	5,888.39	5,888.39	20.82	20.89	-78.81	201.12	178.63	239.73	198.03	41.71	5.748	
6,000.00	5,994.47	5,987.57	5,987.57	21.18	21.25	-81.82	201.12	178.63	237.56	195.14	42.43	5.600	
6,100.00	6,093.65	6,086.75	6,086.75	21.55	21.60	-84.86	201.12	178.63	236.07	192.92	43.15	5.471	
6,200.00	6,192.83	6,185.93	6,185.93	21.91	21.96	-87.94	201.12	178.63	235.26	191.39	43.87	5.363	
6,300.00	6,292.01	6,290.39	6,290.39	22.28	22.32	-91.28	200.19	178.11	234.18	189.60	44.59	5.252	

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

Anticollision Report

Company:	WCDSC Permian NM	**Local Co-ordinate Reference:**	Well Flagler 8 Fed Com 10H
Project:	Lea County (NAD83 New Mexico East)	**TVD Reference:**	RKB @ 3498.70ft
Reference Site:	Sec 08-T25S-R33E	**MD Reference:**	RKB @ 3498.70ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Flagler 8 Fed Com 10H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.50 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM r5000.141_Prod US
Reference Design:	Permit Plan 3	**Offset TVD Reference:**	Offset Datum

Offset Design Sec 08-T25S-R33E - Flagler 8 Fed Com 14H - Wellbore #1 - Permit Plan 1 — **Offset Site Error:** 0.00 ft

Survey Program: 0-MWD+IGRF — **Offset Well Error:** 0.50 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
6,400.00	6,391.18	6,395.41	6,395.32	22.65	22.66	-94.90	196.75	176.20	231.32	186.05	45.27	5.110	
6,500.00	6,490.36	6,499.91	6,499.60	23.02	23.00	-98.89	190.83	172.92	226.85	180.92	45.93	4.939	Alert
6,600.00	6,589.54	6,600.96	6,600.26	23.40	23.33	-103.17	183.06	168.59	221.39	174.79	46.60	4.751	Alert
6,700.00	6,688.72	6,700.61	6,698.28	23.78	23.65	-107.57	175.22	164.24	216.96	169.66	47.31	4.586	Alert
6,800.00	6,787.90	6,802.17	6,796.31	24.16	23.99	-112.12	167.38	159.89	213.89	165.88	48.01	4.455	Alert
6,900.00	6,887.08	6,903.73	6,894.34	24.54	24.33	-116.76	159.54	155.53	212.25	163.53	48.72	4.357	Alert
6,962.88	6,949.44	6,958.16	6,955.98	24.78	24.51	-119.71	154.62	152.79	211.96	162.83	49.13	4.314	Alert, CC
7,000.00	6,986.26	7,005.30	6,992.36	24.92	24.67	-121.45	151.71	151.18	212.06	162.64	49.42	4.291	Alert, ES
7,100.00	7,085.44	7,106.86	7,090.39	25.30	25.01	-126.11	143.87	146.82	213.33	163.22	50.11	4.257	Alert
7,200.00	7,184.61	7,208.43	7,188.42	25.69	25.35	-130.69	136.03	142.47	216.04	165.23	50.81	4.252	Alert, SF
7,300.00	7,283.79	7,309.99	7,286.44	26.07	25.70	-135.13	128.19	138.12	220.13	168.63	51.49	4.275	Alert
7,400.00	7,382.97	7,388.44	7,384.47	26.46	25.96	-139.39	120.36	133.76	225.52	173.42	52.10	4.329	Alert
7,500.00	7,482.15	7,486.88	7,482.49	26.85	26.30	-143.43	112.52	129.41	232.13	179.36	52.77	4.399	Alert
7,600.00	7,581.33	7,585.31	7,580.52	27.24	26.64	-147.24	104.68	125.05	239.85	186.42	53.44	4.489	Alert
7,700.00	7,680.51	7,683.75	7,678.55	27.63	26.98	-150.81	96.85	120.70	248.59	194.48	54.11	4.594	Alert
7,800.00	7,779.69	7,782.18	7,776.57	28.03	27.32	-154.12	89.01	116.35	258.23	203.46	54.78	4.714	Alert
7,900.00	7,878.87	7,880.62	7,874.60	28.42	27.67	-157.19	81.17	111.99	268.69	213.24	55.45	4.846	Alert
8,000.00	7,978.04	7,979.05	7,972.63	28.82	28.01	-160.03	73.33	107.64	279.86	223.74	56.12	4.987	Alert
8,100.00	8,077.22	8,077.49	8,070.65	29.21	28.36	-162.65	65.50	103.28	291.67	234.87	56.80	5.135	
8,200.00	8,176.40	8,175.93	8,168.68	29.61	28.70	-165.06	57.66	98.93	304.05	246.57	57.48	5.290	
8,300.00	8,275.58	8,274.36	8,266.70	30.01	29.05	-167.28	49.82	94.58	316.92	258.75	58.16	5.449	
8,400.00	8,374.76	8,372.80	8,364.73	30.41	29.40	-169.33	41.98	90.22	330.23	271.38	58.85	5.611	
8,500.00	8,473.94	8,471.37	8,462.89	30.81	29.75	-171.22	34.15	85.87	343.92	284.39	59.54	5.776	
8,600.00	8,573.12	8,571.37	8,562.61	31.21	30.10	-172.74	27.58	82.22	357.71	297.47	60.24	5.938	
8,700.00	8,672.30	8,671.89	8,663.01	31.61	30.45	-173.75	23.27	79.82	371.24	310.29	60.95	6.091	
8,800.00	8,771.47	8,772.80	8,763.89	32.01	30.81	-174.30	21.27	78.71	384.37	322.72	61.65	6.234	
8,900.00	8,870.65	8,872.67	8,863.75	32.42	31.16	-174.51	21.12	78.63	397.14	334.77	62.36	6.368	
9,000.00	8,969.83	8,971.85	8,962.93	32.82	31.51	-174.68	21.12	78.63	409.87	346.80	63.07	6.499	
9,100.00	9,069.01	9,071.02	9,062.11	33.22	31.86	-174.84	21.12	78.63	422.61	358.83	63.77	6.627	
9,200.00	9,168.19	9,170.20	9,161.29	33.63	32.21	-174.99	21.12	78.63	435.35	370.87	64.48	6.752	
9,300.00	9,267.37	9,269.38	9,260.47	34.04	32.56	-175.14	21.12	78.63	448.09	382.90	65.19	6.874	
9,400.00	9,366.55	9,368.56	9,359.65	34.44	32.91	-175.27	21.12	78.63	460.84	394.94	65.89	6.994	
9,500.00	9,465.73	9,467.74	9,458.83	34.85	33.26	-175.40	21.12	78.63	473.58	406.98	66.60	7.111	
9,600.00	9,564.95	9,566.96	9,558.05	35.25	33.61	-175.52	21.12	78.63	485.96	418.65	67.31	7.220	
9,700.00	9,664.44	9,666.45	9,657.54	35.65	33.96	-175.63	21.12	78.63	496.02	428.00	68.02	7.293	
9,800.00	9,764.15	9,766.17	9,757.25	36.03	34.31	-175.70	21.12	78.63	503.48	434.75	68.72	7.326	
9,900.00	9,864.03	9,866.05	9,857.13	36.39	34.67	-175.75	21.12	78.63	508.33	438.90	69.43	7.321	
10,000.00	9,964.01	9,966.02	9,957.11	36.74	35.02	-175.77	21.12	78.63	510.57	440.44	70.13	7.280	
10,100.00	10,064.00	10,066.02	10,057.10	37.08	35.37	-73.23	21.12	78.63	510.74	439.90	70.84	7.210	
10,200.00	10,164.00	10,166.02	10,157.10	37.41	35.73	-73.23	21.12	78.63	510.74	439.20	71.54	7.139	
10,300.00	10,264.00	10,266.02	10,257.10	37.75	36.08	-73.23	21.12	78.63	510.74	438.50	72.25	7.069	
10,302.35	10,266.36	10,268.37	10,259.46	37.76	36.09	-73.23	21.12	78.63	510.74	438.48	72.26	7.068	
10,400.00	10,364.00	10,357.65	10,348.74	38.09	36.40	-73.19	21.53	78.57	510.99	438.10	72.89	7.010	
10,500.00	10,464.00	10,429.05	10,419.73	38.43	36.65	-72.47	28.58	77.48	515.40	442.11	73.30	7.032	
10,600.00	10,564.00	10,500.00	10,488.85	38.77	36.87	-70.92	44.17	75.06	525.68	452.17	73.52	7.151	
10,700.00	10,664.00	10,561.83	10,547.11	39.11	37.05	-68.95	64.55	71.91	542.46	469.11	73.35	7.395	
10,800.00	10,764.00	10,620.55	10,600.08	39.45	37.21	-66.64	89.55	68.04	566.43	493.56	72.87	7.773	
10,900.00	10,864.00	10,673.42	10,645.33	39.79	37.34	-64.27	116.52	63.86	597.99	525.98	72.01	8.304	
11,000.00	10,964.00	10,720.49	10,683.36	40.13	37.45	-62.00	143.93	59.62	637.21	566.39	70.82	8.998	
11,100.00	11,064.00	10,762.15	10,715.00	40.47	37.54	-59.90	170.67	55.48	683.75	614.36	69.39	9.854	
11,200.00	11,164.00	10,800.00	10,741.99	40.81	37.62	-57.95	196.89	51.42	737.04	669.17	67.88	10.858	
11,300.00	11,264.00	10,831.29	10,762.94	41.15	37.70	-56.34	219.86	47.86	796.35	730.08	66.26	12.018	

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

Anticollision Report

Company:	WCDSC Permian NM	**Local Co-ordinate Reference:**	Well Flagler 8 Fed Com 10H
Project:	Lea County (NAD83 New Mexico East)	**TVD Reference:**	RKB @ 3498.70ft
Reference Site:	Sec 08-T25S-R33E	**MD Reference:**	RKB @ 3498.70ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Flagler 8 Fed Com 10H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.50 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM r5000.141_Prod US
Reference Design:	Permit Plan 3	**Offset TVD Reference:**	Offset Datum

Offset Design Sec 08-T25S-R33E - Flagler 8 Fed Com 14H - Wellbore #1 - Permit Plan 1

Offset Site Error: 0.00 ft

Survey Program: 0-MWD+IGRF

Offset Well Error: 0.50 ft

Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance				
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
11,400.00	11,364.00	10,850.00	10,774.85	41.49	37.75	-55.38	234.12	45.66	861.03	796.61	64.42	13.366	
11,500.00	11,464.00	10,885.23	10,795.97	41.83	37.85	-53.59	261.98	41.34	929.96	866.63	63.33	14.685	

Anticollision Report

Company:	WCDSC Permian NM	**Local Co-ordinate Reference:**	Well Flagler 8 Fed Com 10H
Project:	Lea County (NAD83 New Mexico East)	**TVD Reference:**	RKB @ 3498.70ft
Reference Site:	Sec 08-T25S-R33E	**MD Reference:**	RKB @ 3498.70ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Flagler 8 Fed Com 10H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.50 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM r5000.141_Prod US
Reference Design:	Permit Plan 3	**Offset TVD Reference:**	Offset Datum

Offset Design Sec 08-T25S-R33E - Flagler 8 Fed Com 18H - Wellbore #1 - Permit Plan 1 — **Offset Site Error:** 0.00 ft

Survey Program: 0-MWD+IGRF — **Offset Well Error:** 0.50 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	6.40	-6.40	0.50	0.50	30.59	200.73	118.65	233.17				
100.00	100.00	106.40	93.60	0.51	0.52	30.59	200.73	118.65	233.17	232.14	1.04	224.461	
200.00	200.00	206.40	193.60	0.69	0.72	30.59	200.73	118.65	233.17	231.76	1.41	165.168	
300.00	300.00	306.40	293.60	0.98	1.01	30.59	200.73	118.65	233.17	231.19	1.98	117.544	
400.00	400.00	406.40	393.60	1.30	1.33	30.59	200.73	118.65	233.17	230.55	2.63	88.733	
500.00	500.00	506.40	493.60	1.63	1.67	30.59	200.73	118.65	233.17	229.87	3.30	70.614	
600.00	600.00	606.40	593.60	1.98	2.01	30.59	200.73	118.65	233.17	229.18	3.99	58.421	
700.00	700.00	706.40	693.60	2.33	2.36	30.59	200.73	118.65	233.17	228.49	4.69	49.730	
800.00	800.00	806.40	793.60	2.68	2.71	30.59	200.73	118.65	233.17	227.78	5.39	43.249	
900.00	900.00	906.40	893.60	3.03	3.07	30.59	200.73	118.65	233.17	227.08	6.10	38.242	
1,000.00	1,000.00	1,006.40	993.60	3.39	3.42	30.59	200.73	118.65	233.17	226.37	6.81	34.262	
1,100.00	1,100.00	1,106.40	1,093.60	3.74	3.78	30.59	200.73	118.65	233.17	225.66	7.52	31.026	
1,200.00	1,200.00	1,206.40	1,193.60	4.10	4.13	30.59	200.73	118.65	233.17	224.95	8.23	28.344	
1,300.00	1,300.00	1,306.40	1,293.60	4.45	4.49	30.59	200.73	118.65	233.17	224.24	8.94	26.086	
1,400.00	1,400.00	1,406.40	1,393.60	4.81	4.84	30.59	200.73	118.65	233.17	223.52	9.65	24.160	
1,500.00	1,500.00	1,506.40	1,493.60	5.16	5.20	30.59	200.73	118.65	233.17	222.81	10.36	22.497	
1,600.00	1,600.00	1,606.40	1,593.60	5.52	5.56	30.59	200.73	118.65	233.17	222.10	11.08	21.047	
1,700.00	1,700.00	1,706.40	1,693.60	5.88	5.91	30.59	200.73	118.65	233.17	221.38	11.79	19.773	
1,800.00	1,800.00	1,806.40	1,793.60	6.24	6.27	30.59	200.73	118.65	233.17	220.67	12.51	18.643	
1,900.00	1,900.00	1,906.40	1,893.60	6.59	6.63	30.59	200.73	118.65	233.17	219.95	13.22	17.635	
2,000.00	2,000.00	2,006.40	1,993.60	6.95	6.99	30.59	200.73	118.65	233.17	219.24	13.94	16.731	
2,100.00	2,100.00	2,106.40	2,093.60	7.31	7.34	30.59	200.73	118.65	233.17	218.52	14.65	15.914	
2,200.00	2,200.00	2,206.40	2,193.60	7.67	7.70	30.59	200.73	118.65	233.17	217.81	15.37	15.173	
2,300.00	2,300.00	2,306.40	2,293.60	8.02	8.06	30.59	200.73	118.65	233.17	217.09	16.08	14.498	
2,400.00	2,400.00	2,406.40	2,393.60	8.38	8.42	30.59	200.73	118.65	233.17	216.38	16.80	13.881	
2,500.00	2,500.00	2,506.40	2,493.60	8.74	8.77	30.59	200.73	118.65	233.17	215.66	17.51	13.313	
2,600.00	2,600.00	2,593.60	2,593.60	9.10	9.09	30.59	200.73	118.65	233.17	214.99	18.18	12.823	
2,700.00	2,700.00	2,696.25	2,696.24	9.46	9.45	30.38	200.69	117.64	232.64	213.74	18.90	12.309	
2,800.00	2,800.00	2,801.52	2,798.42	9.81	9.81	29.70	200.56	114.39	230.94	211.32	19.61	11.774	
2,900.00	2,900.00	2,901.60	2,898.26	10.17	10.15	28.87	200.40	110.47	228.88	208.56	20.32	11.266	
3,000.00	3,000.00	3,001.68	2,998.11	10.53	10.49	28.02	200.24	106.55	226.86	205.85	21.02	10.794	
3,100.00	3,100.00	3,101.75	3,097.95	10.89	10.84	27.15	200.08	102.62	224.90	203.18	21.72	10.354	
3,200.00	3,200.00	3,201.83	3,197.80	11.25	11.19	26.28	199.92	98.70	222.99	200.57	22.43	9.943	
3,300.00	3,300.00	3,301.91	3,297.64	11.60	11.54	25.38	199.76	94.78	221.14	198.00	23.13	9.559	
3,400.00	3,400.00	3,401.99	3,397.49	11.96	11.89	24.47	199.60	90.85	219.34	195.49	23.84	9.200	
3,500.00	3,500.00	3,502.06	3,497.34	12.32	12.24	23.55	199.44	86.93	217.59	193.04	24.55	8.863	
3,600.00	3,600.00	3,602.14	3,597.18	12.68	12.59	22.61	199.28	83.01	215.90	190.64	25.26	8.548	
3,700.00	3,700.00	3,702.22	3,697.03	13.04	12.94	21.66	199.12	79.08	214.27	188.30	25.97	8.251	
3,800.00	3,800.00	3,802.30	3,796.87	13.39	13.29	20.69	198.96	75.16	212.70	186.02	26.68	7.972	
3,900.00	3,900.00	3,902.37	3,896.72	13.75	13.65	19.71	198.80	71.24	211.20	183.80	27.39	7.710	
4,000.00	4,000.00	4,002.45	3,996.56	14.11	14.00	18.72	198.63	67.31	209.75	181.65	28.10	7.463	
4,100.00	4,100.00	4,102.53	4,096.41	14.47	14.36	17.71	198.47	63.39	208.37	179.55	28.82	7.231	
4,200.00	4,200.00	4,202.60	4,196.25	14.83	14.71	16.69	198.31	59.47	207.06	177.52	29.53	7.011	
4,300.00	4,300.00	4,302.68	4,296.10	15.19	15.07	15.66	198.15	55.54	205.81	175.56	30.25	6.804	
4,400.00	4,400.00	4,402.76	4,395.95	15.54	15.43	14.61	197.99	51.62	204.63	173.66	30.96	6.609	
4,500.00	4,500.00	4,502.84	4,495.79	15.90	15.78	13.55	197.83	47.69	203.51	171.84	31.68	6.425	
4,600.00	4,600.00	4,602.91	4,595.64	16.26	16.14	12.49	197.67	43.77	202.47	170.08	32.39	6.250	
4,700.00	4,700.00	4,702.99	4,695.48	16.62	16.50	11.41	197.51	39.85	201.50	168.39	33.11	6.086	
4,800.00	4,800.00	4,803.07	4,795.33	16.98	16.86	10.32	197.35	35.92	200.60	166.78	33.83	5.930	
4,900.00	4,900.00	4,903.14	4,895.17	17.34	17.21	9.22	197.19	32.00	199.78	165.24	34.54	5.783	
5,000.00	5,000.00	5,003.22	4,995.02	17.69	17.57	8.11	197.03	28.08	199.03	163.77	35.26	5.644	
5,100.00	5,099.99	5,103.36	5,094.80	18.04	17.93	-95.93	196.87	24.16	198.48	162.51	35.97	5.518	

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

Anticollision Report

Company:	WCDSC Permian NM	**Local Co-ordinate Reference:**	Well Flagler 8 Fed Com 10H
Project:	Lea County (NAD83 New Mexico East)	**TVD Reference:**	RKB @ 3498.70ft
Reference Site:	Sec 08-T25S-R33E	**MD Reference:**	RKB @ 3498.70ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Flagler 8 Fed Com 10H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.50 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM r5000.141_Prod US
Reference Design:	Permit Plan 3	**Offset TVD Reference:**	Offset Datum

Offset Design Sec 08-T25S-R33E - Flagler 8 Fed Com 18H - Wellbore #1 - Permit Plan 1 — **Offset Site Error:** 0.00 ft

