PECOS DISTRICT
DRILLING CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Devon Energy Production Company LP
LEASE NO.:	NMNM92199
WELL NAME & NO.:	Rio Blanco 4-33 Fed Com 38H
SURFACE HOLE FOOTAGE:	2630'/N & 470'/W
BOTTOM HOLE FOOTAGE	330'/N & 1750'/W
LOCATION:	Section 4, T.23 S., R.34 E., NMPM
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

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

1. The **16** inch surface casing shall be set at approximately **2215** 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.

2. The minimum required fill of cement behind the **11 7/8** inch first intermediate casing is:

   - Cement to surface. If cement does not circulate see B.1.a, c-d above. **Excess calculates to 10% - additional cement might be required.**

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

   Option 1:

   - Cement to surface. Operator shall provide method of verification. **Excess calculates to 13% - additional cement might be required.**

   Option 2:

   Operator has proposed DV tool at depth of 3550', but will adjust cement proportionately if moved. DV tool shall be set a minimum of 50' below previous shoe and a minimum of 200' above current shoe. Operator shall submit sundry if DV tool depth cannot be set in this range. If an ECP is used, it is to be set a minimum of 50' below the shoe to provide cement across the shoe. If it cannot be set below the shoe, a CBL shall be run to verify cement coverage.

   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. **Excess calculates to 14% - additional cement might be required.**

   b. Second stage above DV tool:

      - Cement to surface. If cement does not circulate, contact the appropriate BLM office. **Excess calculates to 3% - additional cement might be required.**

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

- Cement as proposed. Operator shall provide method of verification. **Excess calculates to negative 14% - additional cement will be required.**

Alternate Design

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

5. The **20** inch surface casing shall be set at approximately **2395** 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.

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

6. The minimum required fill of cement behind the **13 3/8** inch first intermediate casing is:

    Option1:

    - Cement to surface. If cement does not circulate see B.5.a, c-d above. **Excess calculates to 9% - additional cement might be required.**

    Option 2:

    Operator has proposed DV tool at depth of 2325', but will adjust cement proportionately if moved. DV tool shall be set a minimum of 50' below previous shoe and a minimum of 200' above current shoe. Operator shall submit sundry

if DV tool depth cannot be set in this range. If an ECP is used, it is to be set a minimum of 50' below the shoe to provide cement across the shoe. If it cannot be set below the shoe, a CBL shall be run to verify cement coverage.

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. **Excess calculates to negative 47% - additional cement will be required.**

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

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

Option 1:

- Cement to surface. Operator shall provide method of verification. **Excess calculates to 9% - additional cement might be required.**

Option 2:

Operator has proposed DV tool at depth of 3450', but will adjust cement proportionately if moved. DV tool shall be set a minimum of 50' below previous shoe and a minimum of 200' above current shoe. Operator shall submit sundry if DV tool depth cannot be set in this range. If an ECP is used, it is to be set a minimum of 50' below the shoe to provide cement across the shoe. If it cannot be set below the shoe, a CBL shall be run to verify cement coverage.

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. **Excess calculates to negative 38% - additional cement might be required.**

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

- Cement as proposed. Operator shall provide method of verification.

C. PRESSURE CONTROL

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

2.

Option 1:

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

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

Option 2:

i. 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 **3000 (3M)** 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. 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.

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 05092018

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.

Devon Energy, Rio Blanco 4-33 Fed Com 38H

1. Geologic Formations

TVD of target	10,142'	Pilot hole depth	N/A
MD at TD:	17,658'	Deepest expected fresh water:	

Basin

Formation	Depth (TVD) from KB	Water/Mineral Bearing/ Target Zone?	Hazards*
Rustler	2287		
Top of Salt	2037		
Base of Salt	4973		
Delaware	5123		
1st BSPG Lime	8437		
1st BSPG Sand	9504		
2nd BSPG Lime	9732		
2nd BSPG Sand	10009		

*H2S, water flows, loss of circulation, abnormal pressures, etc.

Approval Date: 05/16/2018

2. Casing Program (Primary Design)

Hole Size	Casing Interval From	Casing Interval To	Csg. Size	Weight (lbs)	Grade	Conn	Min SF Collapse	Min SF Burst	Min SF Tension
20"	0	2,340'	16"	75	J-55	BTC	1.125	1.00	1.6 Dry 1.8 Wet
13.5"	0	3,500'	11.875"	71.8	Q-125 HC	Vam HD-L	1.125	1.00	1.6 Dry 1.8 Wet
10.625"	0	5,170'	8.625"	32	K55 HC	LTC	1.125	1.00	1.6 Dry 1.8 Wet
7.875"	0	TD	5.5"	17	P110	BTC	1.125	1.00	1.6 Dry 1.8 Wet
				BLM Minimum Safety Factor			1.125	1.00	1.6 Dry 1.8 Wet

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

Casing Program (Alternate Design)

Hole Size	Casing Interval From	Casing Interval To	Csg. Size	Weight (lbs)	Grade	Conn	Min SF Collapse	Min SF Burst	Min SF Tension
26"	0	2,340'	20"	106.5	J-55	BTC	1.125	1.00	1.6 Dry 1.8 Wet
17.5"	0	3,500'	13.375"	54.5	J-55	BTC	1.125	1.00	1.6 Dry 1.8 Wet
12.25"	0	5,170'	9.625"	40	J-55	BTC	1.125	1.00	1.6 Dry 1.8 Wet
8.75"	0	TD	5.5"	17	P110	BTC	1.125	1.00	1.6 Dry 1.8 Wet
				BLM Minimum Safety Factor			1.125	1.00	1.6 Dry 1.8 Wet

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

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

3. Cementing Program (Primary Design)

Casing	# Sks	Wt. lb/ gal	H_20 gal/sk	Yld ft3/ sack	500# Comp. Strength (hours)	Slurry Description
16" Surface	1692	13.5	9.22	1.73	12	Lead: 100% Class C Cement: 4% BWOC Bentonite + 0.125 lbs/sack Poly-E-Flake
	328	14.8	6.32	1.33	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
16" Surface Top Out	1200	14.8	6.32	1.33	6	Primary: Neat Class C Cement
11.875" Int 1	696	12.9	9.81	1.87	14	Lead: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	157	14.8	6.32	1.33	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
11.875" Int 1 Top Out	2235	13.5	9.22	1.73	12	Lead: 100% Class C Cement: 4% BWOC Bentonite + 0.125 lbs/sack Poly-E-Flake
8.625" Int 2	587	12.5	10.89	1.96	20	Lead: (65:35) Class H Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	112	15.6	5.28	1.18	7.5	Tail: Class H Cement + 0.125 lbs/sack Poly-E-Flake
8.625" Int 2 Two Stage	390	12.9	9.81	1.87	14	Lead: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	55	14.8	6.32	1.33	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
	135	12.5	10.89	1.96	20	Lead: (65:35) Class H Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	120	15.6	5.28	1.18	7.5	Tail: Class H Cement + 0.125 lbs/sack Poly-E-Flake
5.5" Prod	338	11	17.38	2.81	20	Lead: NeoCem®
	678	13.2	7.46	1.47	6	Tail: NeoCem®

DV tool depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. If cement is not returned to surface during the primary cement job on the surface casing string, a planned top job will be conducted immediately after completion of the primary job.

Casing String	TOC	% Excess
16" Surface	0ft	75%
11.875" Intermediate 1	0ft	50%
8.625" Intermediate 2	0ft	25%
8.625" Intermediate 2 (Two Stage)	1st Stage = 3550ft / 2nd Stage = 0ft	25%
5.5" Prod	4670'	10%

Cementing Program (Alternate Design)

Casing	# Sks	Wt. lb/ gal	H_20 gal/sk	Yld ft3/ sack	500# Comp. Strength (hours)	Slurry Description
20" Surface	2175	13.7	8.89	1.73	7	Lead: Class C Cement + 2% Bentonite + 5lb/sk Salt
	910	14.8	6.32	1.33	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
20" Surface Top Out	1200	14.8	6.32	1.33	6	Primary: Neat Class C Cement
13.375" Int 1	1440	12.9	9.81	1.87	14	Lead: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	745	14.8	6.32	1.33	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
13.375" Int 1 Two Stage	1020	12.9	9.81	1.87	14	Lead: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	390	14.8	6.32	1.33	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
	DV Tool = 2360ft					
	915	14.8	6.32	1.33	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
9.625" Int 2	780	12.9	9.81	1.87	14	Lead: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	385	14.8	6.32	1.33	6	Tail: Class C Cement + 0.125 lbs/sack Poly-E-Flake
9.625" Int 2 Two Stage	575	12.9	9.81	1.87	14	Lead Stage 1: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	145	14.8	6.32	1.33	6	Tail Stage 1: Class C Cement + 0.125 lbs/sack Poly-E-Flake
	290	12.9	9.81	1.87	14	Lead Stage 2: (65:35) Class C Cement: Poz (Fly Ash): 6% BWOC Bentonite + 5% BWOW Sodium Chloride + 0.125 lbs/sack Poly-E-Flake
	180	14.8	6.32	1.33	6	Tail Stage 2: Class C Cement + 0.125 lbs/sack Poly-E-Flake
5.5" Prod	825	11	17.38	2.811	20	Lead: NeoCem®
	1765	13.2	7.46	1.468	6	Tail: NeoCem®

DV tool depth(s) will be adjusted based on hole conditions and cement volumes will be adjusted proportionally. DV tool will be set a minimum of 50 feet below previous casing and a minimum of 200 feet above current shoe. If cement is not returned to surface during the primary cement job on the surface casing string, a planned top job will be conducted immediately after completion of the primary job.