Survey Program: 0-MWD+IGRF — **Offset Well Error:** 0.50 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,160.49	5,160.44	5,156.97	5,155.09	18.25	18.13	-97.20	196.78	21.79	198.38	162.01	36.37	5.455	CC
5,200.00	5,199.91	5,203.67	5,194.42	18.38	18.29	-98.17	196.71	20.24	198.43	161.76	36.67	5.411	ES
5,300.00	5,299.69	5,304.21	5,293.80	18.72	18.65	-101.12	196.55	16.34	199.17	161.80	37.37	5.329	
5,400.00	5,399.27	5,405.06	5,392.88	19.06	19.02	-104.74	196.40	12.44	201.10	163.02	38.08	5.281	
5,500.00	5,498.58	5,506.27	5,491.58	19.41	19.38	-108.92	196.24	8.56	204.66	165.88	38.79	5.277	SF
5,600.00	5,597.75	5,607.66	5,590.13	19.76	19.75	-113.23	196.08	4.69	209.74	170.24	39.50	5.310	
5,700.00	5,696.93	5,709.04	5,688.67	20.11	20.11	-117.33	195.92	0.82	215.97	175.76	40.21	5.371	
5,800.00	5,796.11	5,789.58	5,787.21	20.46	20.40	-121.18	195.76	-3.05	223.26	182.42	40.84	5.467	
5,900.00	5,895.29	5,888.19	5,885.75	20.82	20.76	-124.78	195.60	-6.92	231.51	189.97	41.54	5.573	
6,000.00	5,994.47	5,986.81	5,984.29	21.18	21.11	-128.12	195.45	-10.80	240.62	198.39	42.24	5.697	
6,100.00	6,093.65	6,085.43	6,082.83	21.55	21.47	-131.22	195.29	-14.67	250.50	207.57	42.93	5.835	
6,200.00	6,192.83	6,184.04	6,181.37	21.91	21.83	-134.07	195.13	-18.54	261.06	217.43	43.63	5.984	
6,300.00	6,292.01	6,282.66	6,279.91	22.28	22.18	-136.70	194.97	-22.41	272.22	227.89	44.32	6.141	
6,400.00	6,391.18	6,381.27	6,378.45	22.65	22.54	-139.13	194.81	-26.29	283.91	238.89	45.02	6.306	
6,500.00	6,490.36	6,479.89	6,476.99	23.02	22.90	-141.36	194.66	-30.16	296.06	250.35	45.71	6.476	
6,600.00	6,589.54	6,578.51	6,575.53	23.40	23.25	-143.41	194.50	-34.03	308.63	262.22	46.41	6.650	
6,700.00	6,688.72	6,677.12	6,674.07	23.78	23.61	-145.30	194.34	-37.90	321.56	274.46	47.10	6.827	
6,800.00	6,787.90	6,775.74	6,772.61	24.16	23.97	-147.05	194.18	-41.77	334.81	287.02	47.80	7.005	
6,900.00	6,887.08	6,874.36	6,871.15	24.54	24.32	-148.66	194.02	-45.65	348.35	299.86	48.49	7.184	
7,000.00	6,986.26	6,972.97	6,969.69	24.92	24.68	-150.15	193.87	-49.52	362.14	312.95	49.19	7.362	
7,100.00	7,085.44	7,071.59	7,068.23	25.30	25.04	-151.53	193.71	-53.39	376.16	326.27	49.88	7.541	
7,200.00	7,184.61	7,170.21	7,166.77	25.69	25.40	-152.82	193.55	-57.26	390.37	339.79	50.58	7.718	
7,300.00	7,283.79	7,268.82	7,265.31	26.07	25.75	-154.01	193.39	-61.13	404.77	353.49	51.28	7.894	
7,400.00	7,382.97	7,367.44	7,363.85	26.46	26.11	-155.12	193.23	-65.01	419.33	367.35	51.97	8.068	
7,500.00	7,482.15	7,466.06	7,462.39	26.85	26.47	-156.16	193.08	-68.88	434.03	381.36	52.67	8.240	
7,600.00	7,581.33	7,564.67	7,560.93	27.24	26.83	-157.13	192.92	-72.75	448.86	395.49	53.37	8.410	
7,700.00	7,680.51	7,663.29	7,659.47	27.63	27.19	-158.03	192.76	-76.62	463.81	409.74	54.07	8.578	
7,800.00	7,779.69	7,761.90	7,758.01	28.03	27.54	-158.88	192.60	-80.50	478.87	424.10	54.77	8.744	
7,900.00	7,878.87	7,860.52	7,856.55	28.42	27.90	-159.68	192.44	-84.37	494.03	438.56	55.47	8.906	
8,000.00	7,978.04	7,959.14	7,955.09	28.82	28.26	-160.43	192.29	-88.24	509.27	453.10	56.17	9.067	
8,100.00	8,077.22	8,057.75	8,053.63	29.21	28.62	-161.14	192.13	-92.11	524.60	467.73	56.87	9.224	
8,200.00	8,176.40	8,156.37	8,152.17	29.61	28.98	-161.81	191.97	-95.98	539.99	482.42	57.57	9.379	
8,300.00	8,275.58	8,254.99	8,250.71	30.01	29.33	-162.44	191.81	-99.86	555.46	497.19	58.27	9.532	
8,400.00	8,374.76	8,353.60	8,349.25	30.41	29.69	-163.04	191.65	-103.73	570.99	512.01	58.98	9.682	
8,500.00	8,473.94	8,452.22	8,447.79	30.81	30.05	-163.60	191.50	-107.60	586.58	526.90	59.68	9.829	
8,600.00	8,573.12	8,550.84	8,546.33	31.21	30.41	-164.14	191.34	-111.47	602.22	541.83	60.38	9.973	
8,700.00	8,672.30	8,649.45	8,644.87	31.61	30.77	-164.65	191.18	-115.35	617.90	556.82	61.09	10.115	
8,800.00	8,771.47	8,748.07	8,743.41	32.01	31.13	-165.13	191.02	-119.22	633.64	571.85	61.79	10.254	
8,900.00	8,870.65	8,846.68	8,841.95	32.42	31.49	-165.59	190.86	-123.09	649.41	586.92	62.50	10.391	
9,000.00	8,969.83	8,961.63	8,956.85	32.82	31.90	-166.04	190.74	-126.11	664.11	600.82	63.30	10.492	
9,100.00	9,069.01	9,067.39	9,062.61	33.22	32.27	-166.32	190.73	-126.35	676.72	612.69	64.03	10.569	
9,200.00	9,168.19	9,166.57	9,161.79	33.63	32.61	-166.58	190.73	-126.35	689.16	624.43	64.73	10.647	
9,300.00	9,267.37	9,265.75	9,260.97	34.04	32.95	-166.82	190.73	-126.35	701.61	636.18	65.43	10.724	
9,400.00	9,366.55	9,364.92	9,360.15	34.44	33.30	-167.05	190.73	-126.35	714.08	647.95	66.13	10.798	
9,500.00	9,465.73	9,464.10	9,459.33	34.85	33.64	-167.28	190.73	-126.35	726.55	659.72	66.83	10.872	
9,600.00	9,564.95	9,563.33	9,558.55	35.25	33.98	-167.51	190.73	-126.35	738.67	671.14	67.53	10.938	
9,700.00	9,664.44	9,662.82	9,658.04	35.65	34.33	-167.71	190.73	-126.35	748.52	680.29	68.23	10.970	
9,800.00	9,764.15	9,762.53	9,757.75	36.03	34.68	-167.85	190.73	-126.35	755.84	686.90	68.94	10.964	
9,900.00	9,864.03	9,859.72	9,854.94	36.39	35.01	-167.94	190.83	-126.32	760.62	691.00	69.62	10.925	
10,000.00	9,964.01	9,939.33	9,934.18	36.74	35.28	-167.46	197.67	-124.62	764.50	694.29	70.21	10.889	
10,100.00	10,064.00	10,015.61	10,008.48	37.08	35.53	-63.68	214.16	-120.51	769.32	698.60	70.72	10.878	
10,200.00	10,164.00	10,086.28	10,074.75	37.41	35.74	-61.91	237.85	-114.60	777.75	706.65	71.10	10.939	

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

Company:	WCDSC Permian NM	**Local Co-ordinate Reference:**	Well Flagler 8 Fed Com 10H
Project:	Lea County (NAD83 New Mexico East)	**TVD Reference:**	RKB @ 3498.70ft
Reference Site:	Sec 08-T25S-R33E	**MD Reference:**	RKB @ 3498.70ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Flagler 8 Fed Com 10H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.50 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM r5000.141_Prod US
Reference Design:	Permit Plan 3	**Offset TVD Reference:**	Offset Datum

Offset Design Sec.08-T25S-R33E - Flagler 8 Fed Com 18H - Wellbore #1 - Permit Plan 1 — **Offset Site Error:** 0.00 ft

Survey Program: 0-MWD+IGRF — **Offset Well Error:** 0.50 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,300.00	10,264.00	10,150.00	10,131.53	37.75	35.91	-59.86	265.85	-107.62	790.97	719.68	71.29	11.096	
10,400.00	10,364.00	10,206.55	10,178.95	38.09	36.05	-57.72	295.69	-100.18	809.91	738.70	71.20	11.375	
10,500.00	10,464.00	10,250.00	10,213.21	38.43	36.15	-55.89	321.61	-93.72	835.30	764.59	70.70	11.814	
10,600.00	10,564.00	10,300.00	10,249.98	38.77	36.25	-53.65	354.46	-85.53	867.39	797.25	70.14	12.367	
10,700.00	10,664.00	10,336.57	10,274.94	39.11	36.34	-51.92	380.39	-79.06	906.29	837.13	69.16	13.104	
10,800.00	10,764.00	10,369.17	10,295.70	39.45	36.43	-50.35	404.76	-72.98	951.71	883.70	68.01	13.995	

Anticollision Report

Company:	WCDSC Permian NM	**Local Co-ordinate Reference:**	Well Flagler 8 Fed Com 10H
Project:	Lea County (NAD83 New Mexico East)	**TVD Reference:**	RKB @ 3498.70ft
Reference Site:	Sec 08-T25S-R33E	**MD Reference:**	RKB @ 3498.70ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Flagler 8 Fed Com 10H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.50 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM r5000.141_Prod US
Reference Design:	Permit Plan 3	**Offset TVD Reference:**	Offset Datum

Offset Design Sec 08-T25S-R33E - Flagler 8 Fed Com 23H - Wellbore #1 - Permit Plan 1

Offset Site Error: 0.00 ft

Survey Program: 0-MWD+IGRF

Offset Well Error: 0.50 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	6.60	-6.60	0.50	0.50	36.49	200.92	148.64	249.93				
100.00	100.00	106.60	93.40	0.51	0.52	36.49	200.92	148.64	249.93	248.89	1.04	240.536	
200.00	200.00	206.60	193.40	0.69	0.72	36.49	200.92	148.64	249.93	248.51	1.41	176.968	
300.00	300.00	306.60	293.40	0.98	1.01	36.49	200.92	148.64	249.93	247.94	1.98	125.949	
400.00	400.00	406.60	393.40	1.30	1.33	36.49	200.92	148.64	249.93	247.30	2.63	95.083	
500.00	500.00	506.60	493.40	1.63	1.67	36.49	200.92	148.64	249.93	246.62	3.30	75.671	
600.00	600.00	606.60	593.40	1.98	2.01	36.49	200.92	148.64	249.93	245.93	3.99	62.607	
700.00	700.00	706.60	693.40	2.33	2.36	36.49	200.92	148.64	249.93	245.24	4.69	53.295	
800.00	800.00	806.60	793.40	2.68	2.71	36.49	200.92	148.64	249.93	244.53	5.39	46.350	
900.00	900.00	906.60	893.40	3.03	3.07	36.49	200.92	148.64	249.93	243.83	6.10	40.984	
1,000.00	1,000.00	1,006.60	993.40	3.39	3.42	36.49	200.92	148.64	249.93	243.12	6.81	36.720	
1,100.00	1,100.00	1,106.60	1,093.40	3.74	3.78	36.49	200.92	148.64	249.93	242.41	7.52	33.252	
1,200.00	1,200.00	1,206.60	1,193.40	4.10	4.13	36.49	200.92	148.64	249.93	241.70	8.23	30.377	
1,300.00	1,300.00	1,306.60	1,293.40	4.45	4.49	36.49	200.92	148.64	249.93	240.99	8.94	27.958	
1,400.00	1,400.00	1,406.60	1,393.40	4.81	4.84	36.49	200.92	148.64	249.93	240.27	9.65	25.893	
1,500.00	1,500.00	1,506.60	1,493.40	5.16	5.20	36.49	200.92	148.64	249.93	239.56	10.37	24.111	
1,600.00	1,600.00	1,606.60	1,593.40	5.52	5.56	36.49	200.92	148.64	249.93	238.85	11.08	22.558	
1,700.00	1,700.00	1,706.60	1,693.40	5.88	5.91	36.49	200.92	148.64	249.93	238.13	11.79	21.192	
1,800.00	1,800.00	1,806.60	1,793.40	6.24	6.27	36.49	200.92	148.64	249.93	237.42	12.51	19.981	
1,900.00	1,900.00	1,906.60	1,893.40	6.59	6.63	36.49	200.92	148.64	249.93	236.70	13.22	18.901	
2,000.00	2,000.00	2,006.60	1,993.40	6.95	6.99	36.49	200.92	148.64	249.93	235.99	13.94	17.932	
2,100.00	2,100.00	2,106.60	2,093.40	7.31	7.34	36.49	200.92	148.64	249.93	235.27	14.65	17.056	
2,200.00	2,200.00	2,206.60	2,193.40	7.67	7.70	36.49	200.92	148.64	249.93	234.56	15.37	16.262	
2,300.00	2,300.00	2,306.60	2,293.40	8.02	8.06	36.49	200.92	148.64	249.93	233.84	16.08	15.539	
2,400.00	2,400.00	2,406.60	2,393.40	8.38	8.42	36.49	200.92	148.64	249.93	233.13	16.80	14.877	
2,500.00	2,500.00	2,506.60	2,493.40	8.74	8.78	36.49	200.92	148.64	249.93	232.41	17.52	14.269	
2,600.00	2,600.00	2,593.40	2,593.40	9.10	9.09	36.49	200.92	148.64	249.93	231.74	18.18	13.744	
2,700.00	2,700.00	2,698.68	2,698.67	9.46	9.45	36.45	200.19	147.87	248.94	230.04	18.90	13.171	
2,800.00	2,800.00	2,803.70	2,803.64	9.81	9.79	36.31	197.83	145.35	245.70	226.10	19.59	12.540	
2,900.00	2,900.00	2,903.61	2,903.46	10.17	10.13	36.12	194.92	142.27	241.53	221.25	20.28	11.909	
3,000.00	3,000.00	3,003.52	3,003.28	10.53	10.46	35.94	192.02	139.19	237.37	216.40	20.97	11.318	
3,100.00	3,100.00	3,103.43	3,103.10	10.89	10.80	35.74	189.12	136.11	233.21	211.54	21.66	10.765	
3,200.00	3,200.00	3,203.34	3,202.92	11.25	11.13	35.54	186.22	133.02	229.05	206.69	22.36	10.245	
3,300.00	3,300.00	3,303.25	3,302.74	11.60	11.47	35.33	183.32	129.94	224.90	201.84	23.05	9.755	
3,400.00	3,400.00	3,403.17	3,402.56	11.96	11.82	35.11	180.42	126.86	220.75	197.00	23.75	9.294	
3,500.00	3,500.00	3,503.08	3,502.38	12.32	12.16	34.89	177.52	123.78	216.60	192.15	24.45	8.860	
3,600.00	3,600.00	3,602.99	3,602.20	12.68	12.50	34.65	174.62	120.69	212.45	187.31	25.15	8.448	
3,700.00	3,700.00	3,702.90	3,702.02	13.04	12.85	34.41	171.72	117.61	208.31	182.47	25.85	8.059	
3,800.00	3,800.00	3,802.81	3,801.84	13.39	13.20	34.15	168.82	114.53	204.18	177.63	26.55	7.691	
3,900.00	3,900.00	3,902.72	3,901.66	13.75	13.54	33.89	165.92	111.45	200.04	172.79	27.25	7.341	
4,000.00	4,000.00	4,002.63	4,001.48	14.11	13.89	33.61	163.02	108.37	195.91	167.96	27.95	7.009	
4,100.00	4,100.00	4,102.54	4,101.30	14.47	14.24	33.33	160.11	105.28	191.79	163.13	28.66	6.693	
4,200.00	4,200.00	4,202.45	4,201.12	14.83	14.59	33.03	157.21	102.20	187.67	158.31	29.36	6.392	
4,300.00	4,300.00	4,302.36	4,300.95	15.19	14.94	32.71	154.31	99.12	183.56	153.49	30.07	6.105	
4,400.00	4,400.00	4,402.27	4,400.77	15.54	15.30	32.39	151.41	96.04	179.45	148.68	30.77	5.832	
4,500.00	4,500.00	4,502.18	4,500.59	15.90	15.65	32.04	148.51	92.96	175.35	143.87	31.48	5.571	
4,600.00	4,600.00	4,602.09	4,600.41	16.26	16.00	31.68	145.61	89.87	171.26	139.07	32.18	5.321	
4,700.00	4,700.00	4,702.00	4,700.23	16.62	16.36	31.31	142.71	86.79	167.17	134.28	32.89	5.082	
4,800.00	4,800.00	4,801.91	4,800.05	16.98	16.71	30.91	139.81	83.71	163.09	129.49	33.60	4.854	Alert
4,900.00	4,900.00	4,901.82	4,899.87	17.34	17.07	30.49	136.91	80.63	159.02	124.71	34.31	4.635	Alert
5,000.00	5,000.00	5,001.73	4,999.69	17.69	17.42	30.06	134.01	77.54	154.95	119.94	35.02	4.425	Alert
5,100.00	5,099.99	5,101.60	5,099.47	18.04	17.78	-73.48	131.11	74.46	150.52	114.81	35.72	4.214	Alert

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

Anticollision Report

Company:	WCDSC Permian NM	**Local Co-ordinate Reference:**	Well Flagler 8 Fed Com 10H
Project:	Lea County (NAD83 New Mexico East)	**TVD Reference:**	RKB @ 3498.70ft
Reference Site:	Sec 08-T25S-R33E	**MD Reference:**	RKB @ 3498.70ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Flagler 8 Fed Com 10H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.50 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM r5000.141_Prod US
Reference Design:	Permit Plan 3	**Offset TVD Reference:**	Offset Datum

Offset Design Sec 08-T25S-R33E - Flagler 8 Fed Com 23H - Wellbore #1 - Permit Plan 1 — **Offset Site Error:** 0.00 ft

Survey Program: 0-MWD+IGRF — **Offset Well Error:** 0.50 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,200.00	5,199.91	5,201.33	5,199.11	18.38	18.14	-75.54	128.21	71.39	145.46	109.05	36.41	3.995	Alert
5,300.00	5,299.69	5,300.87	5,298.56	18.72	18.49	-78.79	125.32	68.32	140.04	102.94	37.10	3.774	Alert
5,400.00	5,399.27	5,400.14	5,397.74	19.06	18.85	-83.36	122.44	65.25	134.76	96.96	37.80	3.565	Alert
5,500.00	5,498.58	5,500.92	5,496.59	19.41	19.21	-89.35	119.57	62.20	130.32	91.80	38.52	3.383	Alert
5,600.00	5,597.75	5,602.14	5,595.29	19.76	19.57	-96.07	116.70	59.15	127.49	88.25	39.24	3.249	Alert
5,700.00	5,696.93	5,703.35	5,693.99	20.11	19.94	-102.98	113.83	56.11	126.53	86.56	39.97	3.165	Alert
5,700.71	5,697.64	5,702.65	5,694.68	20.11	19.93	-103.03	113.81	56.09	126.53	86.56	39.97	3.165	Alert, CC, ES
5,800.00	5,796.11	5,804.57	5,792.68	20.46	20.30	-109.90	110.96	53.06	127.47	86.76	40.70	3.132	Alert, SF
5,900.00	5,895.29	5,905.78	5,891.38	20.82	20.66	-116.62	108.09	50.01	130.26	88.83	41.43	3.144	Alert
6,000.00	5,994.47	6,007.00	5,990.07	21.18	21.03	-122.99	105.23	46.96	134.81	92.65	42.16	3.198	Alert
6,100.00	6,093.65	6,108.21	6,088.77	21.55	21.39	-128.88	102.36	43.92	140.93	98.05	42.88	3.287	Alert
6,200.00	6,192.83	6,209.43	6,187.47	21.91	21.76	-134.24	99.49	40.87	148.42	104.83	43.59	3.405	Alert
6,300.00	6,292.01	6,289.36	6,286.16	22.28	22.05	-139.05	96.62	37.82	157.11	112.88	44.22	3.553	Alert
6,400.00	6,391.18	6,388.15	6,384.86	22.65	22.40	-143.34	93.75	34.77	166.79	121.87	44.92	3.713	Alert
6,500.00	6,490.36	6,486.93	6,483.56	23.02	22.76	-147.15	90.88	31.73	177.31	131.69	45.62	3.887	Alert
6,600.00	6,589.54	6,585.72	6,582.25	23.40	23.12	-150.52	88.02	28.68	188.52	142.21	46.31	4.071	Alert
6,700.00	6,688.72	6,684.50	6,680.95	23.78	23.47	-153.51	85.15	25.63	200.31	153.31	47.00	4.262	Alert
6,800.00	6,787.90	6,783.29	6,779.65	24.16	23.83	-156.17	82.28	22.58	212.58	164.89	47.70	4.457	Alert
6,900.00	6,887.08	6,882.07	6,878.34	24.54	24.19	-158.53	79.41	19.54	225.26	176.87	48.39	4.655	Alert
7,000.00	6,986.26	6,980.86	6,977.04	24.92	24.55	-160.64	76.54	16.49	238.28	189.19	49.09	4.854	Alert
7,100.00	7,085.44	7,079.64	7,075.74	25.30	24.90	-162.53	73.68	13.44	251.58	201.80	49.78	5.054	
7,200.00	7,184.61	7,178.43	7,174.43	25.69	25.26	-164.23	70.81	10.40	265.13	214.65	50.48	5.252	
7,300.00	7,283.79	7,277.21	7,273.13	26.07	25.62	-165.77	67.94	7.35	278.88	227.71	51.17	5.450	
7,400.00	7,382.97	7,376.00	7,371.83	26.46	25.98	-167.16	65.07	4.30	292.82	240.94	51.87	5.645	
7,500.00	7,482.15	7,474.78	7,470.52	26.85	26.34	-168.42	62.20	1.25	306.90	254.33	52.57	5.838	
7,600.00	7,581.33	7,573.57	7,569.22	27.24	26.70	-169.57	59.33	-1.79	321.12	267.85	53.27	6.028	
7,700.00	7,680.51	7,672.35	7,667.92	27.63	27.05	-170.63	56.47	-4.84	335.46	281.49	53.97	6.215	
7,800.00	7,779.69	7,771.14	7,766.61	28.03	27.41	-171.59	53.60	-7.89	349.90	295.23	54.67	6.400	
7,900.00	7,878.87	7,869.92	7,865.31	28.42	27.77	-172.49	50.73	-10.94	364.44	309.06	55.38	6.581	
8,000.00	7,978.04	7,968.71	7,964.00	28.82	28.13	-173.31	47.86	-13.98	379.05	322.97	56.08	6.759	
8,100.00	8,077.22	8,067.49	8,062.70	29.21	28.49	-174.07	44.99	-17.03	393.73	336.94	56.79	6.934	
8,200.00	8,176.40	8,168.79	8,163.92	29.61	28.86	-174.75	42.31	-19.89	408.30	350.80	57.51	7.100	
8,300.00	8,275.58	8,272.40	8,267.51	30.01	29.22	-175.15	41.00	-21.28	421.94	363.70	58.23	7.246	
8,400.00	8,374.76	8,373.05	8,368.16	30.41	29.57	-175.30	40.92	-21.36	434.74	375.80	58.93	7.377	
8,500.00	8,473.94	8,472.23	8,467.34	30.81	29.90	-175.44	40.92	-21.36	447.48	387.86	59.63	7.505	
8,600.00	8,573.12	8,571.41	8,566.52	31.21	30.24	-175.56	40.92	-21.36	460.24	399.92	60.32	7.630	
8,700.00	8,672.30	8,670.58	8,665.70	31.61	30.58	-175.68	40.92	-21.36	472.99	411.98	61.01	7.753	
8,800.00	8,771.47	8,769.76	8,764.87	32.01	30.92	-175.80	40.92	-21.36	485.74	424.04	61.70	7.872	
8,900.00	8,870.65	8,868.94	8,864.05	32.42	31.26	-175.91	40.92	-21.36	498.50	436.10	62.40	7.989	
9,000.00	8,969.83	8,968.12	8,963.23	32.82	31.60	-176.01	40.92	-21.36	511.26	448.16	63.09	8.103	
9,100.00	9,069.01	9,067.30	9,062.41	33.22	31.94	-176.10	40.92	-21.36	524.02	460.23	63.79	8.215	
9,200.00	9,168.19	9,166.48	9,161.59	33.63	32.28	-176.20	40.92	-21.36	536.78	472.29	64.49	8.324	
9,300.00	9,267.37	9,258.38	9,253.49	34.04	32.59	-176.22	41.53	-21.36	549.76	484.62	65.14	8.440	
9,400.00	9,366.55	9,334.73	9,329.29	34.44	32.84	-175.44	50.12	-21.42	565.82	500.17	65.65	8.619	
9,500.00	9,465.73	9,407.03	9,399.42	34.85	33.06	-173.85	67.47	-21.53	586.19	520.18	66.01	8.881	
9,600.00	9,564.95	9,473.57	9,461.58	35.25	33.24	-171.77	91.13	-21.69	611.24	545.08	66.15	9.240	
9,700.00	9,664.44	9,533.76	9,515.11	35.65	33.39	-169.50	118.60	-21.87	639.93	573.91	66.02	9.694	
9,800.00	9,764.15	9,587.44	9,560.18	36.03	33.51	-167.22	147.72	-22.06	672.73	607.18	65.55	10.263	
9,900.00	9,864.03	9,634.89	9,597.59	36.39	33.61	-165.07	176.87	-22.25	710.13	645.37	64.75	10.967	
10,000.00	9,964.01	9,676.65	9,628.44	36.74	33.69	-163.15	205.02	-22.43	752.29	688.63	63.66	11.817	
10,100.00	10,064.00	9,713.34	9,653.77	37.08	33.76	-58.78	231.54	-22.61	799.58	737.24	62.34	12.825	
10,200.00	10,164.00	9,750.00	9,677.35	37.41	33.85	-56.84	259.61	-22.79	853.21	792.17	61.04	13.978	

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

Company:	WCDSC Permian NM	**Local Co-ordinate Reference:**	Well Flagler 8 Fed Com 10H
Project:	Lea County (NAD83 New Mexico East)	**TVD Reference:**	RKB @ 3498.70ft
Reference Site:	Sec 08-T25S-R33E	**MD Reference:**	RKB @ 3498.70ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Flagler 8 Fed Com 10H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.50 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM r5000.141_Prod US
Reference Design:	Permit Plan 3	**Offset TVD Reference:**	Offset Datum

Offset Design Sec 08-T25S-R33E - Flagler 8 Fed Com 23H - Wellbore #1 - Permit Plan 1

Offset Site Error: 0.00 ft

Survey Program: 0-MWD+IGRF

Offset Well Error: 0.50 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,300.00	10,264.00	9,773.62	9,691.56	37.75	33.91	-55.58	278.46	-22.91	912.54	853.09	59.46	15.348	
10,400.00	10,364.00	9,800.00	9,706.51	38.09	33.99	-54.17	300.20	-23.06	976.96	918.88	58.09	16.820	

Anticollision Report

Company:	WCDSC Permian NM	**Local Co-ordinate Reference:**	Well Flagler 8 Fed Com 10H
Project:	Lea County (NAD83 New Mexico East)	**TVD Reference:**	RKB @ 3498.70ft
Reference Site:	Sec 08-T25S-R33E	**MD Reference:**	RKB @ 3498.70ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Flagler 8 Fed Com 10H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.50 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM r5000.141_Prod US
Reference Design:	Permit Plan 3	**Offset TVD Reference:**	Offset Datum

Offset Design Sec 08-T25S-R33E - Flagler 8 Fed Com 2H - Wellbore #1 - Permit Plan 2 — **Offset Site Error:** 0.00 ft

Survey Program: 0-MWD+IGRF — **Offset Well Error:** 0.50 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.20	0.20	0.50	0.50	-90.36	-0.19	-30.00	30.00				
100.00	100.00	100.20	100.20	0.51	0.51	-90.36	-0.19	-30.00	30.00	28.97	1.03	29.142	
200.00	200.00	200.20	200.20	0.69	0.69	-90.36	-0.19	-30.00	30.00	28.61	1.39	21.627	
300.00	300.00	300.20	300.20	0.98	0.98	-90.36	-0.19	-30.00	30.00	28.05	1.95	15.356	
400.00	400.00	400.20	400.20	1.30	1.30	-90.36	-0.19	-30.00	30.00	27.40	2.60	11.558	
500.00	500.00	500.20	500.20	1.63	1.63	-90.36	-0.19	-30.00	30.00	26.73	3.27	9.177	
600.00	600.00	600.20	600.20	1.98	1.98	-90.36	-0.19	-30.00	30.00	26.04	3.96	7.580	
700.00	700.00	700.20	700.20	2.33	2.33	-90.36	-0.19	-30.00	30.00	25.35	4.65	6.445	
800.00	800.00	800.20	800.20	2.68	2.68	-90.36	-0.19	-30.00	30.00	24.64	5.36	5.600	
900.00	900.00	900.20	900.20	3.03	3.03	-90.36	-0.19	-30.00	30.00	23.94	6.06	4.948	Alert
1,000.00	1,000.00	1,000.20	1,000.20	3.39	3.39	-90.36	-0.19	-30.00	30.00	23.23	6.77	4.431	Alert
1,100.00	1,100.00	1,100.20	1,100.20	3.74	3.74	-90.36	-0.19	-30.00	30.00	22.52	7.48	4.010	Alert
1,200.00	1,200.00	1,200.20	1,200.20	4.10	4.10	-90.36	-0.19	-30.00	30.00	21.81	8.19	3.662	Alert
1,300.00	1,300.00	1,300.20	1,300.20	4.45	4.45	-90.36	-0.19	-30.00	30.00	21.10	8.90	3.369	Alert
1,400.00	1,400.00	1,400.20	1,400.20	4.81	4.81	-90.36	-0.19	-30.00	30.00	20.38	9.62	3.120	Alert
1,500.00	1,500.00	1,500.20	1,500.20	5.16	5.17	-90.36	-0.19	-30.00	30.00	19.67	10.33	2.904	Alert
1,600.00	1,600.00	1,600.20	1,600.20	5.52	5.52	-90.36	-0.19	-30.00	30.00	18.96	11.04	2.716	Alert
1,700.00	1,700.00	1,700.20	1,700.20	5.88	5.88	-90.36	-0.19	-30.00	30.00	18.24	11.76	2.551	Alert
1,800.00	1,800.00	1,800.20	1,800.20	6.24	6.24	-90.36	-0.19	-30.00	30.00	17.53	12.47	2.405	Minor Risk
1,900.00	1,900.00	1,900.20	1,900.20	6.59	6.59	-90.36	-0.19	-30.00	30.00	16.81	13.19	2.275	Minor Risk
2,000.00	2,000.00	2,000.20	2,000.20	6.95	6.95	-90.36	-0.19	-30.00	30.00	16.10	13.90	2.158	Minor Risk
2,100.00	2,100.00	2,100.20	2,100.20	7.31	7.31	-90.36	-0.19	-30.00	30.00	15.38	14.62	2.052	Minor Risk
2,200.00	2,200.00	2,200.20	2,200.20	7.67	7.67	-90.36	-0.19	-30.00	30.00	14.67	15.33	1.957	Minor Risk
2,300.00	2,300.00	2,300.20	2,300.20	8.02	8.02	-90.36	-0.19	-30.00	30.00	13.95	16.05	1.869	Minor Risk
2,400.00	2,400.00	2,400.20	2,400.20	8.38	8.38	-90.36	-0.19	-30.00	30.00	13.24	16.76	1.790	Minor Risk
2,500.00	2,500.00	2,500.20	2,500.20	8.74	8.74	-90.36	-0.19	-30.00	30.00	12.52	17.48	1.716	Minor Risk
2,600.00	2,600.00	2,600.20	2,600.20	9.10	9.10	-90.36	-0.19	-30.00	30.00	11.81	18.20	1.649	Minor Risk
2,700.00	2,700.00	2,700.20	2,700.20	9.46	9.46	-90.36	-0.19	-30.00	30.00	11.09	18.91	1.586	Minor Risk
2,800.00	2,800.00	2,800.20	2,800.20	9.81	9.81	-90.36	-0.19	-30.00	30.00	10.37	19.63	1.529	Minor Risk
2,900.00	2,900.00	2,900.20	2,900.20	10.17	10.17	-90.36	-0.19	-30.00	30.00	9.66	20.34	1.475	Major Risk
3,000.00	3,000.00	3,000.20	3,000.20	10.53	10.53	-90.36	-0.19	-30.00	30.00	8.94	21.06	1.425	Major Risk
3,100.00	3,100.00	3,100.20	3,100.20	10.89	10.89	-90.36	-0.19	-30.00	30.00	8.22	21.78	1.378	Major Risk
3,200.00	3,200.00	3,200.20	3,200.20	11.25	11.25	-90.36	-0.19	-30.00	30.00	7.51	22.49	1.334	Major Risk
3,300.00	3,300.00	3,300.20	3,300.20	11.60	11.60	-90.36	-0.19	-30.00	30.00	6.79	23.21	1.293	Major Risk
3,400.00	3,400.00	3,400.20	3,400.20	11.96	11.96	-90.36	-0.19	-30.00	30.00	6.08	23.92	1.254	Major Risk
3,500.00	3,500.00	3,500.20	3,500.20	12.32	12.32	-90.36	-0.19	-30.00	30.00	5.36	24.64	1.218	Major Risk
3,600.00	3,600.00	3,600.20	3,600.20	12.68	12.68	-90.36	-0.19	-30.00	30.00	4.64	25.36	1.183	Major Risk
3,700.00	3,700.00	3,700.20	3,700.20	13.04	13.04	-90.36	-0.19	-30.00	30.00	3.93	26.07	1.151	Major Risk
3,800.00	3,800.00	3,800.20	3,800.20	13.39	13.40	-90.36	-0.19	-30.00	30.00	3.21	26.79	1.120	Major Risk
3,900.00	3,900.00	3,900.20	3,900.20	13.75	13.75	-90.36	-0.19	-30.00	30.00	2.49	27.51	1.091	Major Risk
4,000.00	4,000.00	4,000.20	4,000.20	14.11	14.11	-90.36	-0.19	-30.00	30.00	1.78	28.22	1.063	Major Risk
4,100.00	4,100.00	4,100.20	4,100.20	14.47	14.47	-90.36	-0.19	-30.00	30.00	1.06	28.94	1.037	Major Risk
4,200.00	4,200.00	4,200.20	4,200.20	14.83	14.83	-90.36	-0.19	-30.00	30.00	0.34	29.66	1.012	Major Risk
4,300.00	4,300.00	4,300.20	4,300.20	15.19	15.19	-90.36	-0.19	-30.00	30.00	-0.37	30.37	0.988	Collision
4,400.00	4,400.00	4,400.20	4,400.20	15.54	15.54	-90.36	-0.19	-30.00	30.00	-1.09	31.09	0.965	Collision
4,500.00	4,500.00	4,500.20	4,500.20	15.90	15.90	-90.36	-0.19	-30.00	30.00	-1.81	31.81	0.943	Collision
4,600.00	4,600.00	4,600.20	4,600.20	16.26	16.26	-90.36	-0.19	-30.00	30.00	-2.52	32.52	0.922	Collision
4,700.00	4,700.00	4,700.20	4,700.20	16.62	16.62	-90.36	-0.19	-30.00	30.00	-3.24	33.24	0.903	Collision
4,800.00	4,800.00	4,800.20	4,800.20	16.98	16.98	-90.36	-0.19	-30.00	30.00	-3.95	33.96	0.884	Collision
4,900.00	4,900.00	4,900.20	4,900.20	17.34	17.34	-90.36	-0.19	-30.00	30.00	-4.67	34.67	0.865	Collision
5,000.00	5,000.00	5,000.20	5,000.20	17.69	17.69	-90.36	-0.19	-30.00	30.00	-5.39	35.39	0.848	Collision
5,100.00	5,099.99	5,100.19	5,100.19	18.04	18.05	167.63	-0.19	-30.00	31.28	-4.82	36.09	0.867	Collision

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

Anticollision Report

Company:	WCDSC Permian NM	**Local Co-ordinate Reference:**	Well Flagler 8 Fed Com 10H
Project:	Lea County (NAD83 New Mexico East)	**TVD Reference:**	RKB @ 3498.70ft
Reference Site:	Sec 08-T25S-R33E	**MD Reference:**	RKB @ 3498.70ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Flagler 8 Fed Com 10H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.50 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM r5000.141_Prod US
Reference Design:	Permit Plan 3	**Offset TVD Reference:**	Offset Datum

Offset Design Sec 08-T25S-R33E - Flagler 8 Fed Com 2H - Wellbore #1 - Permit Plan 2 — **Offset Site Error:** 0.00 ft

Survey Program: 0-MWD+IGRF — **Offset Well Error:** 0.50 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,200.00	5,199.91	5,200.11	5,200.11	18.38	18.41	168.99	-0.19	-30.00	35.12	-1.67	36.79	0.955	Collision
5,300.00	5,299.69	5,300.11	5,299.89	18.72	18.77	170.70	-0.19	-30.00	41.56	4.08	37.48	1.109	Major Risk
5,400.00	5,399.27	5,400.53	5,399.47	19.06	19.13	172.35	-0.19	-30.00	50.61	12.43	38.18	1.326	Major Risk
5,500.00	5,498.58	5,501.23	5,498.78	19.41	19.49	173.77	-0.19	-30.00	62.27	23.39	38.88	1.602	Minor Risk
5,600.00	5,597.75	5,602.05	5,597.95	19.76	19.85	174.83	-0.19	-30.00	75.00	35.42	39.57	1.895	Minor Risk
5,700.00	5,696.93	5,702.87	5,697.13	20.11	20.21	175.59	-0.19	-30.00	87.74	47.47	40.27	2.179	Minor Risk
5,800.00	5,796.11	5,803.69	5,796.31	20.46	20.57	176.15	-0.19	-30.00	100.50	59.53	40.97	2.453	Minor Risk
5,900.00	5,895.29	5,904.51	5,895.49	20.82	20.94	176.58	-0.19	-30.00	113.27	71.59	41.67	2.718	Alert
6,000.00	5,994.47	6,005.33	5,994.67	21.18	21.30	176.93	-0.19	-30.00	126.03	83.66	42.37	2.974	Alert
6,100.00	6,093.65	6,106.15	6,093.85	21.55	21.66	177.21	-0.19	-30.00	138.81	95.73	43.07	3.222	Alert
6,200.00	6,192.83	6,193.03	6,193.03	21.91	21.97	177.45	-0.19	-30.00	151.58	107.86	43.73	3.467	Alert
6,300.00	6,292.01	6,296.33	6,296.32	22.28	22.33	177.64	-0.44	-28.81	163.20	118.77	44.43	3.673	Alert
6,400.00	6,391.18	6,400.50	6,400.41	22.65	22.68	177.78	-1.28	-24.85	172.12	127.03	45.09	3.817	Alert
6,500.00	6,490.36	6,505.11	6,504.79	23.02	23.04	177.89	-2.70	-18.08	178.32	132.58	45.73	3.899	Alert
6,600.00	6,589.54	6,610.00	6,609.21	23.40	23.39	177.96	-4.72	-8.49	181.77	135.42	46.35	3.922	Alert
6,700.00	6,688.72	6,715.00	6,713.44	23.78	23.76	178.02	-7.34	3.92	182.49	135.55	46.94	3.888	Alert
6,800.00	6,787.90	6,816.41	6,813.84	24.16	24.11	178.05	-10.29	17.91	181.16	133.57	47.59	3.806	Alert
6,900.00	6,887.08	6,916.40	6,912.81	24.54	24.46	178.09	-13.22	31.81	179.72	131.44	48.28	3.723	Alert
7,000.00	6,986.26	7,016.39	7,011.79	24.92	24.82	178.12	-16.15	45.72	178.28	129.31	48.97	3.641	Alert
7,100.00	7,085.44	7,116.38	7,110.76	25.30	25.17	178.16	-19.08	59.62	176.84	127.19	49.66	3.561	Alert
7,200.00	7,184.61	7,216.37	7,209.74	25.69	25.54	178.19	-22.02	73.52	175.41	125.06	50.35	3.484	Alert
7,300.00	7,283.79	7,316.36	7,308.71	26.07	25.90	178.23	-24.95	87.43	173.97	122.93	51.04	3.408	Alert
7,400.00	7,382.97	7,416.35	7,407.69	26.46	26.26	178.27	-27.88	101.33	172.53	120.79	51.74	3.335	Alert
7,500.00	7,482.15	7,516.34	7,506.66	26.85	26.63	178.31	-30.81	115.24	171.09	118.66	52.43	3.263	Alert
7,600.00	7,581.33	7,616.33	7,605.63	27.24	27.00	178.35	-33.74	129.14	169.66	116.53	53.13	3.193	Alert
7,700.00	7,680.51	7,716.31	7,704.61	27.63	27.38	178.38	-36.67	143.04	168.22	114.39	53.83	3.125	Alert
7,800.00	7,779.69	7,816.30	7,803.58	28.03	27.75	178.42	-39.60	156.95	166.78	112.25	54.53	3.059	Alert
7,900.00	7,878.87	7,916.29	7,902.56	28.42	28.13	178.47	-42.53	170.85	165.34	110.12	55.23	2.994	Alert
8,000.00	7,978.04	8,016.28	8,001.53	28.82	28.51	178.51	-45.47	184.75	163.91	107.98	55.93	2.931	Alert
8,100.00	8,077.22	8,116.27	8,100.51	29.21	28.89	178.55	-48.40	198.66	162.47	105.84	56.63	2.869	Alert
8,200.00	8,176.40	8,216.26	8,199.48	29.61	29.27	178.59	-51.33	212.56	161.03	103.70	57.34	2.809	Alert
8,300.00	8,275.58	8,316.25	8,298.46	30.01	29.66	178.64	-54.26	226.47	159.60	101.56	58.04	2.750	Alert
8,400.00	8,374.76	8,416.24	8,397.43	30.41	30.05	178.68	-57.19	240.37	158.16	99.41	58.75	2.692	Alert
8,500.00	8,473.94	8,516.23	8,496.41	30.81	30.43	178.73	-60.12	254.27	156.72	97.27	59.45	2.636	Alert
8,600.00	8,573.12	8,616.22	8,595.38	31.21	30.82	178.77	-63.05	268.18	155.29	95.13	60.16	2.581	Alert
8,700.00	8,672.30	8,716.21	8,694.36	31.61	31.22	178.82	-65.98	282.08	153.85	92.98	60.87	2.528	Alert
8,800.00	8,771.47	8,816.20	8,793.33	32.01	31.61	178.87	-68.92	295.98	152.41	90.84	61.58	2.475	Minor Risk
8,900.00	8,870.65	8,916.19	8,892.31	32.42	32.00	178.92	-71.85	309.89	150.98	88.69	62.29	2.424	Minor Risk
9,000.00	8,969.83	9,016.18	8,991.28	32.82	32.40	178.97	-74.78	323.79	149.54	86.55	63.00	2.374	Minor Risk
9,100.00	9,069.01	9,116.17	9,090.26	33.22	32.80	179.02	-77.71	337.70	148.11	84.40	63.71	2.325	Minor Risk
9,200.00	9,168.19	9,216.16	9,189.23	33.63	33.20	179.07	-80.64	351.60	146.67	82.25	64.42	2.277	Minor Risk
9,300.00	9,267.37	9,316.15	9,288.21	34.04	33.59	179.12	-83.57	365.50	145.23	80.10	65.13	2.230	Minor Risk
9,400.00	9,366.55	9,416.14	9,387.18	34.44	34.00	179.18	-86.50	379.41	143.80	77.96	65.84	2.184	Minor Risk
9,500.00	9,465.73	9,516.13	9,486.16	34.85	34.40	179.23	-89.43	393.31	142.36	75.81	66.56	2.139	Minor Risk
9,600.00	9,564.95	9,616.11	9,585.12	35.25	34.80	179.28	-92.37	407.21	140.55	73.28	67.27	2.089	Minor Risk
9,700.00	9,664.44	9,716.02	9,684.02	35.65	35.21	179.33	-95.29	421.11	136.40	68.41	67.98	2.006	Minor Risk
9,800.00	9,764.15	9,815.79	9,782.78	36.03	35.61	179.36	-98.22	434.98	129.63	60.93	68.70	1.887	Minor Risk
9,900.00	9,864.03	9,915.35	9,881.32	36.39	36.01	179.38	-101.14	448.82	120.25	50.85	69.40	1.733	Minor Risk
10,000.00	9,964.01	10,014.62	9,979.59	36.74	36.42	179.40	-104.05	462.63	108.27	38.17	70.11	1.544	Minor Risk
10,100.00	10,064.00	10,113.63	10,077.60	37.08	36.82	-78.06	-106.95	476.39	94.23	23.42	70.81	1.331	Major Risk
10,200.00	10,164.00	10,212.62	10,175.58	37.41	37.23	-78.05	-109.85	490.16	80.02	8.51	71.51	1.119	Major Risk
10,300.00	10,264.00	10,311.60	10,273.56	37.75	37.63	-78.04	-112.75	503.92	65.81	-6.40	72.21	0.911	Collision