Casing String	TOC	% Excess
20" Surface	0ft	100%
13.375" Intermediate	0ft	75%
13.375" Intermediate (Two Stage)	1st Stage = 2360ft / 2nd Stage = 0ft	75%
9.625" Intermediate	0ft	50%
9.625" Intermediate (Two Stage)	1st Stage = 3450ft / 2nd Stage = 0ft	50%
5.5" Prod	4670'	10%

4. Pressure Control Equipment (Primary Casing Design)

BOP installed and tested before drilling which hole?	Size	Min Required WP	Type	✓	Tested to:
13-1/2"	13-5/8"	2M	Annular	x	50% testing pressure
			Blind Ram		2M
			Pipe Ram		
			Double Ram		
			Other*		
10-5/8"	13-5/8"	3M	Annular	x	50% testing pressure
			Blind Ram		3M
			Pipe Ram		
			Double Ram	x	
			Other*		
7-5/8"	13-5/8"	3M	Annular	x	50% testing pressure
			Blind Ram		3M
			Pipe Ram		
			Double Ram	x	
			Other*		

*Specify if additional ram is utilized.

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

Pressure Control Equipment (Alternate Casing Design)

BOP installed and tested before drilling which hole?	Size	Min Required WP	Type	✓	Tested to:
17-1/2"	21-1/4"	2M	Annular	x	50% of working pressure
			Blind Ram		2M
			Pipe Ram		
			Double Ram		
			Other*		
12-1/4"	13-5/8"	3M	Annular	x	50% testing pressure
			Blind Ram		3M
			Pipe Ram		
			Double Ram	x	
			Other*		
8-3/4"	13-5/8"	3M	Annular	x	50% testing pressure
			Blind Ram		3M
			Pipe Ram		
			Double Ram	x	
			Other*		

*Specify if additional ram is utilized.

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

5. Mud Program

Depth		Type	Weight (ppg)	Viscosity	Water Loss
From	To				
0	2,340'	FW Gel	8.4-8.6	28-34	N/C
2,340'	3,500'	Saturated Brine	10.0	28-34	N/C
3,500'	5,170'	Cut brine/brine	8.8-10	28-34	N/C
5,170'	TD	Cut brine	8.6-9.2	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

PECOS DISTRICT
SURFACE USE
CONDITIONS OF APPROVAL

OPERATOR'S NAME:	Devon Energy Production Company LP
LEASE NO.:	NMNM92199
WELL NAME & NO.:	Rio Blanco 4-33 Fed Com 38H
SURFACE HOLE FOOTAGE:	2630'/N & 470'/W
BOTTOM HOLE FOOTAGE	330'/N & 1750'/W
LOCATION:	Section 4, T.23 S., R.34 E., NMPM
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.

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)

This Pad is build as you go. No grading all of the pad.

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

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

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

Raptor Nest Mitigation

- A BLM Wildlife Biologist must be contacted by the operator prior to construction activities to determine if the raptor nest/burrow 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/burrow.

Temporary Fencing Requirement

For the following proposed locations, the BLM would require temporary fencing be installed before construction begins. This fencing would stay in place and be maintained throughout the life of the well pads and CTB pads to protect nearby dune land habitat from harm.

- Gaucho Unit 17-17 Pad 5
- Rio Blanco 4-33 Pad 2
- Rio Blanco 4-33 CTB 6
- Rio Blanco 4-33 CTB 9

EXHIBIT NO. 1

Date of Issue: 9/25/17

Bureau of Land Management, Carlsbad Field Office
620 E. Greene Street Carlsbad, NM 88220

Cultural and Archaeological Resources

BLM Report No. NM-523-17-0689

NOTICE OF STIPULATIONS

17-0334

Historic properties in the vicinity of this project are protected by federal law. In order to ensure that they are not damaged or destroyed by construction activities, the project proponent and construction supervisors shall ensure that the following stipulations are implemented.

Project Name:	**Gaucho MDP**
	1). A 3-day preconstruction call-in notification. Contact BLM Inspection and Enforcement at
Required	***2. Professional archaeological monitoring***. Contact your BLM project archaeologist at (575) 234-5917 for assistance.
A. ☒	These stipulations must be given to your monitor at least **5 days** prior to the start of construction.
B. ☒	No construction, including vegetation removal or other site prep may begin prior to the arrival of the monitor.
	3. Cultural site barrier fencing. (Your monitor will assist you).
A. ☐	**A temporary site protection barrier**(s) shall be erected prior to all ground-disturbing activities. The minimum barrier(s) shall consist of upright wooden survey lath spaced no more than ten (10) feet apart and marked with blue ribbon flagging or blue paint. There shall be no construction activities or vehicular traffic past the barrier(s) at any time.
B. ☐	**A permanent, 4-strand barbed wire fence** strung on standard "T-posts" shall be erected prior to all ground-disturbing activities. No construction activities or vehicle traffic are allowed past the fence.
Required	***4. The archaeological monitor shall:***
A. ☐	
B. ☒	Observe all ground-disturbing activities within 100 feet of cultural sites LA 133255, LA 187240, LA 188502.
C. ☐	Ensure that the proposed
D. ☒	Ensure the proposed reroute for LA 133255 and 187240 are adhered to.
E. ☒	Submit a brief monitoring report within 30 days of completion of monitoring.
	If subsurface cultural resources are encountered during the monitoring, all activities shall cease and a BLM-CFO archaeologist shall be notified immediately.
Other:	**IF THE CONTRACT ARCHAEOLOGIST DOES NOT KNOW WHERE THE SITE(S) ARE LOCATED AT PLEASE COME BY THE CARLSBAD BLM AND MAPS AND OTHER DATA WILL BE PROVIDED UPON REQUEST TO THE CONTRACT ARCHAEOLOGIST**

Approval Date: 05/16/2018

Site Protection and Employee Education: It is the responsibility of the project proponent and his construction supervisor to inform all employees and subcontractors that cultural and archaeological sites are to be avoided by all personnel, vehicles, and equipment; and that it is illegal to collect, damage, or disturb cultural resources on Public Lands.

For assistance contact: Bruce Boeke (575) 234-5917

Mitigation measures consist of monitoring and rerouting around documented archaeology sites for this undertaking. Four sites were identified during the block survey. These sites are LA 133255, LA 187240, LA 188502, and LA 65937. Three of these sites require monitoring during construction (LA 133255, LA 187240, and LA 188502). Three sites require a reroute to avoid cultural properties that are being protected by construction (LA 133255, LA 1872140, and LA and LA 65937).

Temporary Fencing Requirement

For the following proposed locations, the BLM would require temporary fencing be installed before construction begins. This fencing would stay in place and be maintained throughout the life of the well pads and CTB pads to protect nearby dune land habitat from harm.

- Gaucho Unit 17-17 Pad 5
- Rio Blanco 4-33 Pad 2
- Rio Blanco 4-33 CTB 6
- Rio Blanco 4-33 CTB 9

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. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

During construction, the proponent shall minimize disturbance to existing fences, water lines, troughs, windmills, and other improvements on public lands. The proponent 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.

Devon will consult with the grazing permittee prior to disturbing any livestock watering or known fresh water pipelines used to provide water to livestock. Should the operator damage any livestock pipelines, known or unknown, the operator will repair lines immediately and consult with the grazing permittee about the possible relocation of the pipeline. Should pipeline relocation be necessary, the operator will provide all the clearances necessary for the relocation.

Due to the sandy soils, relatively flat topography, and lack of drainages within half a mile of the proposed project area, the well pads and CTB pads would not need to be bermed and no further mitigation would be required, *except* for the following proposed action:

For Proposed Action: Gaucho Unit 21-21 Pad 4

- The entire well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad. Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad. The berm shall be maintained through the life of the well and after interim reclamation has been completed.
- Any water erosion that may occur due to the construction of the well pad during the life of the well will be corrected within two weeks and proper measures will be taken to prevent future erosion.

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.