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

Anticollision Report

Company:	WCDSC Permian NM	**Local Co-ordinate Reference:**	Well Flagler 8 Fed Com 10H
Project:	Lea County (NAD83 New Mexico East)	**TVD Reference:**	RKB @ 3498.70ft
Reference Site:	Sec 08-T25S-R33E	**MD Reference:**	RKB @ 3498.70ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Flagler 8 Fed Com 10H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.50 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM r5000.141_Prod US
Reference Design:	Permit Plan 3	**Offset TVD Reference:**	Offset Datum

Offset Design Sec 08-T25S-R33E - Flagler 8 Fed Com 2H - Wellbore #1 - Permit Plan 2 — **Offset Site Error:** 0.00 ft

Survey Program: 0-MWD+IGRF — **Offset Well Error:** 0.50 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,400.00	10,364.00	10,410.59	10,371.54	38.09	38.04	-78.03	-115.66	517.69	51.60	-21.32	72.91	0.708	Collision
10,500.00	10,464.00	10,509.45	10,469.40	38.43	38.45	-78.00	-118.55	531.41	37.41	-36.22	73.63	0.508	Collision
10,600.00	10,564.00	10,607.85	10,567.01	38.77	38.85	-77.96	-121.11	543.56	24.79	-49.64	74.43	0.333	Collision
10,700.00	10,664.00	10,706.84	10,665.50	39.11	39.23	-77.87	-123.16	553.29	14.74	-60.46	75.21	0.196	Collision
10,800.00	10,764.00	10,806.28	10,764.65	39.45	39.60	-77.63	-124.69	560.55	7.28	-68.66	75.94	0.096	Collision
10,900.00	10,864.00	10,906.03	10,864.29	39.79	39.97	-76.71	-125.69	565.29	2.43	-74.22	76.65	0.032	Collision
11,000.00	10,964.00	11,005.98	10,964.21	40.13	40.31	-60.05	-126.16	567.49	0.19	-77.39	77.58	0.002	Collision
11,046.99	11,011.00	11,052.97	11,011.20	40.29	40.47	-0.06	-126.19	567.65	0.06	-80.54	80.60	0.001	Collision
11,100.00	11,064.00	11,105.98	11,064.20	40.47	40.65	-0.06	-126.19	567.65	0.06	-80.90	80.96	0.001	Collision
11,200.00	11,164.00	11,205.98	11,164.20	40.81	40.99	-0.06	-126.19	567.65	0.06	-81.58	81.64	0.001	Collision
11,300.00	11,264.00	11,305.98	11,264.20	41.15	41.33	-0.06	-126.19	567.65	0.06	-82.27	82.33	0.001	Collision
11,400.00	11,364.00	11,405.98	11,364.20	41.49	41.67	-0.06	-126.19	567.65	0.06	-82.95	83.01	0.001	Collision
11,500.00	11,464.00	11,505.98	11,464.20	41.83	42.02	-0.06	-126.19	567.65	0.06	-83.64	83.70	0.001	Collision
11,600.00	11,564.00	11,605.98	11,564.20	42.18	42.36	-0.06	-126.19	567.65	0.06	-84.32	84.38	0.001	Collision
11,700.00	11,664.00	11,705.98	11,664.20	42.52	42.70	-0.06	-126.19	567.65	0.06	-85.01	85.07	0.001	Collision, ES
11,713.64	11,677.64	11,719.61	11,677.84	42.56	42.75	-89.97	-126.19	567.65	0.00	-82.46	82.46	0.000	Collision, CC, SF
11,800.00	11,763.98	11,805.95	11,764.18	42.86	43.04	-180.00	-126.19	567.65	1.13	-84.62	85.75	0.013	Collision
11,900.00	11,862.70	11,904.67	11,862.90	43.18	43.38	-180.00	-126.19	567.65	16.23	-70.19	86.42	0.188	Collision
12,000.00	11,957.31	12,006.00	11,963.89	43.47	43.72	-180.00	-119.57	567.65	42.11	-44.26	86.38	0.488	Collision
12,100.00	12,044.91	12,113.00	12,067.54	43.72	44.05	-180.00	-93.59	567.65	67.44	-16.97	84.42	0.799	Collision
12,200.00	12,122.86	12,225.83	12,169.58	43.92	44.34	-180.00	-45.88	567.65	91.10	10.68	80.42	1.133	Major Risk
12,300.00	12,188.78	12,344.77	12,264.83	44.09	44.59	-180.00	24.98	567.65	112.06	37.53	74.53	1.504	Minor Risk
12,400.00	12,240.67	12,469.66	12,346.87	44.23	44.80	-180.00	118.83	567.65	129.26	61.89	67.37	1.919	Minor Risk
12,500.00	12,276.96	12,599.74	12,408.63	44.41	44.99	-180.00	232.99	567.65	141.70	81.41	60.29	2.350	Minor Risk
12,600.00	12,296.54	12,733.48	12,443.66	44.66	45.26	-180.00	361.75	567.65	148.57	93.07	55.49	2.677	Alert
12,700.00	12,300.00	12,855.72	12,450.00	44.99	45.64	-180.00	483.67	567.65	149.80	95.02	54.78	2.735	Alert
12,800.00	12,300.00	12,955.72	12,450.00	45.42	46.05	-180.00	583.67	567.65	149.80	94.75	55.05	2.721	Alert
12,900.00	12,300.00	13,055.72	12,450.00	45.93	46.54	-180.00	683.67	567.65	149.80	94.43	55.37	2.705	Alert
13,000.00	12,300.00	13,155.72	12,450.00	46.51	47.12	-180.00	783.67	567.65	149.80	94.07	55.73	2.688	Alert
13,100.00	12,300.00	13,255.72	12,450.00	47.17	47.76	-180.00	883.67	567.65	149.80	93.66	56.14	2.669	Alert
13,200.00	12,300.00	13,355.72	12,450.00	47.89	48.47	-180.00	983.67	567.65	149.80	93.22	56.58	2.648	Alert
13,300.00	12,300.00	13,455.72	12,450.00	48.68	49.25	-180.00	1,083.67	567.65	149.80	92.74	57.06	2.625	Alert
13,400.00	12,300.00	13,555.72	12,450.00	49.52	50.09	-180.00	1,183.67	567.65	149.80	92.22	57.58	2.601	Alert
13,500.00	12,300.00	13,655.72	12,450.00	50.43	50.98	-180.00	1,283.67	567.65	149.80	91.66	58.14	2.576	Alert
13,600.00	12,300.00	13,755.72	12,450.00	51.39	51.93	-180.00	1,383.67	567.65	149.80	91.06	58.74	2.550	Alert
13,700.00	12,300.00	13,855.72	12,450.00	52.41	52.94	-180.00	1,483.67	567.65	149.80	90.43	59.37	2.523	Alert
13,800.00	12,300.00	13,955.72	12,450.00	53.47	53.99	-180.00	1,583.67	567.65	149.80	89.76	60.04	2.495	Minor Risk
13,900.00	12,300.00	14,055.72	12,450.00	54.58	55.09	-180.00	1,683.67	567.65	149.80	89.06	60.74	2.466	Minor Risk
14,000.00	12,300.00	14,155.72	12,450.00	55.74	56.23	-180.00	1,783.67	567.65	149.80	88.33	61.47	2.437	Minor Risk
14,100.00	12,300.00	14,255.72	12,450.00	56.93	57.41	-180.00	1,883.67	567.65	149.80	87.57	62.23	2.407	Minor Risk
14,200.00	12,300.00	14,355.72	12,450.00	58.16	58.64	-180.00	1,983.67	567.65	149.80	86.78	63.02	2.377	Minor Risk
14,300.00	12,300.00	14,455.72	12,450.00	59.43	59.89	-180.00	2,083.67	567.65	149.80	85.95	63.85	2.346	Minor Risk
14,400.00	12,300.00	14,555.72	12,450.00	60.74	61.19	-180.00	2,183.67	567.65	149.80	85.11	64.69	2.316	Minor Risk
14,500.00	12,300.00	14,655.72	12,450.00	62.07	62.51	-180.00	2,283.67	567.65	149.80	84.23	65.57	2.285	Minor Risk
14,600.00	12,300.00	14,755.72	12,450.00	63.44	63.87	-180.00	2,383.67	567.65	149.80	83.33	66.47	2.254	Minor Risk
14,700.00	12,300.00	14,855.72	12,450.00	64.83	65.25	-180.00	2,483.67	567.65	149.80	82.40	67.40	2.223	Minor Risk
14,800.00	12,300.00	14,955.72	12,450.00	66.25	66.66	-180.00	2,583.67	567.65	149.80	81.45	68.35	2.192	Minor Risk
14,900.00	12,300.00	15,055.72	12,450.00	67.69	68.09	-180.00	2,683.67	567.65	149.80	80.48	69.32	2.161	Minor Risk
15,000.00	12,300.00	15,155.72	12,450.00	69.16	69.55	-180.00	2,783.67	567.65	149.80	79.49	70.31	2.131	Minor Risk
15,100.00	12,300.00	15,255.72	12,450.00	70.64	71.03	-180.00	2,883.67	567.65	149.80	78.48	71.32	2.100	Minor Risk
15,200.00	12,300.00	15,355.72	12,450.00	72.15	72.53	-180.00	2,983.67	567.65	149.80	77.44	72.36	2.070	Minor Risk
15,300.00	12,300.00	15,455.72	12,450.00	73.68	74.04	-180.00	3,083.67	567.65	149.80	76.39	73.41	2.041	Minor Risk

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

Anticollision Report

Company:	WCDSC Permian NM	**Local Co-ordinate Reference:**	Well Flagler 8 Fed Com 10H
Project:	Lea County (NAD83 New Mexico East)	**TVD Reference:**	RKB @ 3498.70ft
Reference Site:	Sec 08-T25S-R33E	**MD Reference:**	RKB @ 3498.70ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Flagler 8 Fed Com 10H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.50 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM r5000.141_Prod US
Reference Design:	Permit Plan 3	**Offset TVD Reference:**	Offset Datum

Offset Design Sec 08-T25S-R33E - Flagler 8 Fed Com 2H - Wellbore #1 - Permit Plan 2 — **Offset Site Error:** 0.00 ft

Survey Program: 0-MWD+IGRF — **Offset Well Error:** 0.50 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
15,400.00	12,300.00	15,555.72	12,450.00	75.22	75.58	-180.00	3,183.67	567.65	149.80	75.32	74.48	2.011	Minor Risk
15,500.00	12,300.00	15,655.72	12,450.00	76.78	77.13	-180.00	3,283.67	567.65	149.80	74.23	75.57	1.982	Minor Risk
15,600.00	12,300.00	15,755.72	12,450.00	78.36	78.70	-180.00	3,383.67	567.65	149.80	73.13	76.67	1.954	Minor Risk
15,700.00	12,300.00	15,855.72	12,450.00	79.95	80.29	-180.00	3,483.67	567.65	149.80	72.00	77.80	1.926	Minor Risk
15,740.20	12,300.00	15,904.08	12,450.00	80.60	81.06	-180.00	3,523.87	567.65	149.80	71.50	78.30	1.913	Minor Risk
15,800.00	12,300.00	15,955.72	12,450.00	81.56	81.89	-180.00	3,583.67	567.65	149.80	70.87	78.93	1.898	Minor Risk
15,900.00	12,300.00	16,055.72	12,450.00	83.18	83.50	-180.00	3,683.67	567.65	149.80	69.72	80.08	1.871	Minor Risk
16,000.00	12,300.00	16,155.72	12,450.00	84.81	85.12	-180.00	3,783.67	567.65	149.80	68.55	81.25	1.844	Minor Risk
16,100.00	12,300.00	16,255.72	12,450.00	86.45	86.76	-180.00	3,883.67	567.65	149.80	67.37	82.43	1.817	Minor Risk
16,200.00	12,300.00	16,355.72	12,450.00	88.11	88.41	-180.00	3,983.67	567.65	149.80	66.18	83.62	1.791	Minor Risk
16,300.00	12,300.00	16,455.72	12,450.00	89.77	90.07	-180.00	4,083.67	567.65	149.80	64.98	84.82	1.766	Minor Risk
16,400.00	12,300.00	16,555.72	12,450.00	91.45	91.74	-180.00	4,183.67	567.65	149.80	63.76	86.04	1.741	Minor Risk
16,500.00	12,300.00	16,655.72	12,450.00	93.13	93.42	-180.00	4,283.67	567.65	149.80	62.54	87.26	1.717	Minor Risk
16,558.61	12,300.00	16,714.32	12,450.00	94.12	94.40	-180.00	4,342.28	567.65	149.80	61.81	87.99	1.703	Minor Risk
16,600.00	12,300.00	16,755.72	12,450.00	94.82	95.10	-180.00	4,383.67	567.65	149.80	61.30	88.50	1.693	Minor Risk
16,700.00	12,300.00	16,855.72	12,450.00	96.52	96.80	-180.00	4,483.67	567.65	149.80	60.05	89.75	1.669	Minor Risk
16,800.00	12,300.00	16,955.72	12,450.00	98.23	98.50	180.00	4,583.67	567.65	149.80	58.79	91.01	1.646	Minor Risk
16,853.88	12,300.00	17,009.59	12,450.00	99.16	99.42	180.00	4,637.55	567.65	149.80	58.11	91.69	1.634	Minor Risk
16,900.00	12,300.00	17,055.72	12,450.00	99.95	100.21	180.00	4,683.67	567.65	149.80	57.53	92.27	1.623	Minor Risk
16,989.88	12,300.00	17,145.59	12,450.00	101.50	101.76	180.00	4,773.55	567.65	149.80	56.38	93.42	1.604	Minor Risk

Anticollision Report

Company:	WCDSC Permian NM	**Local Co-ordinate Reference:**	Well Flagler 8 Fed Com 10H
Project:	Lea County (NAD83 New Mexico East)	**TVD Reference:**	RKB @ 3498.70ft
Reference Site:	Sec 08-T25S-R33E	**MD Reference:**	RKB @ 3498.70ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Flagler 8 Fed Com 10H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.50 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM r5000.141_Prod US
Reference Design:	Permit Plan 3	**Offset TVD Reference:**	Offset Datum

Offset Design Sec 08-T25S-R33E - Flagler 8 Fed Com 30H - Wellbore #1 - Permit Plan 1

Offset Site Error: 0.00 ft

Survey Program: 0-MWD+IGRF

Offset Well Error: 0.50 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	7.40	-7.40	0.50	0.50	49.82	201.50	238.62	312.32				
100.00	100.00	107.40	92.60	0.51	0.53	49.82	201.50	238.62	312.32	311.28	1.04	300.332	
200.00	200.00	207.40	192.60	0.69	0.72	49.82	201.50	238.62	312.32	310.90	1.41	220.824	
300.00	300.00	307.40	292.60	0.98	1.01	49.82	201.50	238.62	312.32	310.33	1.99	157.193	
400.00	400.00	407.40	392.60	1.30	1.33	49.82	201.50	238.62	312.32	309.69	2.63	118.700	
500.00	500.00	507.40	492.60	1.63	1.67	49.82	201.50	238.62	312.32	309.01	3.31	94.484	
600.00	600.00	607.40	592.60	1.98	2.02	49.82	201.50	238.62	312.32	308.32	3.99	78.182	
700.00	700.00	707.40	692.60	2.33	2.37	49.82	201.50	238.62	312.32	307.63	4.69	66.560	
800.00	800.00	807.40	792.60	2.68	2.72	49.82	201.50	238.62	312.32	306.92	5.39	57.891	
900.00	900.00	907.40	892.60	3.03	3.07	49.82	201.50	238.62	312.32	306.22	6.10	51.192	
1,000.00	1,000.00	1,007.40	992.60	3.39	3.42	49.82	201.50	238.62	312.32	305.51	6.81	45.867	
1,100.00	1,100.00	1,107.40	1,092.60	3.74	3.78	49.82	201.50	238.62	312.32	304.80	7.52	41.537	
1,200.00	1,200.00	1,207.40	1,192.60	4.10	4.13	49.82	201.50	238.62	312.32	304.09	8.23	37.948	
1,300.00	1,300.00	1,307.40	1,292.60	4.45	4.49	49.82	201.50	238.62	312.32	303.38	8.94	34.926	
1,400.00	1,400.00	1,407.40	1,392.60	4.81	4.85	49.82	201.50	238.62	312.32	302.66	9.66	32.348	
1,500.00	1,500.00	1,507.40	1,492.60	5.16	5.20	49.82	201.50	238.62	312.32	301.95	10.37	30.122	
1,600.00	1,600.00	1,607.40	1,592.60	5.52	5.56	49.82	201.50	238.62	312.32	301.24	11.08	28.182	
1,700.00	1,700.00	1,707.40	1,692.60	5.88	5.92	49.82	201.50	238.62	312.32	300.52	11.80	26.476	
1,800.00	1,800.00	1,807.40	1,792.60	6.24	6.27	49.82	201.50	238.62	312.32	299.81	12.51	24.964	
1,900.00	1,900.00	1,907.40	1,892.60	6.59	6.63	49.82	201.50	238.62	312.32	299.09	13.23	23.614	
2,000.00	2,000.00	2,007.40	1,992.60	6.95	6.99	49.82	201.50	238.62	312.32	298.38	13.94	22.403	
2,100.00	2,100.00	2,107.40	2,092.60	7.31	7.35	49.82	201.50	238.62	312.32	297.66	14.66	21.310	
2,200.00	2,200.00	2,207.40	2,192.60	7.67	7.71	49.82	201.50	238.62	312.32	296.95	15.37	20.318	
2,300.00	2,300.00	2,307.40	2,292.60	8.02	8.06	49.82	201.50	238.62	312.32	296.23	16.09	19.415	
2,400.00	2,400.00	2,407.40	2,392.60	8.38	8.42	49.82	201.50	238.62	312.32	295.52	16.80	18.588	
2,500.00	2,500.00	2,507.40	2,492.60	8.74	8.78	49.82	201.50	238.62	312.32	294.80	17.52	17.828	
2,600.00	2,600.00	2,607.40	2,592.60	9.10	9.14	49.82	201.50	238.62	312.32	294.08	18.23	17.128	
2,700.00	2,700.00	2,707.40	2,692.60	9.46	9.49	49.82	201.50	238.62	312.32	293.37	18.95	16.481	
2,800.00	2,800.00	2,792.60	2,792.60	9.81	9.80	49.82	201.50	238.62	312.32	292.70	19.61	15.924	
2,900.00	2,900.00	2,892.51	2,892.50	10.17	10.14	49.96	200.94	239.11	312.33	292.02	20.31	15.375	
3,000.00	3,000.00	2,992.35	2,992.32	10.53	10.47	50.41	199.07	240.74	312.39	291.39	21.00	14.876	
3,100.00	3,100.00	3,092.08	3,091.95	10.89	10.80	51.19	195.90	243.52	312.53	290.84	21.69	14.411	
3,200.00	3,200.00	3,191.63	3,191.32	11.25	11.13	52.27	191.43	247.42	312.83	290.46	22.38	13.981	
3,300.00	3,300.00	3,290.94	3,290.34	11.60	11.47	53.67	185.67	252.45	313.38	290.32	23.07	13.585	
3,400.00	3,400.00	3,389.96	3,388.92	11.96	11.80	55.36	178.65	258.59	314.32	290.56	23.76	13.228	
3,500.00	3,500.00	3,488.81	3,487.16	12.32	12.14	57.34	170.39	265.80	315.77	291.31	24.46	12.910	
3,600.00	3,600.00	3,588.13	3,585.81	12.68	12.49	59.40	161.71	273.39	317.70	292.54	25.16	12.626	
3,700.00	3,700.00	3,687.46	3,684.46	13.04	12.84	61.43	153.03	280.97	320.04	294.18	25.87	12.372	
3,800.00	3,800.00	3,786.78	3,783.12	13.39	13.20	63.42	144.34	288.56	322.79	296.21	26.58	12.145	
3,900.00	3,900.00	3,886.11	3,881.77	13.75	13.56	65.39	135.66	296.14	325.92	298.63	27.29	11.943	
4,000.00	4,000.00	3,985.43	3,980.42	14.11	13.92	67.31	126.98	303.73	329.43	301.43	28.00	11.764	
4,100.00	4,100.00	4,084.76	4,079.07	14.47	14.29	69.19	118.30	311.31	333.31	304.59	28.72	11.606	
4,200.00	4,200.00	4,184.08	4,177.73	14.83	14.66	71.03	109.62	318.90	337.54	308.11	29.43	11.468	
4,300.00	4,300.00	4,283.40	4,276.38	15.19	15.03	72.82	100.93	326.48	342.12	311.96	30.15	11.347	
4,400.00	4,400.00	4,382.73	4,375.03	15.54	15.40	74.56	92.25	334.07	347.02	316.15	30.87	11.241	
4,500.00	4,500.00	4,482.05	4,473.68	15.90	15.78	76.26	83.57	341.66	352.24	320.65	31.59	11.151	
4,600.00	4,600.00	4,581.38	4,572.34	16.26	16.15	77.90	74.89	349.24	357.75	325.45	32.31	11.074	
4,700.00	4,700.00	4,680.70	4,670.99	16.62	16.53	79.49	66.21	356.83	363.56	330.53	33.03	11.008	
4,800.00	4,800.00	4,780.02	4,769.64	16.98	16.92	81.03	57.52	364.41	369.64	335.89	33.74	10.954	
4,900.00	4,900.00	4,880.62	4,869.57	17.34	17.30	82.53	48.81	372.03	375.92	341.45	34.47	10.905	
5,000.00	5,000.00	4,983.98	4,972.40	17.69	17.70	83.83	40.94	378.90	381.64	346.42	35.22	10.837	
5,100.00	5,099.99	5,087.75	5,075.81	18.04	18.09	-17.70	34.45	384.57	385.23	349.28	35.95	10.716	

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

Anticollision Report

Company:	WCDSC Permian NM	**Local Co-ordinate Reference:**	Well Flagler 8 Fed Com 10H
Project:	Lea County (NAD83 New Mexico East)	**TVD Reference:**	RKB @ 3498.70ft
Reference Site:	Sec 08-T25S-R33E	**MD Reference:**	RKB @ 3498.70ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Flagler 8 Fed Com 10H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.50 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM r5000.141_Prod US
Reference Design:	Permit Plan 3	**Offset TVD Reference:**	Offset Datum

Offset Design Sec 08-T25S-R33E - Flagler 8 Fed Com 30H - Wellbore #1 - Permit Plan 1 — **Offset Site Error:** 0.00 ft

Survey Program: 0-MWD+IGRF — **Offset Well Error:** 0.50 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,200.00	5,199.91	5,191.81	5,179.65	18.38	18.47	-17.07	29.36	389.02	385.33	348.67	36.67	10.509	
5,300.00	5,299.69	5,295.91	5,283.63	18.72	18.84	-16.80	25.69	392.23	381.88	344.50	37.38	10.217	
5,400.00	5,399.27	5,399.77	5,387.45	19.06	19.21	-16.89	23.44	394.19	374.83	336.75	38.08	9.843	
5,500.00	5,498.58	5,503.16	5,490.83	19.41	19.57	-17.35	22.62	394.91	364.24	325.46	38.78	9.393	
5,600.00	5,597.75	5,602.68	5,590.35	19.76	19.91	-17.97	22.61	394.91	352.05	312.58	39.46	8.922	
5,700.00	5,696.93	5,701.86	5,689.53	20.11	20.25	-18.64	22.61	394.91	339.89	299.75	40.14	8.467	
5,800.00	5,796.11	5,801.04	5,788.71	20.46	20.59	-19.35	22.61	394.91	327.79	286.96	40.83	8.028	
5,900.00	5,895.29	5,900.22	5,887.89	20.82	20.93	-20.12	22.61	394.91	315.74	274.22	41.52	7.604	
6,000.00	5,994.47	6,000.60	5,987.07	21.18	21.27	-20.95	22.61	394.91	303.75	261.53	42.22	7.195	
6,100.00	6,093.65	6,101.42	6,086.25	21.55	21.62	-21.84	22.61	394.91	291.83	248.91	42.92	6.800	
6,200.00	6,192.83	6,202.25	6,185.43	21.91	21.96	-22.82	22.61	394.91	279.98	236.36	43.62	6.419	
6,300.00	6,292.01	6,303.07	6,284.61	22.28	22.31	-23.87	22.61	394.91	268.22	223.90	44.32	6.052	
6,400.00	6,391.18	6,403.89	6,383.78	22.65	22.66	-25.03	22.61	394.91	256.56	211.53	45.03	5.698	
6,500.00	6,490.36	6,504.71	6,482.96	23.02	23.01	-26.29	22.61	394.91	245.02	199.28	45.74	5.357	
6,600.00	6,589.54	6,605.53	6,582.14	23.40	23.36	-27.68	22.61	394.91	233.60	187.15	46.45	5.029	
6,700.00	6,688.72	6,706.35	6,681.32	23.78	23.71	-29.21	22.61	394.91	222.33	175.16	47.17	4.713	Alert
6,800.00	6,787.90	6,807.17	6,780.50	24.16	24.05	-30.90	22.61	394.91	211.24	163.34	47.89	4.410	Alert
6,900.00	6,887.08	6,907.99	6,879.68	24.54	24.40	-32.77	22.61	394.91	200.35	151.72	48.62	4.121	Alert
7,000.00	6,986.26	7,008.82	6,978.86	24.92	24.75	-34.86	22.61	394.91	189.69	140.34	49.35	3.843	Alert
7,100.00	7,085.44	7,109.64	7,078.04	25.30	25.11	-37.19	22.61	394.91	179.31	129.22	50.09	3.580	Alert
7,200.00	7,184.61	7,189.54	7,177.21	25.69	25.38	-39.79	22.61	394.91	169.27	118.51	50.76	3.334	Alert
7,300.00	7,283.79	7,288.72	7,276.39	26.07	25.73	-42.72	22.61	394.91	159.62	108.11	51.51	3.099	Alert
7,400.00	7,382.97	7,387.90	7,375.57	26.46	26.07	-46.01	22.61	394.91	150.43	98.17	52.26	2.878	Alert
7,500.00	7,482.15	7,487.08	7,474.75	26.85	26.42	-49.72	22.61	394.91	141.81	88.79	53.02	2.674	Alert
7,600.00	7,581.33	7,586.26	7,573.93	27.24	26.77	-53.88	22.61	394.91	133.86	80.06	53.79	2.488	Minor Risk
7,700.00	7,680.51	7,685.44	7,673.11	27.63	27.11	-58.52	22.61	394.91	126.69	72.13	54.57	2.322	Minor Risk
7,800.00	7,779.69	7,784.61	7,772.29	28.03	27.46	-63.69	22.61	394.91	120.47	65.12	55.35	2.177	Minor Risk
7,900.00	7,878.87	7,883.79	7,871.47	28.42	27.81	-69.35	22.61	394.91	115.33	59.21	56.12	2.055	Minor Risk
8,000.00	7,978.04	7,982.97	7,970.64	28.82	28.15	-75.47	22.61	394.91	111.43	54.55	56.89	1.959	Minor Risk
8,100.00	8,077.22	8,082.15	8,069.82	29.21	28.50	-81.94	22.61	394.91	108.90	51.27	57.63	1.890	Minor Risk
8,200.00	8,176.40	8,181.33	8,169.00	29.61	28.85	-88.63	22.61	394.91	107.84	49.48	58.36	1.848	Minor Risk
8,220.33	8,196.56	8,201.49	8,189.16	29.69	28.92	-90.00	22.61	394.91	107.81	49.31	58.50	1.843	Minor Risk, CC
8,300.00	8,275.58	8,280.51	8,268.18	30.01	29.20	-95.36	22.61	394.91	108.29	49.23	59.06	1.834	Minor Risk, ES, SF
8,400.00	8,374.76	8,379.69	8,367.36	30.41	29.54	-101.94	22.61	394.91	110.23	50.50	59.73	1.845	Minor Risk
8,500.00	8,473.94	8,478.87	8,466.54	30.81	29.89	-108.21	22.61	394.91	113.59	53.20	60.38	1.881	Minor Risk
8,600.00	8,573.12	8,578.04	8,565.72	31.21	30.24	-114.07	22.61	394.91	118.24	57.22	61.02	1.938	Minor Risk
8,700.00	8,672.30	8,677.22	8,664.90	31.61	30.59	-119.44	22.61	394.91	124.04	62.39	61.65	2.012	Minor Risk
8,800.00	8,771.47	8,776.40	8,764.07	32.01	30.94	-124.30	22.61	394.91	130.84	68.55	62.29	2.101	Minor Risk
8,900.00	8,870.65	8,875.58	8,863.25	32.42	31.28	-128.65	22.61	394.91	138.49	75.57	62.92	2.201	Minor Risk
9,000.00	8,969.83	8,974.76	8,962.43	32.82	31.63	-132.53	22.61	394.91	146.85	83.29	63.56	2.310	Minor Risk
9,100.00	9,069.01	9,062.79	9,050.40	33.22	31.94	-135.21	24.66	394.90	157.93	93.97	63.96	2.469	Minor Risk
9,200.00	9,168.19	9,141.08	9,127.73	33.63	32.19	-135.40	36.57	394.82	179.79	116.06	63.74	2.821	Alert
9,300.00	9,267.37	9,214.30	9,197.94	34.04	32.41	-134.01	57.14	394.68	212.42	149.46	62.96	3.374	Alert
9,400.00	9,366.55	9,280.80	9,258.97	34.44	32.59	-131.97	83.45	394.50	254.98	193.28	61.69	4.133	Alert
9,500.00	9,465.73	9,339.94	9,310.37	34.85	32.73	-129.87	112.65	394.31	306.46	246.37	60.10	5.099	
9,600.00	9,564.95	9,391.88	9,352.83	35.25	32.85	-128.43	142.54	394.11	365.48	307.14	58.34	6.265	
9,700.00	9,664.44	9,437.43	9,387.69	35.65	32.94	-127.60	171.83	393.91	429.98	373.45	56.53	7.606	
9,800.00	9,764.15	9,477.32	9,416.24	36.03	33.01	-127.06	199.68	393.72	498.98	444.21	54.77	9.111	
9,900.00	9,864.03	9,512.27	9,439.60	36.39	33.08	-126.83	225.67	393.55	571.74	518.62	53.12	10.763	
10,000.00	9,964.01	9,550.00	9,462.99	36.74	33.15	-126.56	255.26	393.35	647.69	595.71	51.98	12.461	
10,100.00	10,064.00	9,570.03	9,474.61	37.08	33.20	-23.67	271.59	393.24	726.23	675.94	50.29	14.441	
10,200.00	10,164.00	9,600.00	9,490.90	37.41	33.28	-22.43	296.73	393.07	807.81	758.39	49.42	16.345	

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

Anticollision Report

Company:	WCDSC Permian NM	**Local Co-ordinate Reference:**	Well Flagler 8 Fed Com 10H
Project:	Lea County (NAD83 New Mexico East)	**TVD Reference:**	RKB @ 3498.70ft
Reference Site:	Sec 08-T25S-R33E	**MD Reference:**	RKB @ 3498.70ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Flagler 8 Fed Com 10H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.50 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM r5000.141_Prod US
Reference Design:	Permit Plan 3	**Offset TVD Reference:**	Offset Datum

Offset Design Sec 08-T25S-R33E - Flagler 8 Fed Com 30H - Wellbore #1 - Permit Plan 1 — **Offset Site Error:** 0.00 ft

Survey Program: 0-MWD+IGRF — **Offset Well Error:** 0.50 ft

Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance				
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,300.00	10,264.00	9,614.83	9,498.47	37.75	33.32	-21.84	309.48	392.98	891.71	843.49	48.22	18.491	
10,400.00	10,364.00	9,633.47	9,507.51	38.09	33.38	-21.14	325.78	392.87	977.67	930.23	47.44	20.607	

Anticollision Report

Company:	WCDSC Permian NM	**Local Co-ordinate Reference:**	Well Flagler 8 Fed Com 10H
Project:	Lea County (NAD83 New Mexico East)	**TVD Reference:**	RKB @ 3498.70ft
Reference Site:	Sec 08-T25S-R33E	**MD Reference:**	RKB @ 3498.70ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Flagler 8 Fed Com 10H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.50 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM r5000.141_Prod US
Reference Design:	Permit Plan 3	**Offset TVD Reference:**	Offset Datum

Offset Design Sec 08-T25S-R33E - Flagler 8 Fed Com 36H - Wellbore #1 - Permit Plan 1

Offset Site Error: 0.00 ft

Survey Program: 0-MWD+IGRF

Offset Well Error: 0.50 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	7.10	-7.10	0.50	0.50	46.02	201.31	208.63	289.92				
100.00	100.00	107.10	92.90	0.51	0.52	46.02	201.31	208.63	289.92	288.88	1.04	278.880	
200.00	200.00	207.10	192.90	0.69	0.72	46.02	201.31	208.63	289.92	288.50	1.41	205.099	
300.00	300.00	307.10	292.90	0.98	1.01	46.02	201.31	208.63	289.92	287.93	1.99	145.988	
400.00	400.00	407.10	392.90	1.30	1.33	46.02	201.31	208.63	289.92	287.29	2.63	110.229	
500.00	500.00	507.10	492.90	1.63	1.67	46.02	201.31	208.63	289.92	286.61	3.30	87.735	
600.00	600.00	607.10	592.90	1.98	2.02	46.02	201.31	208.63	289.92	285.92	3.99	72.594	
700.00	700.00	707.10	692.90	2.33	2.36	46.02	201.31	208.63	289.92	285.23	4.69	61.800	
800.00	800.00	807.10	792.90	2.68	2.72	46.02	201.31	208.63	289.92	284.52	5.39	53.750	
900.00	900.00	907.10	892.90	3.03	3.07	46.02	201.31	208.63	289.92	283.82	6.10	47.529	
1,000.00	1,000.00	1,007.10	992.90	3.39	3.42	46.02	201.31	208.63	289.92	283.11	6.81	42.584	
1,100.00	1,100.00	1,107.10	1,092.90	3.74	3.78	46.02	201.31	208.63	289.92	282.40	7.52	38.563	
1,200.00	1,200.00	1,207.10	1,192.90	4.10	4.13	46.02	201.31	208.63	289.92	281.69	8.23	35.231	
1,300.00	1,300.00	1,307.10	1,292.90	4.45	4.49	46.02	201.31	208.63	289.92	280.98	8.94	32.425	
1,400.00	1,400.00	1,407.10	1,392.90	4.81	4.85	46.02	201.31	208.63	289.92	280.26	9.65	30.031	
1,500.00	1,500.00	1,507.10	1,492.90	5.16	5.20	46.02	201.31	208.63	289.92	279.55	10.37	27.965	
1,600.00	1,600.00	1,607.10	1,592.90	5.52	5.56	46.02	201.31	208.63	289.92	278.84	11.08	26.163	
1,700.00	1,700.00	1,707.10	1,692.90	5.88	5.92	46.02	201.31	208.63	289.92	278.12	11.80	24.579	
1,800.00	1,800.00	1,807.10	1,792.90	6.24	6.27	46.02	201.31	208.63	289.92	277.41	12.51	23.175	
1,900.00	1,900.00	1,907.10	1,892.90	6.59	6.63	46.02	201.31	208.63	289.92	276.69	13.22	21.923	
2,000.00	2,000.00	2,007.10	1,992.90	6.95	6.99	46.02	201.31	208.63	289.92	275.98	13.94	20.798	
2,100.00	2,100.00	2,107.10	2,092.90	7.31	7.35	46.02	201.31	208.63	289.92	275.26	14.65	19.783	
2,200.00	2,200.00	2,207.10	2,192.90	7.67	7.70	46.02	201.31	208.63	289.92	274.55	15.37	18.862	
2,300.00	2,300.00	2,307.10	2,292.90	8.02	8.06	46.02	201.31	208.63	289.92	273.83	16.09	18.023	
2,400.00	2,400.00	2,407.10	2,392.90	8.38	8.42	46.02	201.31	208.63	289.92	273.12	16.80	17.256	
2,500.00	2,500.00	2,492.90	2,492.90	8.74	8.73	46.02	201.31	208.63	289.92	272.45	17.47	16.599	
2,600.00	2,600.00	2,597.15	2,597.15	9.10	9.08	46.17	200.28	208.63	289.24	271.06	18.18	15.912	
2,700.00	2,700.00	2,701.05	2,698.90	9.46	9.42	46.59	197.38	208.63	287.27	268.40	18.87	15.223	
2,800.00	2,800.00	2,801.10	2,798.81	9.81	9.74	47.03	194.34	208.63	285.19	265.63	19.55	14.584	
2,900.00	2,900.00	2,901.14	2,898.72	10.17	10.07	47.48	191.31	208.63	283.12	262.88	20.24	13.988	
3,000.00	3,000.00	3,001.19	2,998.62	10.53	10.40	47.94	188.27	208.63	281.08	260.15	20.93	13.430	
3,100.00	3,100.00	3,101.23	3,098.53	10.89	10.74	48.40	185.23	208.63	279.05	257.43	21.62	12.907	
3,200.00	3,200.00	3,201.28	3,198.44	11.25	11.07	48.87	182.19	208.63	277.04	254.73	22.31	12.416	
3,300.00	3,300.00	3,301.33	3,298.35	11.60	11.41	49.35	179.15	208.63	275.05	252.04	23.01	11.955	
3,400.00	3,400.00	3,401.37	3,398.26	11.96	11.75	49.83	176.12	208.63	273.08	249.38	23.70	11.521	
3,500.00	3,500.00	3,501.42	3,498.16	12.32	12.09	50.32	173.08	208.63	271.13	246.73	24.40	11.112	
3,600.00	3,600.00	3,601.47	3,598.07	12.68	12.43	50.82	170.04	208.63	269.20	244.10	25.10	10.725	
3,700.00	3,700.00	3,701.51	3,697.98	13.04	12.77	51.32	167.00	208.63	267.29	241.49	25.80	10.360	
3,800.00	3,800.00	3,801.56	3,797.89	13.39	13.11	51.84	163.96	208.63	265.40	238.90	26.50	10.015	
3,900.00	3,900.00	3,901.60	3,897.79	13.75	13.46	52.36	160.93	208.63	263.53	236.33	27.20	9.688	
4,000.00	4,000.00	4,001.65	3,997.70	14.11	13.80	52.88	157.89	208.63	261.68	233.78	27.91	9.377	
4,100.00	4,100.00	4,101.70	4,097.61	14.47	14.15	53.42	154.85	208.63	259.86	231.25	28.61	9.083	
4,200.00	4,200.00	4,201.74	4,197.52	14.83	14.50	53.96	151.81	208.63	258.06	228.75	29.31	8.803	
4,300.00	4,300.00	4,301.79	4,297.42	15.19	14.85	54.51	148.78	208.63	256.28	226.26	30.02	8.537	
4,400.00	4,400.00	4,401.83	4,397.33	15.54	15.19	55.06	145.74	208.63	254.53	223.80	30.73	8.284	
4,500.00	4,500.00	4,501.88	4,497.24	15.90	15.54	55.63	142.70	208.63	252.80	221.37	31.43	8.042	
4,600.00	4,600.00	4,601.93	4,597.15	16.26	15.89	56.20	139.66	208.63	251.10	218.96	32.14	7.812	
4,700.00	4,700.00	4,701.97	4,697.05	16.62	16.25	56.78	136.62	208.63	249.42	216.57	32.85	7.592	
4,800.00	4,800.00	4,802.02	4,796.96	16.98	16.60	57.37	133.59	208.63	247.77	214.21	33.56	7.383	
4,900.00	4,900.00	4,902.07	4,896.87	17.34	16.95	57.96	130.55	208.63	246.14	211.87	34.27	7.182	
5,000.00	5,000.00	5,002.11	4,996.78	17.69	17.30	58.57	127.51	208.63	244.54	209.56	34.98	6.991	
5,100.00	5,099.99	5,102.16	5,096.68	18.04	17.65	-43.60	124.47	208.63	242.02	206.34	35.68	6.783	