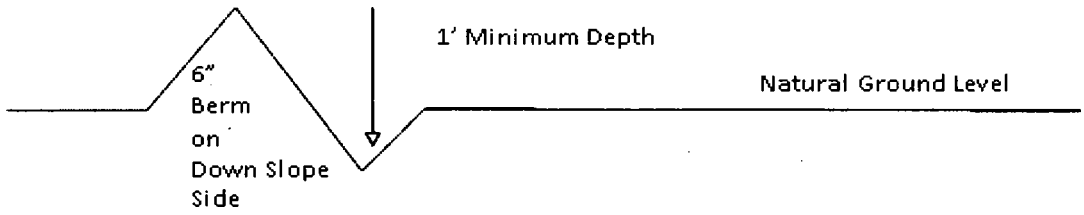
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

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

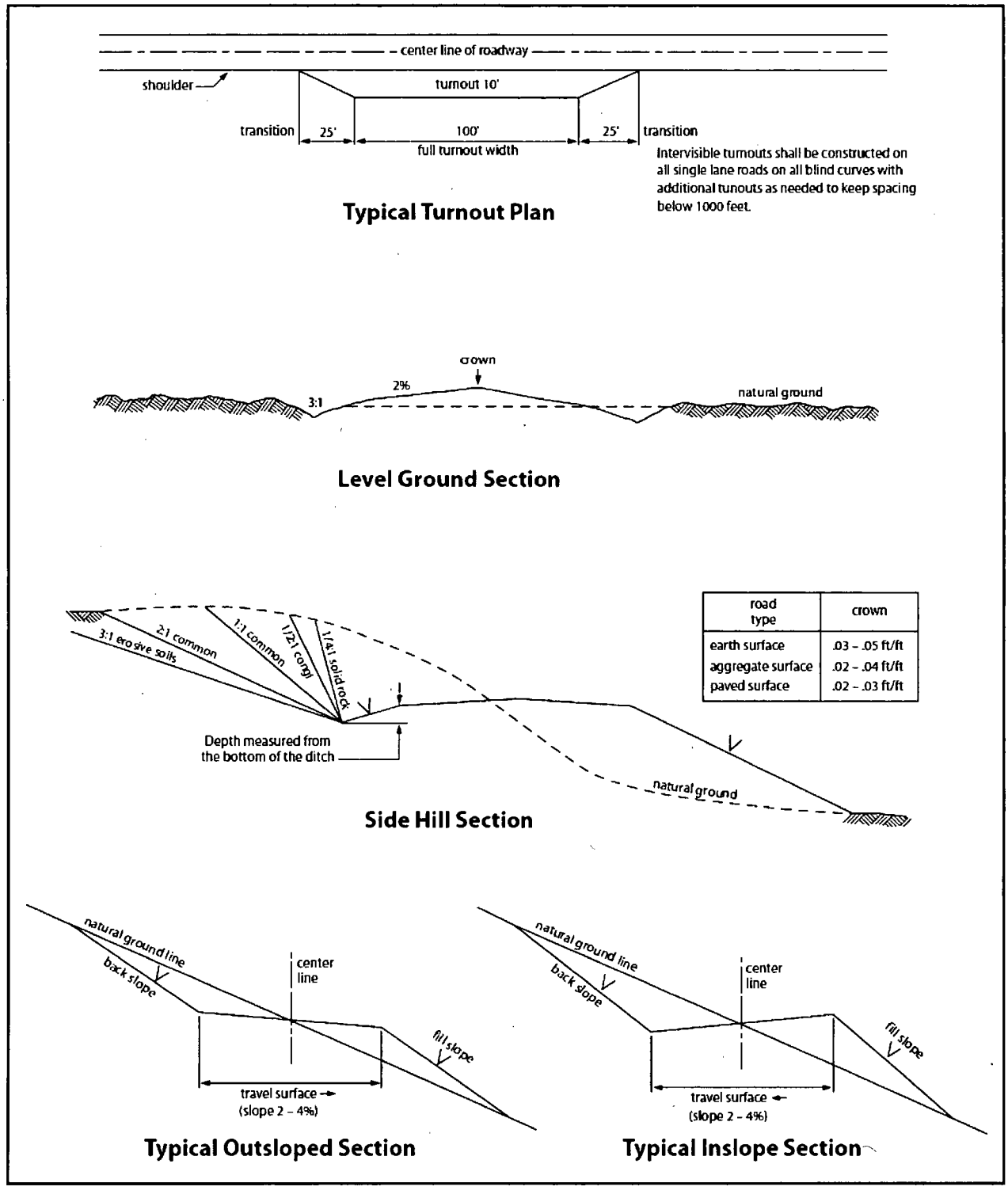


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

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).

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.

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

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.

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

STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES

A copy of the application (Grant, Sundry Notice, APD) 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 activity of the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

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

a. Activities of the holder including, but not limited to construction, operation, maintenance, and termination of the facility.
b. Activities of other parties including, but not limited to:
    (1) Land clearing.
    (2) Earth-disturbing and earth-moving work.
    (3) Blasting.
    (4) Vandalism and sabotage.
c. Acts of God.

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

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

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil, salt water, or other pollutant, wherever found, shall be the responsibility of

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 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 the holder of any responsibility as provided herein.

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

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

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

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

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

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

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

Interagency Committee.

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

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

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

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

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

18. Special Stipulations:

a. **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 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.

b. This authorization is subject to your Certificate of Participation and/or Certificate of Inclusion under the New Mexico Candidate Conservation Agreement. Because it involves surface disturbing activities covered under your Certificate, your Habitat Conservation Fund Account with the Center of Excellence for Hazardous

Materials Management (CEHMM) will be debited according to Exhibit B Part 2 of the Certificate of Participation.

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 Company LP
LEASE NO.:	NMNM92199
WELL NAME & NO.:	Rio Blanco 4-33 Fed Com 38H
SURFACE HOLE FOOTAGE:	2630'/N & 470'/W
BOTTOM HOLE FOOTAGE	330'/N & 1750'/W
LOCATION:	Section 4, T.23 S., R.34 E., NMPM
COUNTY:	Lea County, New Mexico

TABLE OF CONTENTS

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

I. GENERAL PROVISIONS

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

II. PERMIT EXPIRATION

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

III. ARCHAEOLOGICAL, PALEONTOLOGY & HISTORICAL SITES

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

IV. NOXIOUS WEEDS

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

V. SPECIAL REQUIREMENT(S)

This Pad is build as you go. No grading all of the pad.

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

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

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

Raptor Nest Mitigation

- A BLM Wildlife Biologist must be contacted by the operator prior to construction activities to determine if the raptor nest/burrow 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/burrow.

Temporary Fencing Requirement

For the following proposed locations, the BLM would require temporary fencing be installed before construction begins. This fencing would stay in place and be maintained throughout the life of the well pads and CTB pads to protect nearby dune land habitat from harm.

- Gaucho Unit 17-17 Pad 5
- Rio Blanco 4-33 Pad 2
- Rio Blanco 4-33 CTB 6
- Rio Blanco 4-33 CTB 9

EXHIBIT NO. 1

Date of Issue: 9/25/17

Bureau of Land Management, Carlsbad Field Office
620 E. Greene Street Carlsbad, NM 88220

Cultural and Archaeological Resources

BLM Report No. NM-523-17-0689

NOTICE OF STIPULATIONS

17-0334

Historic properties in the vicinity of this project are protected by federal law. In order to ensure that they are not damaged or destroyed by construction activities, the project proponent and construction supervisors shall ensure that the following stipulations are implemented.

Project Name:	**Gaucho MDP**
	1). A 3-day preconstruction call-in notification. Contact BLM Inspection and Enforcement at
Required	***2. Professional archaeological monitoring***. Contact your BLM project archaeologist at (575) 234-5917 for assistance.
A. ☒	These stipulations must be given to your monitor at least **5 days** prior to the start of construction.
B. ☒	No construction, including vegetation removal or other site prep may begin prior to the arrival of the monitor.
	3. Cultural site barrier fencing. (Your monitor will assist you).
A. ☐	**A temporary site protection barrier**(s) shall be erected prior to all ground-disturbing activities. The minimum barrier(s) shall consist of upright wooden survey lath spaced no more than ten (10) feet apart and marked with blue ribbon flagging or blue paint. There shall be no construction activities or vehicular traffic past the barrier(s) at any time.
B. ☐	**A permanent, 4-strand barbed wire fence** strung on standard "T-posts" shall be erected prior to all ground-disturbing activities. No construction activities or vehicle traffic are allowed past the fence.
Required	***4. The archaeological monitor shall:***
A. ☐	
B. ☒	Observe all ground-disturbing activities within 100 feet of cultural sites LA 133255, LA 187240, LA 188502.
C. ☐	Ensure that the proposed
D. ☒	Ensure the proposed reroute for LA 133255 and 187240 are adhered to.
E. ☒	Submit a brief monitoring report within 30 days of completion of monitoring.
	If subsurface cultural resources are encountered during the monitoring, all activities shall cease and a BLM-CFO archaeologist shall be notified immediately.
Other:	**IF THE CONTRACT ARCHAEOLOGIST DOES NOT KNOW WHERE THE SITE(S) ARE LOCATED AT PLEASE COME BY THE CARLSBAD BLM AND MAPS AND OTHER DATA WILL BE PROVIDED UPON REQUEST TO THE CONTRACT ARCHAEOLOGIST**

Approval Date: 05/16/2018

Site Protection and Employee Education: It is the responsibility of the project proponent and his construction supervisor to inform all employees and subcontractors that cultural and archaeological sites are to be avoided by all personnel, vehicles, and equipment; and that it is illegal to collect, damage, or disturb cultural resources on Public Lands.

For assistance contact: Bruce Boeke (575) 234-5917

Mitigation measures consist of monitoring and rerouting around documented archaeology sites for this undertaking. Four sites were identified during the block survey. These sites are LA 133255, LA 187240, LA 188502, and LA 65937. Three of these sites require monitoring during construction (LA 133255, LA 187240, and LA 188502). Three sites require a reroute to avoid cultural properties that are being protected by construction (LA 133255, LA 1872140, and LA and LA 65937).

Temporary Fencing Requirement

For the following proposed locations, the BLM would require temporary fencing be installed before construction begins. This fencing would stay in place and be maintained throughout the life of the well pads and CTB pads to protect nearby dune land habitat from harm.

- Gaucho Unit 17-17 Pad 5
- Rio Blanco 4-33 Pad 2
- Rio Blanco 4-33 CTB 6
- Rio Blanco 4-33 CTB 9

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. The operator shall notify the private surface landowner or the grazing allotment holder prior to crossing any fences.

During construction, the proponent shall minimize disturbance to existing fences, water lines, troughs, windmills, and other improvements on public lands. The proponent 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.

Devon will consult with the grazing permittee prior to disturbing any livestock watering or known fresh water pipelines used to provide water to livestock. Should the operator damage any livestock pipelines, known or unknown, the operator will repair lines immediately and consult with the grazing permittee about the possible relocation of the pipeline. Should pipeline relocation be necessary, the operator will provide all the clearances necessary for the relocation.

Due to the sandy soils, relatively flat topography, and lack of drainages within half a mile of the proposed project area, the well pads and CTB pads would not need to be bermed and no further mitigation would be required, *except* for the following proposed action:

For Proposed Action: Gaucho Unit 21-21 Pad 4

- The entire well pad will be bermed to prevent oil, salt, and other chemical contaminants from leaving the well pad. Topsoil shall not be used to construct the berm. No water flow from the uphill side(s) of the pad shall be allowed to enter the well pad. The berm shall be maintained through the life of the well and after interim reclamation has been completed.
- Any water erosion that may occur due to the construction of the well pad during the life of the well will be corrected within two weeks and proper measures will be taken to prevent future erosion.

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.

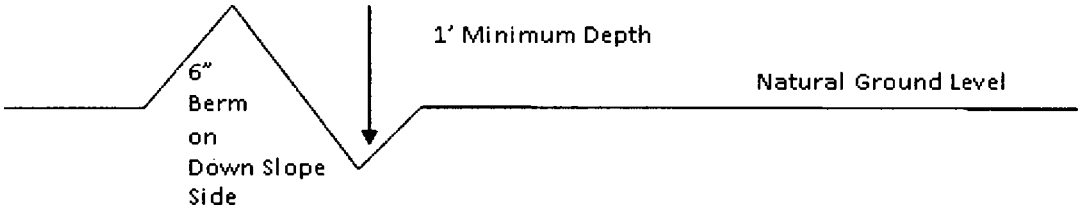
Turnouts
Vehicle turnouts shall be constructed on the road. Turnouts shall be intervisible with interval spacing distance less than 1000 feet. Turnouts shall conform to Figure 1; cross section and plans for typical road construction.

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

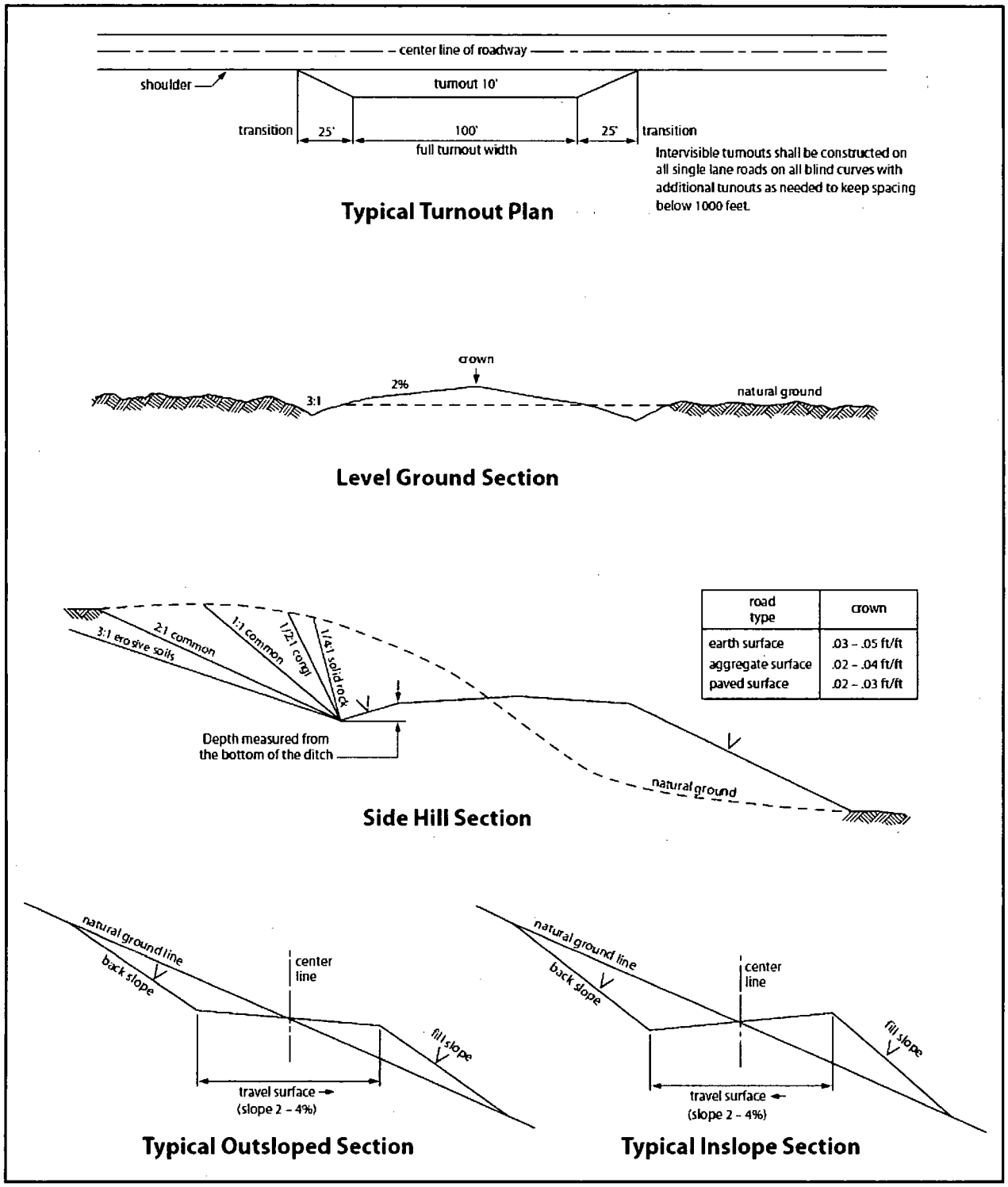


Figure 1. Cross-sections and plans for typical road sections representative of BLM resource or FS local and higher-class roads.

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).

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.

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

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.

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

STANDARD STIPULATIONS FOR SURFACE INSTALLED PIPELINES

A copy of the application (Grant, Sundry Notice, APD) 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 activity of the Right-of-Way holder's activity on the Right-of-Way), or resulting from the activity of the Right-of-Way holder on the Right-of-Way. This agreement applies without regard to whether a release is caused by the holder, its agent, or unrelated third parties.

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

a. Activities of the holder including, but not limited to construction, operation, maintenance, and termination of the facility.
b. Activities of other parties including, but not limited to:
    (1) Land clearing.
    (2) Earth-disturbing and earth-moving work.
    (3) Blasting.
    (4) Vandalism and sabotage.
c. Acts of God.

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

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

5. If, during any phase of the construction, operation, maintenance, or termination of the pipeline, any oil, salt water, or other pollutant should be discharged from the pipeline system, impacting Federal lands, the control and total removal, disposal, and cleaning up of such oil, salt water, or other pollutant, wherever found, shall be the responsibility of

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 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 the holder of any responsibility as provided herein.

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

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

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

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

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

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

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

Interagency Committee.

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

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

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

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

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

18. Special Stipulations:

a. **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 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.

b. This authorization is subject to your Certificate of Participation and/or Certificate of Inclusion under the New Mexico Candidate Conservation Agreement. Because it involves surface disturbing activities covered under your Certificate, your Habitat Conservation Fund Account with the Center of Excellence for Hazardous

Materials Management (CEHMM) will be debited according to Exhibit B Part 2 of the Certificate of Participation.