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

Anticollision Report

Company:	WCDSC Permian NM	**Local Co-ordinate Reference:**	Well Flagler 8 Fed Com 10H
Project:	Lea County (NAD83 New Mexico East)	**TVD Reference:**	RKB @ 3498.70ft
Reference Site:	Sec 08-T25S-R33E	**MD Reference:**	RKB @ 3498.70ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Flagler 8 Fed Com 10H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.50 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM r5000.141_Prod US
Reference Design:	Permit Plan 3	**Offset TVD Reference:**	Offset Datum

Offset Design Sec 08-T25S-R33E - Flagler 8 Fed Com 36H - Wellbore #1 - Permit Plan 1 — **Offset Site Error:** 0.00 ft

Survey Program: 0-MWD+IGRF — **Offset Well Error:** 0.50 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,200.00	5,199.91	5,202.26	5,196.54	18.38	18.01	-43.67	121.44	208.63	237.61	201.24	36.37	6.533	
5,300.00	5,299.69	5,302.48	5,296.27	18.72	18.36	-44.21	118.40	208.63	231.32	194.26	37.06	6.242	
5,400.00	5,399.27	5,397.11	5,395.82	19.06	18.70	-45.27	115.38	208.63	223.19	185.46	37.73	5.915	
5,500.00	5,498.58	5,503.55	5,495.11	19.41	19.07	-46.92	112.36	208.63	213.35	174.91	38.45	5.549	
5,600.00	5,597.75	5,604.33	5,594.28	19.76	19.43	-48.84	109.34	208.63	202.99	163.85	39.14	5.186	
5,700.00	5,696.93	5,705.12	5,693.45	20.11	19.79	-50.97	106.33	208.63	192.88	153.04	39.84	4.841	Alert
5,800.00	5,796.11	5,805.90	5,792.62	20.46	20.15	-53.33	103.31	208.63	183.06	142.52	40.55	4.515	Alert
5,900.00	5,895.29	5,906.68	5,891.79	20.82	20.51	-55.94	100.30	208.63	173.59	132.34	41.26	4.208	Alert
6,000.00	5,994.47	6,007.47	5,990.96	21.18	20.87	-58.86	97.28	208.63	164.52	122.55	41.97	3.920	Alert
6,100.00	6,093.65	6,108.25	6,090.14	21.55	21.22	-62.09	94.26	208.63	155.92	113.24	42.68	3.653	Alert
6,200.00	6,192.83	6,209.03	6,189.31	21.91	21.58	-65.69	91.25	208.63	147.88	104.48	43.40	3.407	Alert
6,300.00	6,292.01	6,309.81	6,288.48	22.28	21.94	-69.69	88.23	208.63	140.49	96.36	44.12	3.184	Alert
6,400.00	6,391.18	6,389.40	6,387.65	22.65	22.23	-74.09	85.22	208.63	133.86	89.08	44.78	2.989	Alert
6,500.00	6,490.36	6,488.62	6,486.82	23.02	22.58	-78.92	82.20	208.63	128.10	82.60	45.50	2.815	Alert
6,600.00	6,589.54	6,587.84	6,585.99	23.40	22.94	-84.16	79.19	208.63	123.34	77.12	46.23	2.668	Alert
6,700.00	6,688.72	6,687.06	6,685.17	23.78	23.29	-89.75	76.17	208.63	119.71	72.75	46.95	2.550	Alert
6,800.00	6,787.90	6,786.27	6,784.34	24.16	23.65	-95.64	73.16	208.63	117.29	69.62	47.68	2.460	Minor Risk
6,900.00	6,887.08	6,885.49	6,883.51	24.54	24.00	-101.70	70.14	208.63	116.18	67.78	48.40	2.401	Minor Risk
6,933.49	6,920.30	6,918.72	6,916.72	24.66	24.12	-103.74	69.13	208.63	116.10	67.47	48.64	2.387	Minor Risk, CC
7,000.00	6,986.26	6,984.71	6,982.68	24.92	24.36	-107.80	67.13	208.63	116.40	67.29	49.11	2.370	Minor Risk, ES
7,100.00	7,085.44	7,083.93	7,081.85	25.30	24.71	-113.82	64.11	208.63	117.95	68.13	49.82	2.368	Minor Risk, SF
7,200.00	7,184.61	7,183.14	7,181.02	25.69	25.07	-119.62	61.09	208.63	120.78	70.26	50.52	2.391	Minor Risk
7,300.00	7,283.79	7,282.36	7,280.19	26.07	25.42	-125.10	58.08	208.63	124.80	73.58	51.21	2.437	Minor Risk
7,400.00	7,382.97	7,381.58	7,379.37	26.46	25.78	-130.21	55.06	208.63	129.90	77.99	51.90	2.503	Alert
7,500.00	7,482.15	7,480.80	7,478.54	26.85	26.14	-134.90	52.05	208.63	135.95	83.36	52.59	2.585	Alert
7,600.00	7,581.33	7,580.01	7,577.71	27.24	26.49	-139.17	49.03	208.63	142.85	89.57	53.28	2.681	Alert
7,700.00	7,680.51	7,679.23	7,676.88	27.63	26.85	-143.03	46.02	208.63	150.47	96.50	53.97	2.788	Alert
7,800.00	7,779.69	7,778.45	7,776.05	28.03	27.20	-146.50	43.00	208.63	158.70	104.04	54.66	2.903	Alert
7,900.00	7,878.87	7,877.31	7,874.87	28.42	27.56	-149.61	40.02	208.63	167.48	112.13	55.35	3.026	Alert
8,000.00	7,978.04	7,974.11	7,971.65	28.82	27.90	-152.03	38.40	208.63	177.56	121.54	56.02	3.169	Alert
8,100.00	8,077.22	8,072.58	8,070.12	29.21	28.23	-153.86	38.31	208.63	188.92	132.22	56.70	3.332	Alert
8,200.00	8,176.40	8,171.76	8,169.30	29.61	28.57	-155.46	38.31	208.63	200.50	143.11	57.39	3.494	Alert
8,300.00	8,275.58	8,270.94	8,268.48	30.01	28.91	-156.90	38.31	208.63	212.21	154.14	58.07	3.654	Alert
8,400.00	8,374.76	8,370.12	8,367.66	30.41	29.24	-158.18	38.31	208.63	224.05	165.29	58.76	3.813	Alert
8,500.00	8,473.94	8,469.29	8,466.84	30.81	29.58	-159.33	38.31	208.63	235.98	176.54	59.44	3.970	Alert
8,600.00	8,573.12	8,568.47	8,566.02	31.21	29.92	-160.37	38.31	208.63	248.00	187.87	60.13	4.124	Alert
8,700.00	8,672.30	8,667.65	8,665.20	31.61	30.26	-161.32	38.31	208.63	260.09	199.27	60.82	4.276	Alert
8,800.00	8,771.47	8,766.83	8,764.37	32.01	30.59	-162.18	38.31	208.63	272.25	210.74	61.51	4.426	Alert
8,900.00	8,870.65	8,850.00	8,847.50	32.42	30.88	-162.59	40.03	208.09	286.23	224.22	62.01	4.616	Alert
9,000.00	8,969.83	8,919.95	8,916.71	32.82	31.10	-161.82	49.38	205.17	308.63	246.59	62.04	4.975	Alert
9,100.00	9,069.01	8,985.93	8,980.46	33.22	31.30	-160.24	65.50	200.14	339.82	278.16	61.66	5.511	
9,200.00	9,168.19	9,050.00	9,040.10	33.63	31.48	-158.14	87.75	193.18	379.55	318.49	61.06	6.216	
9,300.00	9,267.37	9,100.00	9,084.62	34.04	31.62	-156.27	109.45	186.41	427.19	367.42	59.78	7.147	
9,400.00	9,366.55	9,150.00	9,126.98	34.44	31.75	-154.28	134.77	178.50	482.09	423.53	58.56	8.232	
9,500.00	9,465.73	9,200.00	9,166.87	34.85	31.89	-152.27	163.51	169.51	543.44	485.92	57.52	9.448	
9,600.00	9,564.95	9,229.54	9,189.15	35.25	31.97	-151.43	182.02	163.73	609.76	554.01	55.75	10.938	
9,700.00	9,664.44	9,263.19	9,213.28	35.65	32.07	-150.77	204.40	156.74	679.42	625.05	54.37	12.495	
9,800.00	9,764.15	9,300.00	9,238.05	36.03	32.18	-150.04	230.39	148.62	751.74	698.42	53.32	14.099	
9,900.00	9,864.03	9,320.57	9,251.11	36.39	32.25	-150.04	245.55	143.88	826.11	774.30	51.81	15.946	
10,000.00	9,964.01	9,350.00	9,268.79	36.74	32.34	-149.74	268.01	136.87	902.41	851.59	50.82	17.757	
10,100.00	10,064.00	9,367.43	9,278.68	37.08	32.40	-46.84	281.71	132.59	980.48	930.88	49.60	19.767	

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

Company:	WCDSC Permian NM	**Local Co-ordinate Reference:**	Well Flagler 8 Fed Com 10H
Project:	Lea County (NAD83 New Mexico East)	**TVD Reference:**	RKB @ 3498.70ft
Reference Site:	Sec 08-T25S-R33E	**MD Reference:**	RKB @ 3498.70ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Flagler 8 Fed Com 10H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.50 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM r5000.141_Prod US
Reference Design:	Permit Plan 3	**Offset TVD Reference:**	Offset Datum

Offset Design Sec 08-T25S-R33E - Flagler 8 Fed Com 6H - Wellbore #1 - Permit Plan 2 — **Offset Site Error:** 0.00 ft

Survey Program: 0-MWD+IGRF — **Offset Well Error:** 0.50 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.40	0.40	0.50	0.50	-90.36	-0.38	-59.99	59.99				
100.00	100.00	100.40	100.40	0.51	0.51	-90.36	-0.38	-59.99	59.99	58.96	1.03	58.265	
200.00	200.00	200.40	200.40	0.69	0.69	-90.36	-0.38	-59.99	59.99	58.60	1.39	43.231	
300.00	300.00	300.40	300.40	0.98	0.98	-90.36	-0.38	-59.99	59.99	58.04	1.95	30.697	
400.00	400.00	400.40	400.40	1.30	1.30	-90.36	-0.38	-59.99	59.99	57.39	2.60	23.106	
500.00	500.00	500.40	500.40	1.63	1.64	-90.36	-0.38	-59.99	59.99	56.72	3.27	18.348	
600.00	600.00	600.40	600.40	1.98	1.98	-90.36	-0.38	-59.99	59.99	56.03	3.96	15.156	
700.00	700.00	700.40	700.40	2.33	2.33	-90.36	-0.38	-59.99	59.99	55.34	4.66	12.886	
800.00	800.00	800.40	800.40	2.68	2.68	-90.36	-0.38	-59.99	59.99	54.63	5.36	11.197	
900.00	900.00	900.40	900.40	3.03	3.03	-90.36	-0.38	-59.99	59.99	53.93	6.06	9.893	
1,000.00	1,000.00	1,000.40	1,000.40	3.39	3.39	-90.36	-0.38	-59.99	59.99	53.22	6.77	8.859	
1,100.00	1,100.00	1,100.40	1,100.40	3.74	3.74	-90.36	-0.38	-59.99	59.99	52.51	7.48	8.018	
1,200.00	1,200.00	1,200.40	1,200.40	4.10	4.10	-90.36	-0.38	-59.99	59.99	51.80	8.19	7.322	
1,300.00	1,300.00	1,300.40	1,300.40	4.45	4.45	-90.36	-0.38	-59.99	59.99	51.09	8.90	6.737	
1,400.00	1,400.00	1,400.40	1,400.40	4.81	4.81	-90.36	-0.38	-59.99	59.99	50.37	9.62	6.238	
1,500.00	1,500.00	1,500.40	1,500.40	5.16	5.17	-90.36	-0.38	-59.99	59.99	49.66	10.33	5.807	
1,600.00	1,600.00	1,600.40	1,600.40	5.52	5.52	-90.36	-0.38	-59.99	59.99	48.95	11.04	5.432	
1,700.00	1,700.00	1,700.40	1,700.40	5.88	5.88	-90.36	-0.38	-59.99	59.99	48.23	11.76	5.102	
1,800.00	1,800.00	1,800.40	1,800.40	6.24	6.24	-90.36	-0.38	-59.99	59.99	47.52	12.47	4.810	Alert
1,900.00	1,900.00	1,900.40	1,900.40	6.59	6.59	-90.36	-0.38	-59.99	59.99	46.80	13.19	4.549	Alert
2,000.00	2,000.00	2,000.40	2,000.40	6.95	6.95	-90.36	-0.38	-59.99	59.99	46.09	13.90	4.315	Alert
2,100.00	2,100.00	2,100.40	2,100.40	7.31	7.31	-90.36	-0.38	-59.99	59.99	45.37	14.62	4.104	Alert
2,200.00	2,200.00	2,200.40	2,200.40	7.67	7.67	-90.36	-0.38	-59.99	59.99	44.66	15.33	3.912	Alert
2,300.00	2,300.00	2,300.40	2,300.40	8.02	8.03	-90.36	-0.38	-59.99	59.99	43.94	16.05	3.738	Alert
2,400.00	2,400.00	2,400.40	2,400.40	8.38	8.38	-90.36	-0.38	-59.99	59.99	43.23	16.76	3.578	Alert
2,500.00	2,500.00	2,500.40	2,500.40	8.74	8.74	-90.36	-0.38	-59.99	59.99	42.51	17.48	3.432	Alert
2,600.00	2,600.00	2,600.40	2,600.40	9.10	9.10	-90.36	-0.38	-59.99	59.99	41.80	18.20	3.297	Alert
2,700.00	2,700.00	2,700.40	2,700.40	9.46	9.46	-90.36	-0.38	-59.99	59.99	41.08	18.91	3.172	Alert
2,800.00	2,800.00	2,800.40	2,800.40	9.81	9.81	-90.36	-0.38	-59.99	59.99	40.36	19.63	3.056	Alert
2,900.00	2,900.00	2,900.40	2,900.40	10.17	10.17	-90.36	-0.38	-59.99	59.99	39.65	20.34	2.949	Alert
3,000.00	3,000.00	3,000.40	3,000.40	10.53	10.53	-90.36	-0.38	-59.99	59.99	38.93	21.06	2.849	Alert
3,100.00	3,100.00	3,100.40	3,100.40	10.89	10.89	-90.36	-0.38	-59.99	59.99	38.21	21.78	2.755	Alert
3,200.00	3,200.00	3,200.40	3,200.40	11.25	11.25	-90.36	-0.38	-59.99	59.99	37.50	22.49	2.667	Alert
3,300.00	3,300.00	3,300.40	3,300.40	11.60	11.61	-90.36	-0.38	-59.99	59.99	36.78	23.21	2.585	Alert
3,400.00	3,400.00	3,400.40	3,400.40	11.96	11.96	-90.36	-0.38	-59.99	59.99	36.07	23.93	2.507	Alert
3,500.00	3,500.00	3,500.40	3,500.40	12.32	12.32	-90.36	-0.38	-59.99	59.99	35.35	24.64	2.435	Minor Risk
3,600.00	3,600.00	3,600.40	3,600.40	12.68	12.68	-90.36	-0.38	-59.99	59.99	34.63	25.36	2.366	Minor Risk
3,700.00	3,700.00	3,700.40	3,700.40	13.04	13.04	-90.36	-0.38	-59.99	59.99	33.92	26.07	2.301	Minor Risk
3,800.00	3,800.00	3,800.40	3,800.40	13.39	13.40	-90.36	-0.38	-59.99	59.99	33.20	26.79	2.239	Minor Risk
3,900.00	3,900.00	3,900.40	3,900.40	13.75	13.75	-90.36	-0.38	-59.99	59.99	32.48	27.51	2.181	Minor Risk
4,000.00	4,000.00	4,000.40	4,000.40	14.11	14.11	-90.36	-0.38	-59.99	59.99	31.77	28.22	2.126	Minor Risk
4,100.00	4,100.00	4,100.40	4,100.40	14.47	14.47	-90.36	-0.38	-59.99	59.99	31.05	28.94	2.073	Minor Risk
4,200.00	4,200.00	4,200.40	4,200.40	14.83	14.83	-90.36	-0.38	-59.99	59.99	30.33	29.66	2.023	Minor Risk
4,300.00	4,300.00	4,300.40	4,300.40	15.19	15.19	-90.36	-0.38	-59.99	59.99	29.62	30.37	1.975	Minor Risk
4,400.00	4,400.00	4,400.40	4,400.40	15.54	15.55	-90.36	-0.38	-59.99	59.99	28.90	31.09	1.930	Minor Risk
4,500.00	4,500.00	4,500.40	4,500.40	15.90	15.90	-90.36	-0.38	-59.99	59.99	28.18	31.81	1.886	Minor Risk
4,600.00	4,600.00	4,600.40	4,600.40	16.26	16.26	-90.36	-0.38	-59.99	59.99	27.47	32.52	1.845	Minor Risk
4,700.00	4,700.00	4,700.40	4,700.40	16.62	16.62	-90.36	-0.38	-59.99	59.99	26.75	33.24	1.805	Minor Risk
4,800.00	4,800.00	4,800.40	4,800.40	16.98	16.98	-90.36	-0.38	-59.99	59.99	26.04	33.96	1.767	Minor Risk
4,900.00	4,900.00	4,900.40	4,900.40	17.34	17.34	-90.36	-0.38	-59.99	59.99	25.32	34.67	1.730	Minor Risk
5,000.00	5,000.00	5,000.40	5,000.40	17.69	17.70	-90.36	-0.38	-59.99	59.99	24.60	35.39	1.695	Minor Risk, CC, ES, SF
5,100.00	5,099.99	5,100.39	5,100.39	18.04	18.05	167.37	-0.38	-59.99	61.27	25.17	36.09	1.697	Minor Risk

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

Anticollision Report

Company:	WCDSC Permian NM	**Local Co-ordinate Reference:**	Well Flagler 8 Fed Com 10H
Project:	Lea County (NAD83 New Mexico East)	**TVD Reference:**	RKB @ 3498.70ft
Reference Site:	Sec 08-T25S-R33E	**MD Reference:**	RKB @ 3498.70ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Flagler 8 Fed Com 10H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.50 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM r5000.141_Prod US
Reference Design:	Permit Plan 3	**Offset TVD Reference:**	Offset Datum