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

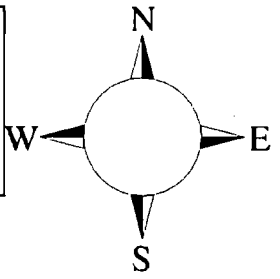
Rio Blanco 4-33 Fed Com 38H

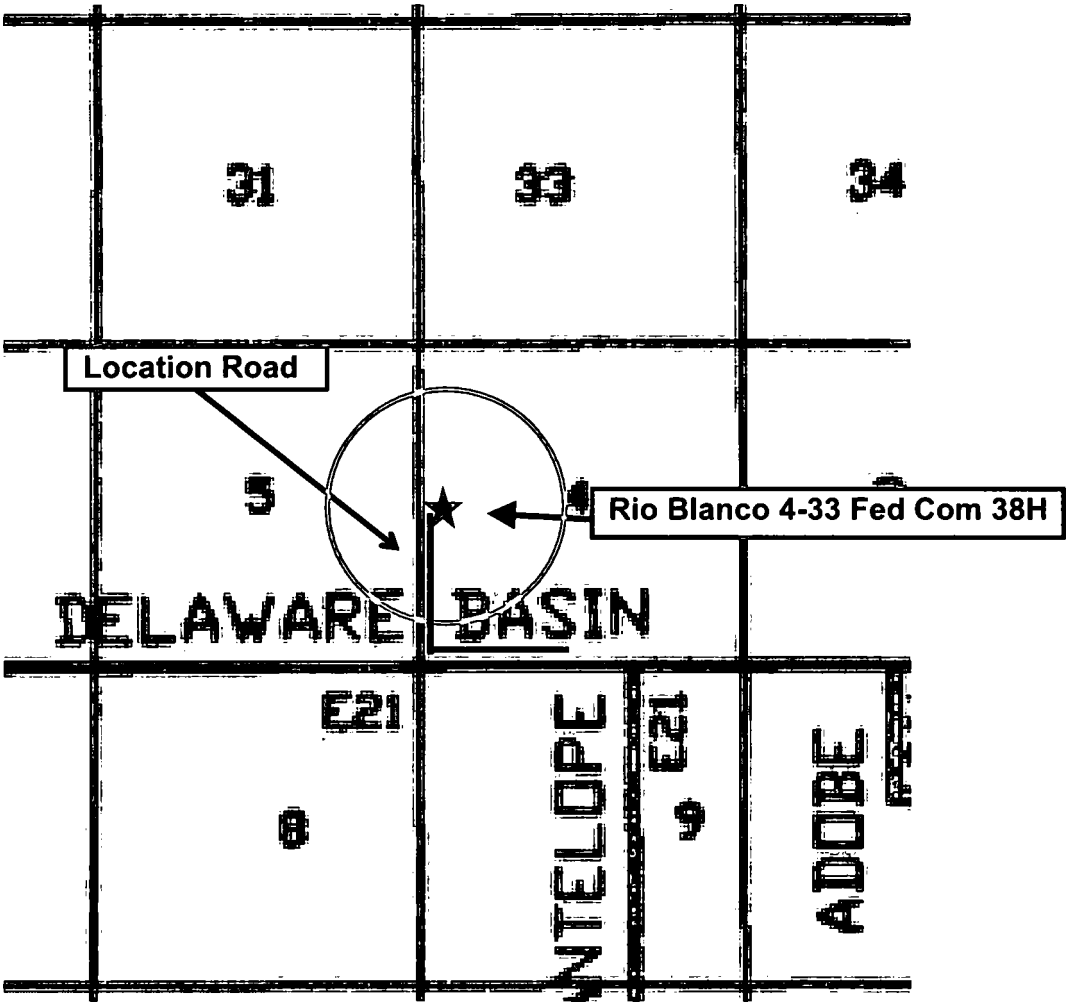
Sec-4 T-23S R-34E
2630' FNL & 470' FWL
LAT. = 32.3336805' N (NAD83)
LONG = 103.4820895' W

Lea County NM

Rio Blanco 4-33 Fed Com 38H

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:**

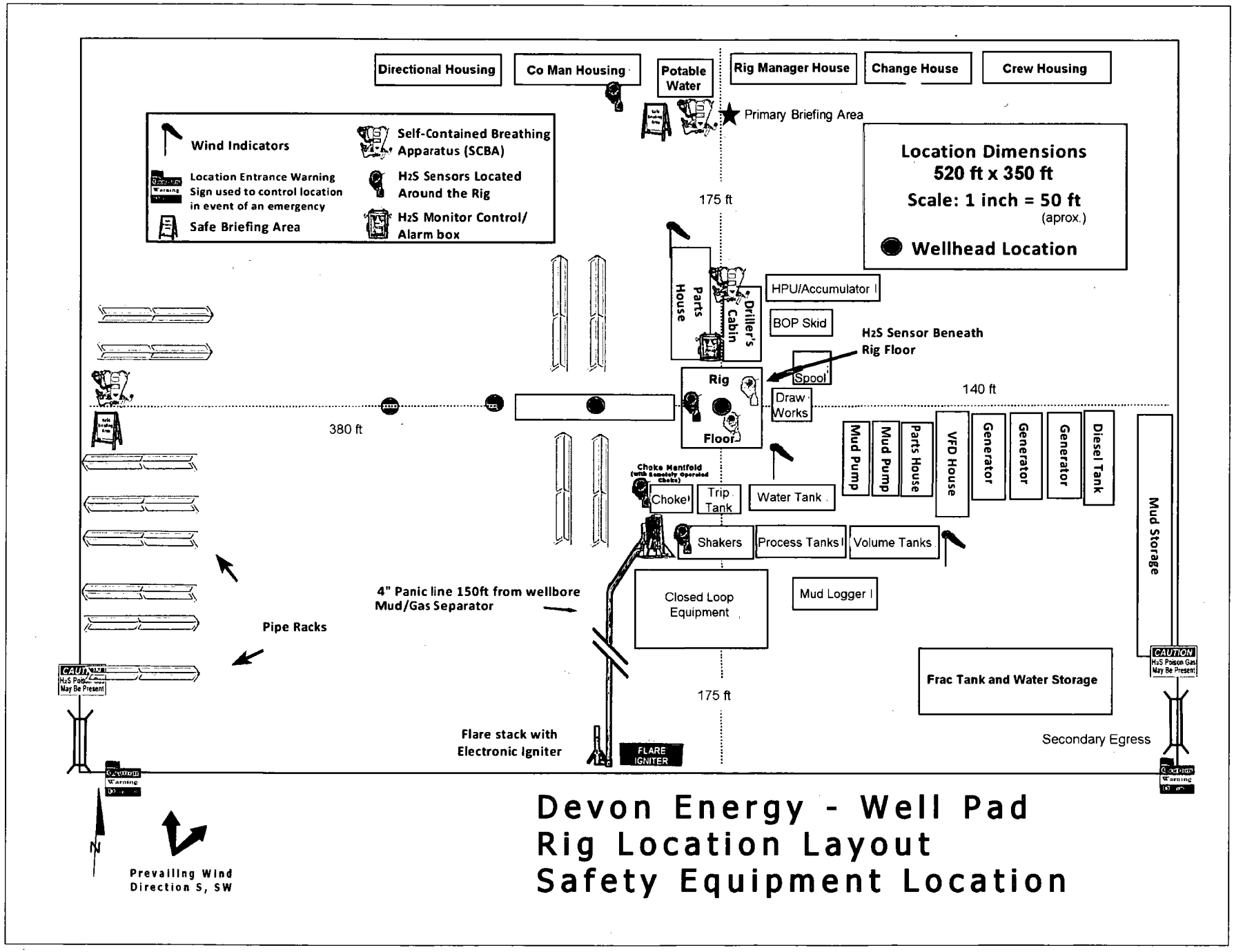
   A. Drill stem testing will be performed with a minimum number of personnel in the immediate vicinity, which are necessary to safety and adequately conduct the test. The drill stem testing will be conducted during daylight hours and formation fluids will not be flowed to the surface. All drill-stem-testing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


Directional Housing
Co Man Housing
Potable Water
Rig Manager House
Change House
Crew Housing
Primary Briefing Area
Wind Indicators
Location Entrance Warning Sign used to control location in event of an emergency
Safe Briefing Area
Self-Contained Breathing Apparatus (SCBA)
H2S Sensors Located Around the Rig
H2S Monitor Control/ Alarm box
Location Dimensions
520 ft x 350 ft
Scale: 1 inch = 50 ft
(aprox.)
Wellhead Location
175 ft
Parts House
Driller's Cabin
HPU/Accumulator
BOP Skid
H2S Sensor Beneath Rig Floor
Spool
Rig Floor
Draw Works
140 ft
380 ft
Mud Pump
Mud Pump
Parts House
VFD House
Generator
Generator
Generator
Diesel Tank
Mud Storage
Choke Manifold
Choke
Trip Tank
Water Tank
Shakers
Process Tanks
Volume Tanks
4" Panic line 150ft from wellbore Mud/Gas Separator
Closed Loop Equipment
Mud Logger
Pipe Racks
Frac Tank and Water Storage
175 ft
Flare stack with Electronic Igniter
FLARE IGNITER
Secondary Egress
CAUTION H2S Poison Gas May Be Present
Prevailing Wind Direction S, SW
Devon Energy - Well Pad
Rig Location Layout
Safety Equipment Location

Database:	WellPlanner1	**Local Co-ordinate Reference:**	Well 38H
Company:	Devon Energy Corp.	**TVD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Project:	Lea County, NM (NAD83)	**MD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Site:	Rio Blanco 4-33 Fed Com	**North Reference:**	Grid
Well:	38H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Prelim Plan		

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

Site	Rio Blanco 4-33 Fed Com				
Site Position:		**Northing:**	486,260.96 usft	**Latitude:**	32° 20' 1.8807 N
From:	Map	**Easting:**	807,694.93 usft	**Longitude:**	103° 28' 15.4463 W
Position Uncertainty:	0.00 usft	**Slot Radius:**	13-3/16 "	**Grid Convergence:**	0.46 °

Well	38H					
Well Position	**+N/-S**	-91.26 usft	**Northing:**	486,169.70 usft	**Latitude:**	32° 20' 1.2498 N
	+E/-W	-3,437.96 usft	**Easting:**	804,256.97 usft	**Longitude:**	103° 28' 55.5224 W
Position Uncertainty		0.00 usft	**Wellhead Elevation:**		**Ground Level:**	3,413.00 usft

Wellbore	OH				
Magnetics	**Model Name**	**Sample Date**	**Declination (°)**	**Dip Angle (°)**	**Field Strength (nT)**
	HDGM	12/20/2017	6.80	60.18	48,166.20

Design	Prelim Plan			
Audit Notes:				
Version:	**Phase:**	PLAN	**Tie On Depth:**	0.00

Vertical Section:	**Depth From (TVD) (usft)**	**+N/-S (usft)**	**+E/-W (usft)**	**Direction (°)**
	0.00	0.00	0.00	359.57

Plan Survey Tool Program **Date** 12/14/2017

	Depth From (usft)	**Depth To (usft)**	**Survey (Wellbore)**	**Tool Name**	**Remarks**
1	0.00	17,658.52	Prelim Plan (OH)	MWD+HDGM	
				OWSG MWD + HDGM	

Database:	WellPlanner1	**Local Co-ordinate Reference:**	Well 38H
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Site:	Rio Blanco 4-33 Fed Com	**North Reference:**	Grid
Well:	38H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Prelim Plan		

Plan Sections

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)	TFO (°)	Target
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00	
3,300.00	8.00	90.00	3,297.40	0.00	55.76	1.00	1.00	0.00	90.00	
5,120.31	8.00	90.00	5,100.00	0.00	309.10	0.00	0.00	0.00	0.00	
5,483.51	15.26	90.00	5,455.50	0.00	382.28	2.00	2.00	0.00	0.00	
8,509.55	15.26	90.00	8,374.79	0.00	1,178.94	0.00	0.00	0.00	0.00	
9,272.76	0.00	0.00	9,129.00	0.00	1,280.00	2.00	-2.00	0.00	180.00	
9,772.76	0.00	0.00	9,629.00	0.00	1,280.00	0.00	0.00	0.00	0.00	
10,590.26	89.93	359.57	10,149.87	520.18	1,276.09	11.00	11.00	-0.05	359.57	
17,658.52	89.93	359.57	10,159.00	7,588.23	1,222.90	0.00	0.00	0.00	0.00	BHL - Rio Blanco 38H

Database:	WellPlanner1	**Local Co-ordinate Reference:**	Well 38H
Company:	Devon Energy Corp.	**TVD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
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Site:	Rio Blanco 4-33 Fed Com	**North Reference:**	Grid
Well:	38H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Prelim Plan		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
1,400.00	0.00	0.00	1,400.00	0.00	0.00	0.00	0.00	0.00	0.00
1,475.00	0.00	0.00	1,475.00	0.00	0.00	0.00	0.00	0.00	0.00
Rustler									
1,500.00	0.00	0.00	1,500.00	0.00	0.00	0.00	0.00	0.00	0.00
1,600.00	0.00	0.00	1,600.00	0.00	0.00	0.00	0.00	0.00	0.00
1,700.00	0.00	0.00	1,700.00	0.00	0.00	0.00	0.00	0.00	0.00
1,800.00	0.00	0.00	1,800.00	0.00	0.00	0.00	0.00	0.00	0.00
1,900.00	0.00	0.00	1,900.00	0.00	0.00	0.00	0.00	0.00	0.00
2,000.00	0.00	0.00	2,000.00	0.00	0.00	0.00	0.00	0.00	0.00
2,100.00	0.00	0.00	2,100.00	0.00	0.00	0.00	0.00	0.00	0.00
2,200.00	0.00	0.00	2,200.00	0.00	0.00	0.00	0.00	0.00	0.00
2,239.00	0.00	0.00	2,239.00	0.00	0.00	0.00	0.00	0.00	0.00
Top of Salt									
2,300.00	0.00	0.00	2,300.00	0.00	0.00	0.00	0.00	0.00	0.00
2,400.00	0.00	0.00	2,400.00	0.00	0.00	0.00	0.00	0.00	0.00
2,500.00	0.00	0.00	2,500.00	0.00	0.00	0.00	0.00	0.00	0.00
Start Build 1.00									
2,600.00	1.00	90.00	2,599.99	0.00	0.87	-0.01	1.00	1.00	0.00
2,700.00	2.00	90.00	2,699.96	0.00	3.49	-0.03	1.00	1.00	0.00
2,800.00	3.00	90.00	2,799.86	0.00	7.85	-0.06	1.00	1.00	0.00
2,900.00	4.00	90.00	2,899.68	0.00	13.96	-0.11	1.00	1.00	0.00
3,000.00	5.00	90.00	2,999.37	0.00	21.80	-0.16	1.00	1.00	0.00
3,100.00	6.00	90.00	3,098.90	0.00	31.39	-0.24	1.00	1.00	0.00
3,200.00	7.00	90.00	3,198.26	0.00	42.71	-0.32	1.00	1.00	0.00
3,300.00	8.00	90.00	3,297.40	0.00	55.76	-0.42	1.00	1.00	0.00
Start 1820.31 hold at 3300.00 MD									
3,400.00	8.00	90.00	3,396.43	0.00	69.68	-0.53	0.00	0.00	0.00
3,500.00	8.00	90.00	3,495.46	0.00	83.59	-0.63	0.00	0.00	0.00
3,600.00	8.00	90.00	3,594.48	0.00	97.51	-0.74	0.00	0.00	0.00
3,700.00	8.00	90.00	3,693.51	0.00	111.43	-0.84	0.00	0.00	0.00
3,800.00	8.00	90.00	3,792.54	0.00	125.35	-0.95	0.00	0.00	0.00
3,900.00	8.00	90.00	3,891.56	0.00	139.26	-1.05	0.00	0.00	0.00
4,000.00	8.00	90.00	3,990.59	0.00	153.18	-1.16	0.00	0.00	0.00
4,100.00	8.00	90.00	4,089.62	0.00	167.10	-1.26	0.00	0.00	0.00
4,200.00	8.00	90.00	4,188.64	0.00	181.02	-1.37	0.00	0.00	0.00
4,300.00	8.00	90.00	4,287.67	0.00	194.93	-1.47	0.00	0.00	0.00
4,400.00	8.00	90.00	4,386.70	0.00	208.85	-1.58	0.00	0.00	0.00
4,500.00	8.00	90.00	4,485.72	0.00	222.77	-1.68	0.00	0.00	0.00
4,571.97	8.00	90.00	4,557.00	0.00	232.78	-1.76	0.00	0.00	0.00
Base of Salt									

Database:	WellPlanner1	**Local Co-ordinate Reference:**	Well 38H
Company:	Devon Energy Corp.	**TVD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Project:	Lea County, NM (NAD83)	**MD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Site:	Rio Blanco 4-33 Fed Com	**North Reference:**	Grid
Well:	38H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Prelim Plan		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
4,600.00	8.00	90.00	4,584.75	0.00	236.68	-1.79	0.00	0.00	0.00
4,700.00	8.00	90.00	4,683.78	0.00	250.60	-1.89	0.00	0.00	0.00
4,800.00	8.00	90.00	4,782.81	0.00	264.52	-2.00	0.00	0.00	0.00
4,900.00	8.00	90.00	4,881.83	0.00	278.44	-2.10	0.00	0.00	0.00
5,000.00	8.00	90.00	4,980.86	0.00	292.35	-2.21	0.00	0.00	0.00
5,100.00	8.00	90.00	5,079.89	0.00	306.27	-2.31	0.00	0.00	0.00
5,120.31	8.00	90.00	5,100.00	0.00	309.10	-2.33	0.00	0.00	0.00
Start DLS 2.00 TFO 0.00									
5,160.74	8.81	90.00	5,140.00	0.00	315.01	-2.38	2.00	2.00	0.00
Delaware									
5,200.00	9.59	90.00	5,178.75	0.00	321.28	-2.42	2.00	2.00	0.00
5,300.00	11.59	90.00	5,277.04	0.00	339.67	-2.56	2.00	2.00	0.00
5,400.00	13.59	90.00	5,374.63	0.00	361.47	-2.73	2.00	2.00	0.00
5,483.51	15.26	90.00	5,455.50	0.00	382.28	-2.89	2.00	2.00	0.00
Start 3026.04 hold at 5483.51 MD									
5,500.00	15.26	90.00	5,471.41	0.00	386.62	-2.92	0.00	0.00	0.00
5,600.00	15.26	90.00	5,567.88	0.00	412.95	-3.12	0.00	0.00	0.00
5,700.00	15.26	90.00	5,664.35	0.00	439.27	-3.32	0.00	0.00	0.00
5,800.00	15.26	90.00	5,760.83	0.00	465.60	-3.51	0.00	0.00	0.00
5,900.00	15.26	90.00	5,857.30	0.00	491.93	-3.71	0.00	0.00	0.00
6,000.00	15.26	90.00	5,953.77	0.00	518.25	-3.91	0.00	0.00	0.00
6,100.00	15.26	90.00	6,050.24	0.00	544.58	-4.11	0.00	0.00	0.00
6,200.00	15.26	90.00	6,146.72	0.00	570.91	-4.31	0.00	0.00	0.00
6,300.00	15.26	90.00	6,243.19	0.00	597.23	-4.51	0.00	0.00	0.00
6,400.00	15.26	90.00	6,339.66	0.00	623.56	-4.71	0.00	0.00	0.00
6,500.00	15.26	90.00	6,436.13	0.00	649.89	-4.90	0.00	0.00	0.00
6,600.00	15.26	90.00	6,532.60	0.00	676.21	-5.10	0.00	0.00	0.00
6,700.00	15.26	90.00	6,629.08	0.00	702.54	-5.30	0.00	0.00	0.00
6,800.00	15.26	90.00	6,725.55	0.00	728.87	-5.50	0.00	0.00	0.00
6,900.00	15.26	90.00	6,822.02	0.00	755.20	-5.70	0.00	0.00	0.00
7,000.00	15.26	90.00	6,918.49	0.00	781.52	-5.90	0.00	0.00	0.00
7,100.00	15.26	90.00	7,014.97	0.00	807.85	-6.10	0.00	0.00	0.00
7,200.00	15.26	90.00	7,111.44	0.00	834.18	-6.30	0.00	0.00	0.00
7,300.00	15.26	90.00	7,207.91	0.00	860.50	-6.49	0.00	0.00	0.00
7,400.00	15.26	90.00	7,304.38	0.00	886.83	-6.69	0.00	0.00	0.00
7,500.00	15.26	90.00	7,400.85	0.00	913.16	-6.89	0.00	0.00	0.00
7,600.00	15.26	90.00	7,497.33	0.00	939.48	-7.09	0.00	0.00	0.00
7,700.00	15.26	90.00	7,593.80	0.00	965.81	-7.29	0.00	0.00	0.00
7,800.00	15.26	90.00	7,690.27	0.00	992.14	-7.49	0.00	0.00	0.00
7,900.00	15.26	90.00	7,786.74	0.00	1,018.46	-7.69	0.00	0.00	0.00
8,000.00	15.26	90.00	7,883.22	0.00	1,044.79	-7.89	0.00	0.00	0.00
8,100.00	15.26	90.00	7,979.69	0.00	1,071.12	-8.08	0.00	0.00	0.00
8,200.00	15.26	90.00	8,076.16	0.00	1,097.44	-8.28	0.00	0.00	0.00
8,300.00	15.26	90.00	8,172.63	0.00	1,123.77	-8.48	0.00	0.00	0.00
8,400.00	15.26	90.00	8,269.11	0.00	1,150.10	-8.68	0.00	0.00	0.00
8,509.55	15.26	90.00	8,374.79	0.00	1,178.94	-8.90	0.00	0.00	0.00
Start Drop -2.00									
8,591.34	13.63	90.00	8,453.99	0.00	1,199.34	-9.05	2.00	-2.00	0.00
1st BSPG Lime									
8,600.00	13.46	90.00	8,462.41	0.00	1,201.37	-9.07	2.00	-2.00	0.00
8,700.00	11.46	90.00	8,560.05	0.00	1,222.94	-9.23	2.00	-2.00	0.00
8,800.00	9.46	90.00	8,658.39	0.00	1,241.08	-9.37	2.00	-2.00	0.00
8,900.00	7.46	90.00	8,757.30	0.00	1,255.78	-9.48	2.00	-2.00	0.00