Offset Design Sec 08-T25S-R33E - Flagler 8 Fed Com 6H - Wellbore #1 - Permit Plan 2 — **Offset Site Error:** 0.00 ft

Survey Program: 0-MWD+IGRF — **Offset Well Error:** 0.50 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,200.00	5,199.91	5,200.31	5,200.31	18.38	18.41	168.11	-0.38	-59.99	65.10	28.32	36.79	1.770	Minor Risk
5,300.00	5,299.69	5,300.09	5,300.09	18.72	18.77	169.17	-0.38	-59.99	71.52	34.03	37.48	1.908	Minor Risk
5,400.00	5,399.27	5,400.33	5,399.67	19.06	19.13	170.37	-0.38	-59.99	80.52	42.34	38.18	2.109	Minor Risk
5,500.00	5,498.58	5,501.03	5,498.98	19.41	19.49	171.57	-0.38	-59.99	92.12	53.24	38.88	2.370	Minor Risk
5,600.00	5,597.75	5,601.85	5,598.15	19.76	19.85	172.60	-0.38	-59.99	104.79	65.22	39.57	2.648	Alert
5,700.00	5,696.93	5,702.67	5,697.33	20.11	20.21	173.40	-0.38	-59.99	117.49	77.22	40.27	2.917	Alert
5,800.00	5,796.11	5,803.49	5,796.51	20.46	20.57	174.05	-0.38	-59.99	130.20	89.23	40.97	3.178	Alert
5,900.00	5,895.29	5,904.31	5,895.69	20.82	20.93	174.58	-0.38	-59.99	142.93	101.26	41.67	3.430	Alert
6,000.00	5,994.47	6,005.13	5,994.87	21.18	21.30	175.02	-0.38	-59.99	155.67	113.30	42.37	3.674	Alert
6,100.00	6,093.65	6,105.95	6,094.05	21.55	21.66	175.40	-0.38	-59.99	168.41	125.34	43.07	3.910	Alert
6,200.00	6,192.83	6,193.23	6,193.23	21.91	21.97	175.72	-0.38	-59.99	181.17	137.44	43.73	4.143	Alert
6,300.00	6,292.01	6,294.46	6,294.46	22.28	22.32	175.70	-1.50	-59.65	193.43	149.01	44.42	4.355	Alert
6,400.00	6,391.18	6,396.05	6,395.97	22.65	22.65	174.99	-5.19	-58.51	204.58	159.49	45.09	4.537	Alert
6,500.00	6,490.36	6,504.08	6,495.67	23.02	22.99	173.92	-10.57	-56.85	215.02	169.24	45.78	4.697	Alert
6,600.00	6,589.54	6,604.70	6,594.89	23.40	23.32	172.93	-15.98	-55.19	225.50	179.05	46.46	4.854	Alert
6,700.00	6,688.72	6,705.32	6,694.11	23.78	23.65	172.04	-21.40	-53.52	236.04	188.91	47.13	5.008	
6,800.00	6,787.90	6,805.95	6,793.32	24.16	23.98	171.22	-26.81	-51.86	246.64	198.83	47.81	5.159	
6,900.00	6,887.08	6,906.57	6,892.54	24.54	24.31	170.47	-32.23	-50.19	257.28	208.79	48.49	5.306	
7,000.00	6,986.26	7,007.19	6,991.76	24.92	24.64	169.78	-37.64	-48.52	267.96	218.78	49.17	5.449	
7,100.00	7,085.44	7,107.81	7,090.97	25.30	24.98	169.14	-43.06	-46.86	278.67	228.81	49.86	5.589	
7,200.00	7,184.61	7,208.43	7,190.19	25.69	25.31	168.55	-48.47	-45.19	289.42	238.87	50.55	5.726	
7,300.00	7,283.79	7,309.06	7,289.41	26.07	25.65	168.00	-53.89	-43.53	300.20	248.96	51.24	5.859	
7,400.00	7,382.97	7,409.68	7,388.62	26.46	25.99	167.49	-59.30	-41.86	311.00	259.07	51.93	5.989	
7,500.00	7,482.15	7,489.70	7,487.84	26.85	26.25	167.01	-64.72	-40.19	321.82	269.27	52.55	6.124	
7,600.00	7,581.33	7,589.08	7,587.06	27.24	26.59	166.57	-70.13	-38.53	332.67	279.43	53.24	6.248	
7,700.00	7,680.51	7,688.46	7,686.27	27.63	26.93	166.15	-75.55	-36.86	343.53	289.60	53.93	6.369	
7,800.00	7,779.69	7,787.83	7,785.49	28.03	27.26	165.76	-80.96	-35.20	354.41	299.78	54.63	6.488	
7,900.00	7,878.87	7,887.21	7,884.71	28.42	27.60	165.39	-86.38	-33.53	365.31	309.98	55.32	6.603	
8,000.00	7,978.04	7,986.59	7,983.92	28.82	27.94	165.04	-91.79	-31.86	376.22	320.20	56.02	6.716	
8,100.00	8,077.22	8,085.97	8,083.14	29.21	28.28	164.72	-97.20	-30.20	387.14	330.42	56.72	6.826	
8,200.00	8,176.40	8,185.35	8,182.35	29.61	28.62	164.41	-102.62	-28.53	398.07	340.65	57.42	6.933	
8,300.00	8,275.58	8,284.72	8,281.57	30.01	28.96	164.11	-108.03	-26.87	409.02	350.90	58.12	7.037	
8,400.00	8,374.76	8,384.10	8,380.79	30.41	29.30	163.84	-113.45	-25.20	419.97	361.15	58.82	7.140	
8,500.00	8,473.94	8,483.48	8,480.00	30.81	29.65	163.57	-118.86	-23.53	430.94	371.41	59.53	7.239	
8,600.00	8,573.12	8,582.86	8,579.22	31.21	29.99	163.32	-124.28	-21.87	441.91	381.68	60.23	7.337	
8,700.00	8,672.30	8,679.74	8,676.00	31.61	30.32	163.23	-128.46	-20.58	453.16	392.23	60.92	7.438	
8,800.00	8,771.47	8,776.40	8,772.64	32.01	30.66	163.44	-130.29	-20.02	464.97	403.36	61.61	7.547	
8,900.00	8,870.65	8,874.81	8,871.05	32.42	31.01	163.87	-130.38	-19.99	477.23	414.92	62.31	7.659	
9,000.00	8,969.83	8,973.99	8,970.23	32.82	31.36	164.28	-130.38	-19.99	489.53	426.52	63.02	7.768	
9,100.00	9,069.01	9,073.17	9,069.41	33.22	31.71	164.68	-130.38	-19.99	501.86	438.14	63.72	7.876	
9,200.00	9,168.19	9,172.35	9,168.59	33.63	32.06	165.05	-130.38	-19.99	514.22	449.79	64.43	7.981	
9,300.00	9,267.37	9,271.53	9,267.77	34.04	32.41	165.41	-130.38	-19.99	526.59	461.45	65.14	8.084	
9,400.00	9,366.55	9,370.71	9,366.95	34.44	32.76	165.75	-130.38	-19.99	538.98	473.14	65.85	8.185	
9,500.00	9,465.73	9,469.89	9,466.13	34.85	33.11	166.08	-130.38	-19.99	551.40	484.84	66.56	8.285	
9,600.00	9,564.95	9,569.11	9,565.35	35.25	33.47	166.41	-130.38	-19.99	563.46	496.19	67.26	8.377	
9,700.00	9,664.44	9,668.60	9,664.84	35.65	33.82	166.68	-130.38	-19.99	573.27	505.30	67.97	8.434	
9,800.00	9,764.15	9,768.32	9,764.55	36.03	34.17	166.87	-130.38	-19.99	580.55	511.87	68.68	8.453	
9,900.00	9,864.03	9,868.20	9,864.43	36.39	34.53	167.00	-130.38	-19.99	585.30	515.91	69.39	8.435	
10,000.00	9,964.01	9,968.17	9,964.41	36.74	34.88	167.05	-130.38	-19.99	587.49	517.39	70.09	8.381	
10,100.00	10,064.00	10,068.17	10,064.40	37.08	35.24	-90.40	-130.38	-19.99	587.65	516.86	70.80	8.300	
10,200.00	10,164.00	10,168.17	10,164.40	37.41	35.59	-90.40	-130.38	-19.99	587.65	516.15	71.50	8.219	
10,300.00	10,264.00	10,268.17	10,264.40	37.75	35.95	-90.40	-130.38	-19.99	587.65	515.45	72.21	8.139	

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

Anticollision Report

Company:	WCDSC Permian NM	**Local Co-ordinate Reference:**	Well Flagler 8 Fed Com 10H
Project:	Lea County (NAD83 New Mexico East)	**TVD Reference:**	RKB @ 3498.70ft
Reference Site:	Sec 08-T25S-R33E	**MD Reference:**	RKB @ 3498.70ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Flagler 8 Fed Com 10H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.50 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM r5000.141_Prod US
Reference Design:	Permit Plan 3	**Offset TVD Reference:**	Offset Datum

Offset Design Sec 08-T25S-R33E - Flagler 8 Fed Com 6H - Wellbore #1 - Permit Plan 2 — **Offset Site Error:** 0.00 ft

Survey Program: 0-MWD+IGRF — **Offset Well Error:** 0.50 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,400.00	10,364.00	10,368.17	10,364.40	38.09	36.30	-90.40	-130.38	-19.99	587.65	514.74	72.91	8.060	
10,500.00	10,464.00	10,468.17	10,464.40	38.43	36.66	-90.40	-130.38	-19.99	587.65	514.04	73.62	7.983	
10,600.00	10,564.00	10,568.17	10,564.40	38.77	37.01	-90.40	-130.38	-19.99	587.65	513.33	74.32	7.907	
10,700.00	10,664.00	10,668.17	10,664.40	39.11	37.37	-90.40	-130.38	-19.99	587.65	512.63	75.03	7.833	
10,800.00	10,764.00	10,768.17	10,764.40	39.45	37.72	-90.40	-130.38	-19.99	587.65	511.92	75.73	7.760	
10,900.00	10,864.00	10,868.17	10,864.40	39.79	38.08	-90.40	-130.38	-19.99	587.65	511.22	76.44	7.688	
11,000.00	10,964.00	10,968.17	10,964.40	40.13	38.44	-90.40	-130.38	-19.99	587.65	510.51	77.14	7.618	
11,100.00	11,064.00	11,068.17	11,064.40	40.47	38.79	-90.40	-130.38	-19.99	587.65	509.81	77.85	7.549	
11,200.00	11,164.00	11,168.17	11,164.40	40.81	39.15	-90.40	-130.38	-19.99	587.65	509.10	78.55	7.481	
11,300.00	11,264.00	11,268.17	11,264.40	41.15	39.50	-90.40	-130.38	-19.99	587.65	508.39	79.26	7.414	
11,400.00	11,364.00	11,368.17	11,364.40	41.49	39.86	-90.40	-130.38	-19.99	587.65	507.69	79.97	7.349	
11,500.00	11,464.00	11,468.17	11,464.40	41.83	40.21	-90.40	-130.38	-19.99	587.65	506.98	80.67	7.284	
11,600.00	11,564.00	11,568.17	11,564.40	42.18	40.57	-90.40	-130.38	-19.99	587.65	506.27	81.38	7.221	
11,700.00	11,664.00	11,668.17	11,664.40	42.52	40.93	-90.40	-130.38	-19.99	587.65	505.57	82.09	7.159	
11,700.01	11,664.02	11,668.18	11,664.42	42.52	40.93	-90.40	-130.38	-19.99	587.65	505.57	82.09	7.159	
11,800.00	11,763.98	11,768.14	11,764.38	42.86	41.28	-90.52	-130.38	-19.99	587.66	504.87	82.80	7.098	
11,900.00	11,862.70	11,868.73	11,864.62	43.18	41.63	-91.33	-123.65	-20.03	587.85	504.36	83.49	7.041	
12,000.00	11,957.31	11,970.90	11,963.67	43.47	41.96	-92.12	-99.13	-20.20	588.26	504.12	84.14	6.991	
12,100.00	12,044.91	12,074.63	12,058.16	43.72	42.27	-92.86	-56.68	-20.48	588.87	504.13	84.74	6.949	
12,200.00	12,122.86	12,179.85	12,144.60	43.92	42.56	-93.50	3.05	-20.87	589.64	504.34	85.30	6.912	
12,300.00	12,188.78	12,286.44	12,219.55	44.09	42.85	-94.04	78.62	-21.37	590.51	504.66	85.85	6.879	
12,400.00	12,240.67	12,394.19	12,279.79	44.23	43.16	-94.44	167.76	-21.96	591.41	505.00	86.41	6.844	
12,500.00	12,276.96	12,502.84	12,322.58	44.41	43.50	-94.70	267.45	-22.61	592.28	505.25	87.03	6.806	
12,600.00	12,296.54	12,612.07	12,345.88	44.66	43.87	-94.81	374.00	-23.32	593.07	505.34	87.73	6.760	
12,700.00	12,300.00	12,718.01	12,350.00	44.99	44.27	-94.79	479.77	-24.01	593.75	505.25	88.50	6.709	
12,800.00	12,300.00	12,818.01	12,350.00	45.42	44.71	-94.79	579.76	-24.67	594.41	505.04	89.37	6.651	
12,900.00	12,300.00	12,918.00	12,350.00	45.93	45.22	-94.78	679.76	-25.33	595.07	504.67	90.40	6.583	
13,000.00	12,300.00	13,018.00	12,350.00	46.51	45.81	-94.78	779.76	-25.99	595.72	504.15	91.58	6.505	
13,100.00	12,300.00	13,118.00	12,350.00	47.17	46.48	-94.77	879.75	-26.65	596.38	503.49	92.90	6.420	
13,200.00	12,300.00	13,218.00	12,350.00	47.89	47.21	-94.77	979.75	-27.31	597.04	502.69	94.35	6.328	
13,300.00	12,300.00	13,317.99	12,350.00	48.68	48.00	-94.76	1,079.74	-27.97	597.70	501.76	95.94	6.230	
13,400.00	12,300.00	13,417.99	12,350.00	49.52	48.86	-94.76	1,179.74	-28.63	598.35	500.71	97.65	6.128	
13,500.00	12,300.00	13,517.99	12,350.00	50.43	49.78	-94.75	1,279.73	-29.29	599.01	499.53	99.48	6.022	
13,600.00	12,300.00	13,617.99	12,350.00	51.39	50.76	-94.74	1,379.73	-29.95	599.67	498.25	101.42	5.913	
13,700.00	12,300.00	13,717.99	12,350.00	52.41	51.79	-94.74	1,479.73	-30.61	600.33	496.86	103.46	5.802	
13,800.00	12,300.00	13,817.98	12,350.00	53.47	52.86	-94.73	1,579.72	-31.27	600.98	495.38	105.61	5.691	
13,900.00	12,300.00	13,917.98	12,350.00	54.58	53.99	-94.73	1,679.72	-31.93	601.64	493.80	107.84	5.579	
14,000.00	12,300.00	14,017.98	12,350.00	55.74	55.16	-94.72	1,779.71	-32.59	602.30	492.13	110.17	5.467	
14,100.00	12,300.00	14,117.98	12,350.00	56.93	56.36	-94.72	1,879.71	-33.25	602.95	490.38	112.57	5.356	
14,200.00	12,300.00	14,217.97	12,350.00	58.16	57.61	-94.71	1,979.70	-33.91	603.61	488.55	115.06	5.246	
14,300.00	12,300.00	14,317.97	12,350.00	59.43	58.90	-94.71	2,079.70	-34.57	604.27	486.65	117.62	5.138	
14,400.00	12,300.00	14,417.97	12,350.00	60.74	60.21	-94.70	2,179.70	-35.23	604.93	484.69	120.24	5.031	
14,500.00	12,300.00	14,517.97	12,350.00	62.07	61.56	-94.70	2,279.69	-35.89	605.58	482.66	122.93	4.926	Alert
14,600.00	12,300.00	14,617.97	12,350.00	63.44	62.94	-94.69	2,379.69	-36.55	606.24	480.57	125.67	4.824	Alert
14,700.00	12,300.00	14,717.96	12,350.00	64.83	64.35	-94.69	2,479.68	-37.21	606.90	478.43	128.47	4.724	Alert
14,800.00	12,300.00	14,817.96	12,350.00	66.25	65.78	-94.68	2,579.68	-37.86	607.56	476.23	131.33	4.626	Alert
14,900.00	12,300.00	14,917.96	12,350.00	67.69	67.24	-94.68	2,679.67	-38.52	608.21	473.99	134.23	4.531	Alert
15,000.00	12,300.00	15,017.96	12,350.00	69.16	68.72	-94.67	2,779.67	-39.18	608.87	471.70	137.17	4.439	Alert
15,100.00	12,300.00	15,117.96	12,350.00	70.64	70.22	-94.67	2,879.66	-39.84	609.53	469.36	140.16	4.349	Alert
15,200.00	12,300.00	15,217.95	12,350.00	72.15	71.74	-94.66	2,979.66	-40.50	610.19	466.99	143.19	4.261	Alert
15,300.00	12,300.00	15,317.95	12,350.00	73.68	73.28	-94.66	3,079.66	-41.16	610.84	464.58	146.26	4.176	Alert
15,400.00	12,300.00	15,417.95	12,350.00	75.22	74.84	-94.65	3,179.65	-41.82	611.50	462.14	149.36	4.094	Alert

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

Company:	WCDSC Permian NM	**Local Co-ordinate Reference:**	Well Flagler 8 Fed Com 10H
Project:	Lea County (NAD83 New Mexico East)	**TVD Reference:**	RKB @ 3498.70ft
Reference Site:	Sec 08-T25S-R33E	**MD Reference:**	RKB @ 3498.70ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Flagler 8 Fed Com 10H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.50 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM r5000.141_Prod US
Reference Design:	Permit Plan 3	**Offset TVD Reference:**	Offset Datum

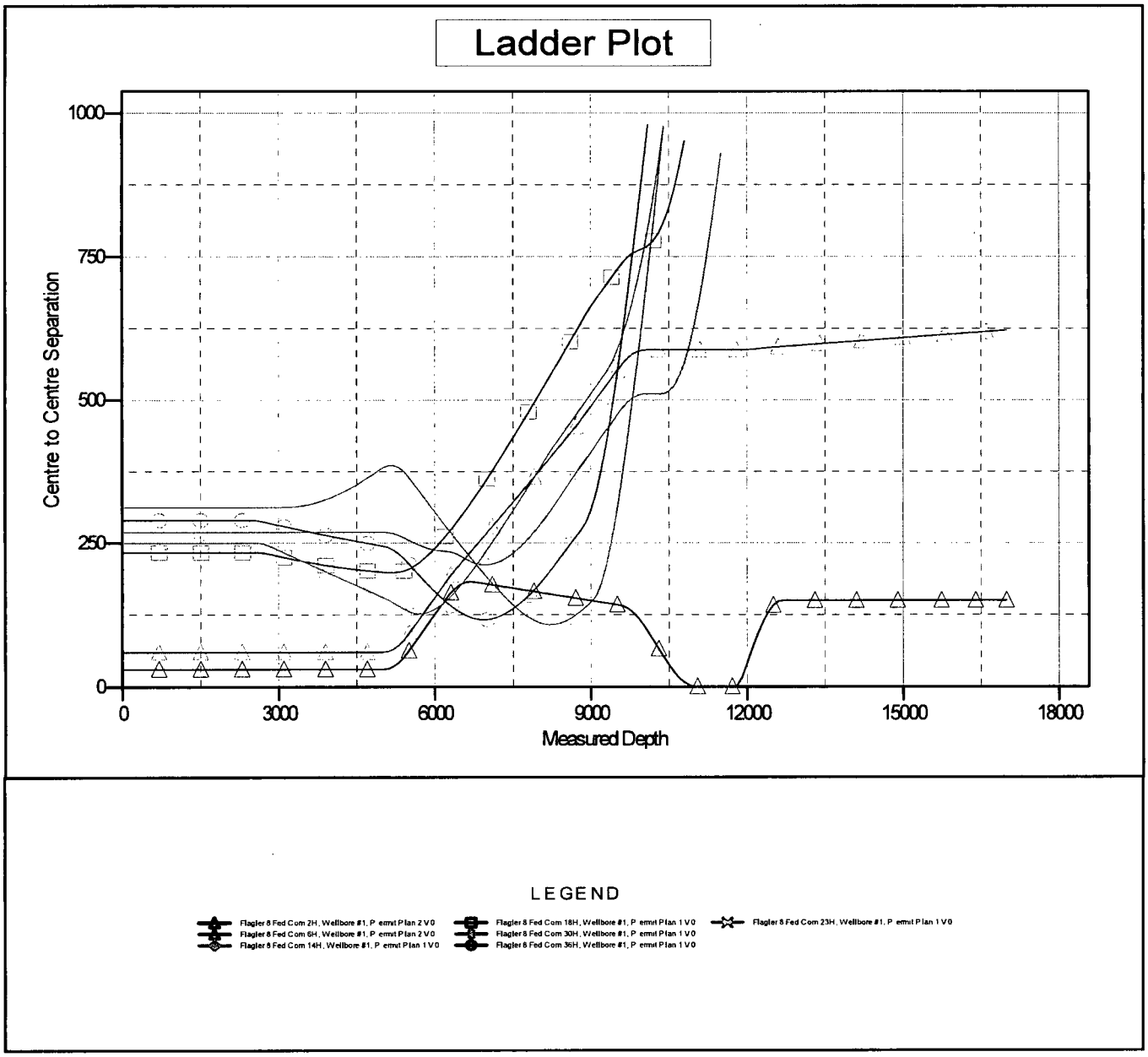
Offset Design Sec 08-T25S-R33E - Flagler 8 Fed Com 6H - Wellbore #1 - Permit Plan 2 — **Offset Site Error:** 0.00 ft