Database:	WellPlanner1	**Local Co-ordinate Reference:**	Well 38H
Company:	Devon Energy Corp.	**TVD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Project:	Lea County, NM (NAD83)	**MD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Site:	Rio Blanco 4-33 Fed Com	**North Reference:**	Grid
Well:	38H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Prelim Plan		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
9,000.00	5.46	90.00	8,856.66	0.00	1,267.03	-9.56	2.00	-2.00	0.00
9,100.00	3.46	90.00	8,956.35	0.00	1,274.79	-9.62	2.00	-2.00	0.00
9,200.00	1.46	90.00	9,056.25	0.00	1,279.08	-9.65	2.00	-2.00	0.00
9,272.76	0.00	0.00	9,129.00	0.00	1,280.00	-9.66	2.00	-2.00	0.00
Start 500.00 hold at 9272.76 MD									
9,300.00	0.00	0.00	9,156.24	0.00	1,280.00	-9.66	0.00	0.00	0.00
9,400.00	0.00	0.00	9,256.24	0.00	1,280.00	-9.66	0.00	0.00	0.00
9,500.00	0.00	0.00	9,356.24	0.00	1,280.00	-9.66	0.00	0.00	0.00
9,600.00	0.00	0.00	9,456.24	0.00	1,280.00	-9.66	0.00	0.00	0.00
9,664.74	0.00	0.00	9,520.99	0.00	1,280.00	-9.66	0.00	0.00	0.00
1st BSPG Sand									
9,700.00	0.00	0.00	9,556.24	0.00	1,280.00	-9.66	0.00	0.00	0.00
9,772.76	0.00	0.00	9,629.00	0.00	1,280.00	-9.66	0.00	0.00	0.00
Start DLS 11.00 TFO 359.57									
9,800.00	3.00	359.57	9,656.23	0.71	1,279.99	-8.95	11.00	11.00	0.00
9,850.00	8.50	359.57	9,705.96	5.72	1,279.96	-3.94	11.00	11.00	0.00
9,893.85	13.32	359.57	9,749.01	14.01	1,279.89	4.35	11.00	11.00	0.00
2nd BSPG Lime									
9,900.00	14.00	359.57	9,754.98	15.46	1,279.88	5.81	11.00	11.00	0.00
9,950.00	19.50	359.57	9,802.84	29.87	1,279.78	20.21	11.00	11.00	0.00
10,000.00	25.00	359.57	9,849.10	48.79	1,279.63	39.13	11.00	11.00	0.00
10,050.00	30.50	359.57	9,893.34	72.06	1,279.46	62.40	11.00	11.00	0.00
10,100.00	36.00	359.57	9,935.14	99.46	1,279.25	89.80	11.00	11.00	0.00
10,150.00	41.50	359.57	9,974.12	130.74	1,279.02	121.08	11.00	11.00	0.00
10,200.00	47.00	359.57	10,009.92	165.61	1,278.75	155.96	11.00	11.00	0.00
10,224.51	49.69	359.57	10,026.21	183.93	1,278.62	174.27	11.00	11.00	0.00
2nd BSPG Sand									
10,250.00	52.50	359.57	10,042.22	203.76	1,278.47	194.10	11.00	11.00	0.00
10,300.00	58.00	359.57	10,070.71	244.82	1,278.16	235.17	11.00	11.00	0.00
10,350.00	63.50	359.57	10,095.13	288.43	1,277.83	278.77	11.00	11.00	0.00
10,400.00	69.00	359.57	10,115.26	334.17	1,277.49	324.52	11.00	11.00	0.00
10,450.00	74.50	359.57	10,130.92	381.64	1,277.13	371.99	11.00	11.00	0.00
10,500.00	80.00	359.57	10,141.95	430.38	1,276.76	420.73	11.00	11.00	0.00
10,550.00	85.50	359.57	10,148.26	479.96	1,276.39	470.32	11.00	11.00	0.00
10,590.26	89.93	359.57	10,149.87	520.18	1,276.09	510.54	11.00	11.00	0.00
Start 7068.25 hold at 10590.26 MD									
10,600.00	89.93	359.57	10,149.88	529.92	1,276.01	520.27	0.00	0.00	0.00
10,700.00	89.93	359.57	10,150.01	629.92	1,275.26	620.27	0.00	0.00	0.00
10,800.00	89.93	359.57	10,150.14	729.91	1,274.51	720.27	0.00	0.00	0.00
10,900.00	89.93	359.57	10,150.27	829.91	1,273.76	820.27	0.00	0.00	0.00
11,000.00	89.93	359.57	10,150.40	929.91	1,273.00	920.27	0.00	0.00	0.00
11,100.00	89.93	359.57	10,150.53	1,029.90	1,272.25	1,020.27	0.00	0.00	0.00
11,200.00	89.93	359.57	10,150.66	1,129.90	1,271.50	1,120.27	0.00	0.00	0.00
11,300.00	89.93	359.57	10,150.79	1,229.90	1,270.75	1,220.27	0.00	0.00	0.00
11,400.00	89.93	359.57	10,150.92	1,329.90	1,269.99	1,320.27	0.00	0.00	0.00
11,500.00	89.93	359.57	10,151.05	1,429.89	1,269.24	1,420.27	0.00	0.00	0.00
11,600.00	89.93	359.57	10,151.17	1,529.89	1,268.49	1,520.27	0.00	0.00	0.00
11,700.00	89.93	359.57	10,151.30	1,629.89	1,267.74	1,620.27	0.00	0.00	0.00
11,800.00	89.93	359.57	10,151.43	1,729.88	1,266.98	1,720.27	0.00	0.00	0.00
11,900.00	89.93	359.57	10,151.56	1,829.88	1,266.23	1,820.27	0.00	0.00	0.00
12,000.00	89.93	359.57	10,151.69	1,929.88	1,265.48	1,920.27	0.00	0.00	0.00
12,100.00	89.93	359.57	10,151.82	2,029.87	1,264.73	2,020.27	0.00	0.00	0.00
12,200.00	89.93	359.57	10,151.95	2,129.87	1,263.97	2,120.27	0.00	0.00	0.00