Survey Program: 0-MWD+IGRF — **Offset Well Error:** 0.50 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
15,500.00	12,300.00	15,517.95	12,350.00	76.78	76.42	-94.65	3,279.65	-42.48	612.16	459.66	152.50	4.014	Alert
15,600.00	12,300.00	15,617.94	12,350.00	78.36	78.00	-94.64	3,379.64	-43.14	612.82	457.15	155.66	3.937	Alert
15,700.00	12,300.00	15,717.94	12,350.00	79.95	79.61	-94.64	3,479.64	-43.80	613.47	454.61	158.86	3.862	Alert
15,800.00	12,300.00	15,817.94	12,350.00	81.56	81.23	-94.63	3,579.63	-44.46	614.13	452.05	162.08	3.789	Alert
15,900.00	12,300.00	15,917.94	12,350.00	83.18	82.86	-94.63	3,679.63	-45.12	614.79	449.46	165.33	3.719	Alert
16,000.00	12,300.00	16,017.94	12,350.00	84.81	84.50	-94.62	3,779.63	-45.78	615.45	446.84	168.60	3.650	Alert
16,100.00	12,300.00	16,117.93	12,350.00	86.45	86.15	-94.62	3,879.62	-46.44	616.10	444.20	171.90	3.584	Alert
16,200.00	12,300.00	16,217.93	12,350.00	88.11	87.82	-94.61	3,979.62	-47.10	616.76	441.54	175.22	3.520	Alert
16,300.00	12,300.00	16,317.93	12,350.00	89.77	89.49	-94.61	4,079.61	-47.76	617.42	438.86	178.56	3.458	Alert
16,400.00	12,300.00	16,417.93	12,350.00	91.45	91.18	-94.60	4,179.61	-48.42	618.07	436.16	181.91	3.398	Alert
16,500.00	12,300.00	16,517.92	12,350.00	93.13	92.87	-94.60	4,279.60	-49.08	618.73	433.44	185.29	3.339	Alert
16,600.00	12,300.00	16,617.92	12,350.00	94.82	94.58	-94.59	4,379.60	-49.74	619.39	430.71	188.68	3.283	Alert
16,700.00	12,300.00	16,717.92	12,350.00	96.52	96.29	-94.59	4,479.60	-50.40	620.05	427.96	192.09	3.228	Alert
16,800.00	12,300.00	16,817.92	12,350.00	98.23	98.01	-94.58	4,579.59	-51.06	620.70	425.19	195.52	3.175	Alert
16,900.00	12,300.00	16,917.92	12,350.00	99.95	99.70	-94.58	4,679.59	-51.71	621.36	422.43	198.93	3.124	Alert
16,989.88	12,300.00	17,007.79	12,350.00	101.50	101.12	-94.57	4,769.46	-52.31	621.95	420.06	201.89	3.081	Alert

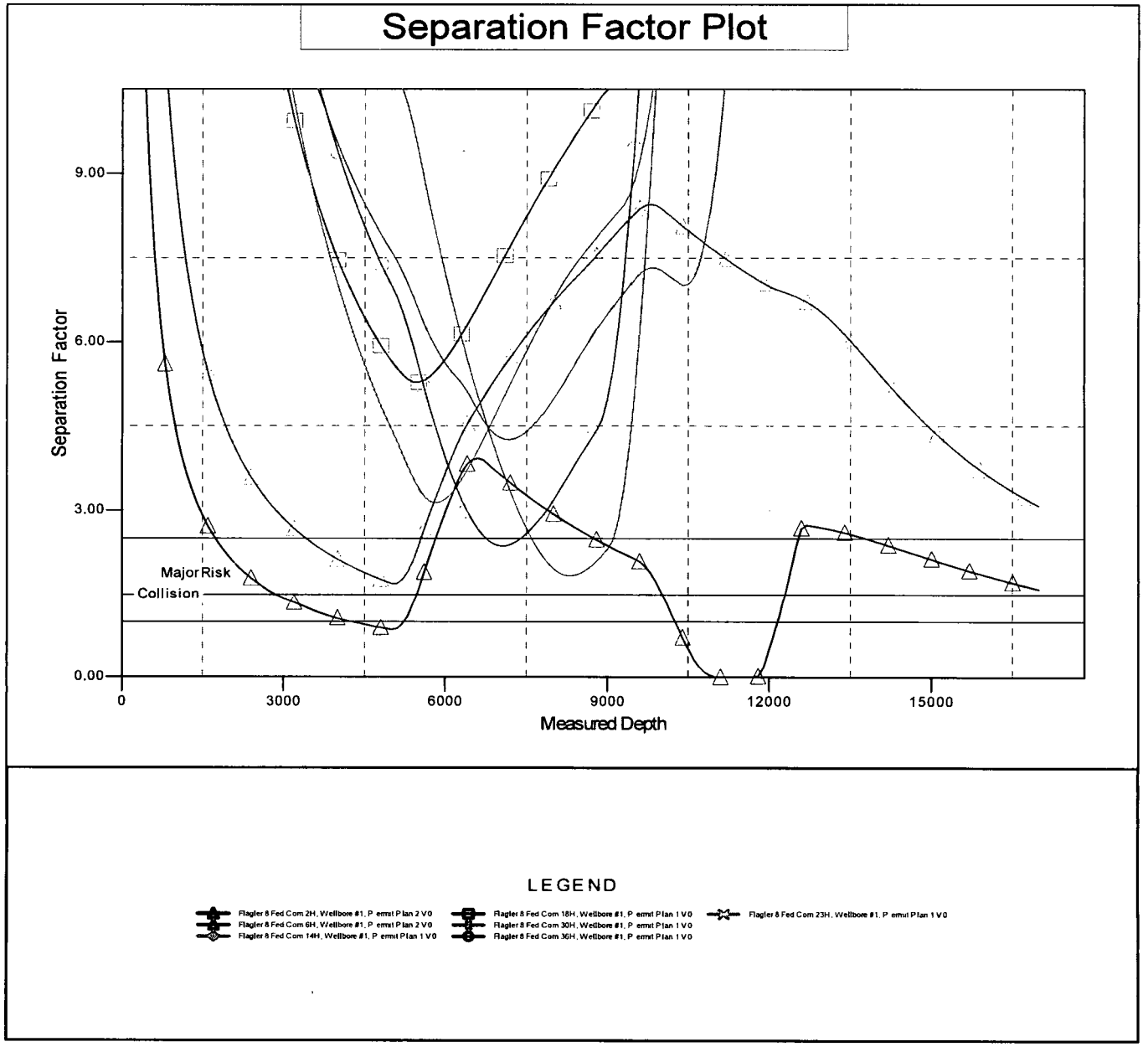
Company:	WCDSC Permian NM	**Local Co-ordinate Reference:**	Well Flagler 8 Fed Com 10H
Project:	Lea County (NAD83 New Mexico East)	**TVD Reference:**	RKB @ 3498.70ft
Reference Site:	Sec 08-T25S-R33E	**MD Reference:**	RKB @ 3498.70ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Flagler 8 Fed Com 10H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.50 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM r5000.141_Prod US
Reference Design:	Permit Plan 3	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to RKB @ 3498.70ft	Coordinates are relative to: Flagler 8 Fed Com 10H
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Central Meridian is -104.333334	Grid Convergence at Surface is: 0.39°



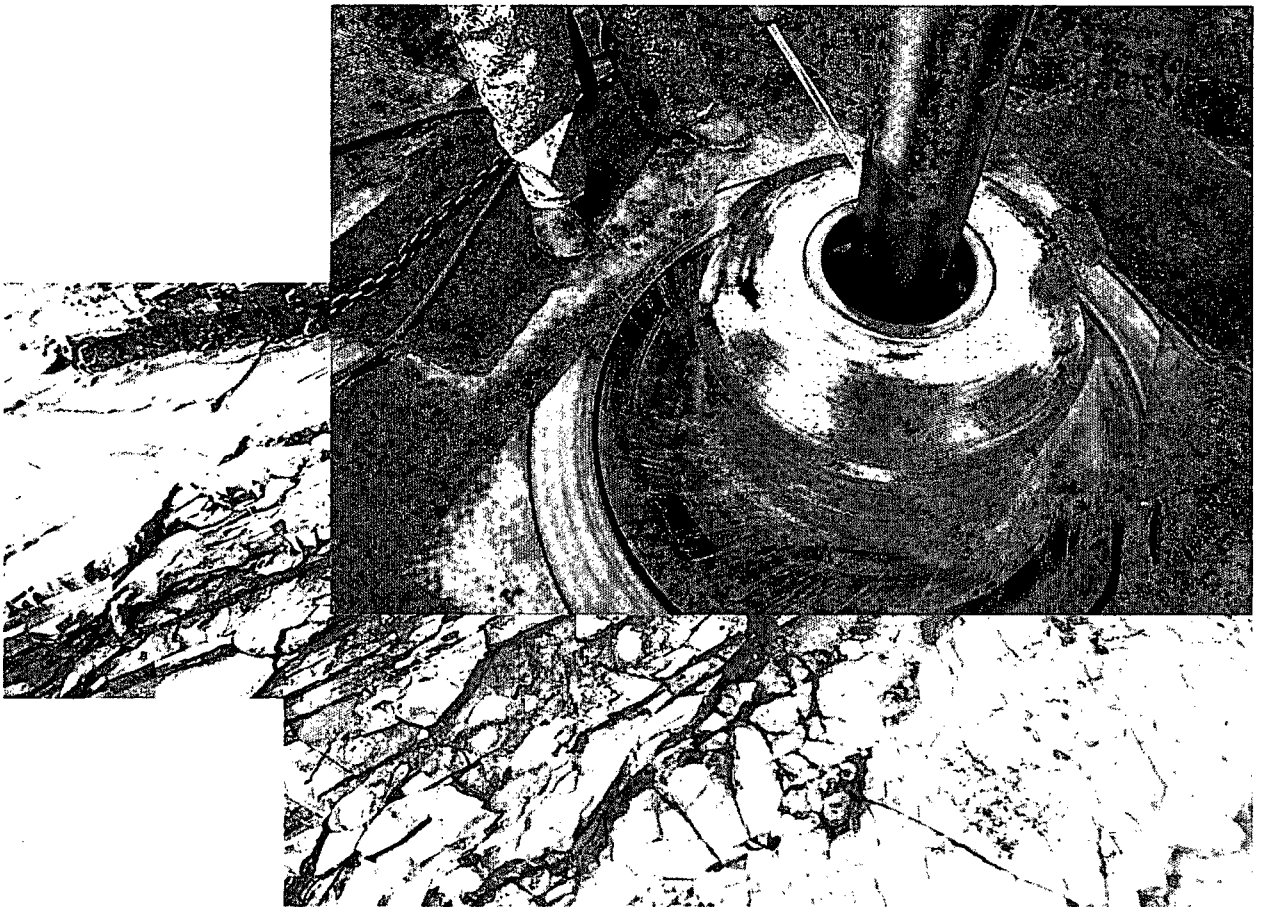
Company:	WCDSC Permian NM	**Local Co-ordinate Reference:**	Well Flagler 8 Fed Com 10H
Project:	Lea County (NAD83 New Mexico East)	**TVD Reference:**	RKB @ 3498.70ft
Reference Site:	Sec 08-T25S-R33E	**MD Reference:**	RKB @ 3498.70ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Flagler 8 Fed Com 10H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.50 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Wellbore #1	**Database:**	EDM r5000.141_Prod US
Reference Design:	Permit Plan 3	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to RKB @ 3498.70ft	Coordinates are relative to: Flagler 8 Fed Com 10H
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Central Meridian is -104.333334	Grid Convergence at Surface is: 0.39°



devon

Commitment Runs Deep



Design Plan
Operation and Maintenance Plan
Closure Plan

SENM - Closed Loop Systems
June 2010

I. Design Plan

Devon uses MI SWACO closed loop system (CLS). The MI SWACO CLS is designed to maintain drill solids at or below 5%. The equipment is arranged to progressively remove solids from the largest to the smallest size. Drilling fluids can thus be reused and savings is realized on mud and disposal costs. Dewatering may be required with the centrifuges to insure removal of ultra fine solids.

The drilling location is constructed to allow storm water to flow to a central sump normally the cellar. This insures no contamination leaves the drilling pad in the event of a spill. Storm water is reused in the mud system or stored in a reserve fluid tank farm until it can be reused. All lubricants, oils, or chemicals are removed immediately from the ground to prevent the contamination of storm water. An oil trap is normally installed on the sump if an oil spill occurs during a storm.

A tank farm is utilized to store drilling fluids including fresh water and brine fluids. The tank farm is constructed on a 20 ml plastic lined, bermed pad to prevent the contamination of the drilling site during a spill. Fluids from other sites may be stored in these tanks for processing by the solids control equipment and reused in the mud system. At the end of the well the fluids are transported from the tank farm to an adjoining well or to the next well for the rig.

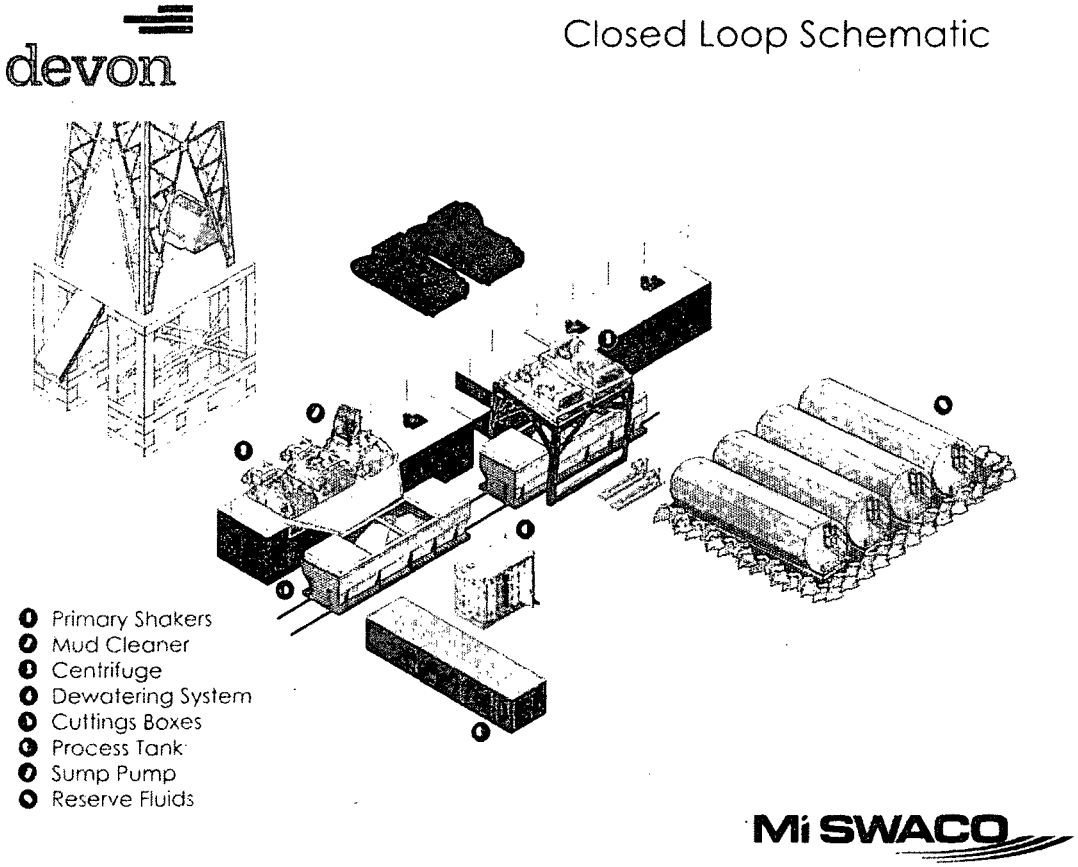
Prior to installing a closed-loop system on site, the topsoil, if present, will be stripped and stockpiled for use as the final cover or fill at the time of closure.

Signs will be posted on the fence surrounding the closed-loop system unless the closed-loop system is located on a site where there is an existing well, that is operated by Devon.

II. Operations and Maintenance Plan

Primary Shakers: The primary shakers make the first removal of drill solids from the drilling mud as it leaves the well bore. The shakers are sized to handle maximum drilling rate at optimal screen size. The shakers normally remove solids down to 74 microns.

Mud Cleaner: The Mud Cleaner cleans the fluid after it leaves the shakers. A set of hydrocyclones are sized to handle 1.25 to 1.5 times the maximum circulating rate. This ensures all the fluid is being processed to an average cut point of 25 microns. The wet discharged is dewatered on a shaker equipped with ultra fine mesh screens and generally cut at 40 microns.



Centrifuges: The centrifuges can be one or two in number depending on the well geometry or depth of well. The centrifuges are sized to maintain low gravity solids at 5% or below. They may or may not need a dewatering system to enhance the removal rates. The centrifuges can make a cut point of 8-10 microns depending on bowl speed, feed rate, solids loading and other factors.

The centrifuge system is designed to work on the active system and be flexible to process incoming fluids from other locations. This set-up is also dependant on well factors.

Dewatering System: The dewatering system is a chemical mixing and dosing system designed to enhance the solids removal of the centrifuge. Not commonly used in shallow wells. It may contain pH adjustment, coagulant mixing and dosing, and polymer mixing and dosing. Chemical flocculation binds ultra fine solids into a mass that is within the centrifuge operating design. The

dewatering system improves the centrifuge cut point to infinity or allows for the return of clear water or brine fluid. This ability allows for the ultimate control of low gravity solids.

Cuttings Boxes: Cuttings boxes are utilized to capture drill solids that are discarded from the solids control equipment. These boxes are set upon a rail system that allows for the removal and replacement of a full box of cuttings with an empty one. They are equipped with a cover that insures no product is spilled into the environment during the transportation phase.

Process Tank: (Optional) The process tank allows for the holding and process of fluids that are being transferred into the mud system. Additionally, during times of lost circulation the process tank may hold active fluids that are removed for additional treatment. It can further be used as a mixing tank during well control conditions.

Sump and Sump Pump: The sump is used to collect storm water and the pump is used to transfer this fluid to the active system or to the tank for to hold in reserve. It can also be used to collect fluids that may escape during spills. The location contains drainage ditches that allow the location fluids to drain to the sump.

Reserve Fluids (Tank Farm): A series of frac tanks are used to replace the reserve pit. These are steel tanks that are equipped with a manifold system and a transfer pump. These tanks can contain any number of fluids used during the drilling process. These can include fresh water, cut brine, and saturated salt fluid. The fluid can be from the active well or reclaimed fluid from other locations. A 20 ml liner and berm system is employed to ensure the fluids do not migrate to the environment during a spill.

If a leak develops, the appropriate division district office will be notified within 48 hours of the discovery and the leak will be addressed. Spill prevention is accomplished by maintaining pump packing, hoses, and pipe fittings to insure no leaks are occurring. During an upset condition the source of the spill is isolated and repaired as soon as it is discovered. Free liquid is removed by a diaphragm pump and returned to the mud system. Loose topsoil may be used to stabilize the spill and the contaminated soil is excavated and placed in the cuttings boxes. After the well is finished and the rig has moved, the entire location is scrapped and testing will be performed to determine if a release has occurred.

All trash is kept in a wire mesh enclosure and removed to an approved landfill when full. All spent motor oils are kept in separate containers and they are removed and sent to an approved recycling center. Any spilled lubricants, pipe