Database:	WellPlanner1	**Local Co-ordinate Reference:**	Well 38H
Company:	Devon Energy Corp.	**TVD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Project:	Lea County, NM (NAD83)	**MD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Site:	Rio Blanco 4-33 Fed Com	**North Reference:**	Grid
Well:	38H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Prelim Plan		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
12,300.00	89.93	359.57	10,152.08	2,229.87	1,263.22	2,220.27	0.00	0.00	0.00
12,400.00	89.93	359.57	10,152.21	2,329.87	1,262.47	2,320.27	0.00	0.00	0.00
12,500.00	89.93	359.57	10,152.34	2,429.86	1,261.72	2,420.27	0.00	0.00	0.00
12,600.00	89.93	359.57	10,152.47	2,529.86	1,260.96	2,520.27	0.00	0.00	0.00
12,700.00	89.93	359.57	10,152.60	2,629.86	1,260.21	2,620.27	0.00	0.00	0.00
12,800.00	89.93	359.57	10,152.72	2,729.85	1,259.46	2,720.27	0.00	0.00	0.00
12,900.00	89.93	359.57	10,152.85	2,829.85	1,258.71	2,820.27	0.00	0.00	0.00
13,000.00	89.93	359.57	10,152.98	2,929.85	1,257.95	2,920.27	0.00	0.00	0.00
13,100.00	89.93	359.57	10,153.11	3,029.85	1,257.20	3,020.27	0.00	0.00	0.00
13,200.00	89.93	359.57	10,153.24	3,129.84	1,256.45	3,120.27	0.00	0.00	0.00
13,300.00	89.93	359.57	10,153.37	3,229.84	1,255.70	3,220.27	0.00	0.00	0.00
13,400.00	89.93	359.57	10,153.50	3,329.84	1,254.94	3,320.27	0.00	0.00	0.00
13,500.00	89.93	359.57	10,153.63	3,429.83	1,254.19	3,420.27	0.00	0.00	0.00
13,600.00	89.93	359.57	10,153.76	3,529.83	1,253.44	3,520.27	0.00	0.00	0.00
13,700.00	89.93	359.57	10,153.89	3,629.83	1,252.69	3,620.27	0.00	0.00	0.00
13,800.00	89.93	359.57	10,154.02	3,729.83	1,251.93	3,720.27	0.00	0.00	0.00
13,900.00	89.93	359.57	10,154.15	3,829.82	1,251.18	3,820.27	0.00	0.00	0.00
14,000.00	89.93	359.57	10,154.27	3,929.82	1,250.43	3,920.27	0.00	0.00	0.00
14,100.00	89.93	359.57	10,154.40	4,029.82	1,249.68	4,020.27	0.00	0.00	0.00
14,200.00	89.93	359.57	10,154.53	4,129.81	1,248.92	4,120.27	0.00	0.00	0.00
14,300.00	89.93	359.57	10,154.66	4,229.81	1,248.17	4,220.27	0.00	0.00	0.00
14,400.00	89.93	359.57	10,154.79	4,329.81	1,247.42	4,320.27	0.00	0.00	0.00
14,500.00	89.93	359.57	10,154.92	4,429.80	1,246.67	4,420.27	0.00	0.00	0.00
14,600.00	89.93	359.57	10,155.05	4,529.80	1,245.91	4,520.27	0.00	0.00	0.00
14,700.00	89.93	359.57	10,155.18	4,629.80	1,245.16	4,620.27	0.00	0.00	0.00
14,800.00	89.93	359.57	10,155.31	4,729.80	1,244.41	4,720.27	0.00	0.00	0.00
14,900.00	89.93	359.57	10,155.44	4,829.79	1,243.66	4,820.27	0.00	0.00	0.00
15,000.00	89.93	359.57	10,155.57	4,929.79	1,242.90	4,920.27	0.00	0.00	0.00
15,100.00	89.93	359.57	10,155.70	5,029.79	1,242.15	5,020.27	0.00	0.00	0.00
15,200.00	89.93	359.57	10,155.82	5,129.78	1,241.40	5,120.27	0.00	0.00	0.00
15,300.00	89.93	359.57	10,155.95	5,229.78	1,240.65	5,220.27	0.00	0.00	0.00
15,400.00	89.93	359.57	10,156.08	5,329.78	1,239.89	5,320.27	0.00	0.00	0.00
15,500.00	89.93	359.57	10,156.21	5,429.78	1,239.14	5,420.27	0.00	0.00	0.00
15,600.00	89.93	359.57	10,156.34	5,529.77	1,238.39	5,520.27	0.00	0.00	0.00
15,700.00	89.93	359.57	10,156.47	5,629.77	1,237.64	5,620.27	0.00	0.00	0.00
15,800.00	89.93	359.57	10,156.60	5,729.77	1,236.88	5,720.27	0.00	0.00	0.00
15,900.00	89.93	359.57	10,156.73	5,829.76	1,236.13	5,820.27	0.00	0.00	0.00
16,000.00	89.93	359.57	10,156.86	5,929.76	1,235.38	5,920.27	0.00	0.00	0.00
16,100.00	89.93	359.57	10,156.99	6,029.76	1,234.63	6,020.27	0.00	0.00	0.00
16,200.00	89.93	359.57	10,157.12	6,129.76	1,233.87	6,120.27	0.00	0.00	0.00
16,300.00	89.93	359.57	10,157.25	6,229.75	1,233.12	6,220.27	0.00	0.00	0.00
16,400.00	89.93	359.57	10,157.37	6,329.75	1,232.37	6,320.27	0.00	0.00	0.00
16,500.00	89.93	359.57	10,157.50	6,429.75	1,231.62	6,420.27	0.00	0.00	0.00
16,600.00	89.93	359.57	10,157.63	6,529.74	1,230.86	6,520.27	0.00	0.00	0.00
16,700.00	89.93	359.57	10,157.76	6,629.74	1,230.11	6,620.27	0.00	0.00	0.00
16,800.00	89.93	359.57	10,157.89	6,729.74	1,229.36	6,720.27	0.00	0.00	0.00
16,900.00	89.93	359.57	10,158.02	6,829.74	1,228.61	6,820.27	0.00	0.00	0.00
17,000.00	89.93	359.57	10,158.15	6,929.73	1,227.86	6,920.27	0.00	0.00	0.00
17,100.00	89.93	359.57	10,158.28	7,029.73	1,227.10	7,020.27	0.00	0.00	0.00
17,200.00	89.93	359.57	10,158.41	7,129.73	1,226.35	7,120.27	0.00	0.00	0.00
17,300.00	89.93	359.57	10,158.54	7,229.72	1,225.60	7,220.27	0.00	0.00	0.00
17,400.00	89.93	359.57	10,158.67	7,329.72	1,224.85	7,320.27	0.00	0.00	0.00
17,500.00	89.93	359.57	10,158.80	7,429.72	1,224.09	7,420.27	0.00	0.00	0.00
17,600.00	89.93	359.57	10,158.92	7,529.71	1,223.34	7,520.27	0.00	0.00	0.00

Database:	WellPlanner1	**Local Co-ordinate Reference:**	Well 38H
Company:	Devon Energy Corp.	**TVD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Project:	Lea County, NM (NAD83)	**MD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Site:	Rio Blanco 4-33 Fed Com	**North Reference:**	Grid
Well:	38H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	OH		
Design:	Prelim Plan		

Planned Survey

Measured Depth (usft)	Inclination (°)	Azimuth (°)	Vertical Depth (usft)	+N/-S (usft)	+E/-W (usft)	Vertical Section (usft)	Dogleg Rate (°/100usft)	Build Rate (°/100usft)	Turn Rate (°/100usft)
17,658.52	89.93	359.57	10,159.00	7,588.23	1,222.90	7,578.78	0.00	0.00	0.00
TD at 17658.52									

Formations

Measured Depth (usft)	Vertical Depth (usft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,475.00	1,475.00	Rustler		0.07	359.57
2,239.00	2,239.00	Top of Salt		0.07	359.57
4,571.97	4,557.00	Base of Salt		0.07	359.57
5,160.74	5,140.00	Delaware		0.07	359.57
8,591.34	8,453.99	1st BSPG Lime		0.07	359.57
9,664.74	9,520.99	1st BSPG Sand		0.07	359.57
9,893.85	9,749.01	2nd BSPG Lime		0.07	359.57
10,224.51	10,026.21	2nd BSPG Sand		0.07	359.57

Plan Annotations

Measured Depth (usft)	Vertical Depth (usft)	Local Coordinates +N/-S (usft)	Local Coordinates +E/-W (usft)	Comment
2,500.00	2,500.00	0.00	0.00	Start Build 1.00
3,300.00	3,297.40	0.00	55.76	Start 1820.31 hold at 3300.00 MD
5,120.31	5,100.00	0.00	309.10	Start DLS 2.00 TFO 0.00
5,483.51	5,455.50	0.00	382.28	Start 3026.04 hold at 5483.51 MD
8,509.55	8,374.79	0.00	1,178.94	Start Drop -2.00
9,272.76	9,129.00	0.00	1,280.00	Start 500.00 hold at 9272.76 MD
9,772.76	9,629.00	0.00	1,280.00	Start DLS 11.00 TFO 359.57
10,590.26	10,149.87	520.18	1,276.09	Start 7068.25 hold at 10590.26 MD
17,658.52	10,159.00	7,588.23	1,222.90	TD at 17658.52

devon

Pro Directional

Anticollision Report

PRODIRECTIONAL

Company:	Devon Energy Corp.	**Local Co-ordinate Reference:**	Well 38H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Reference Site:	Rio Blanco 4-33 Fed Com	**MD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	38H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	WellPlanner1
Reference Design:	Prelim Plan	**Offset TVD Reference:**	Reference Datum

Reference	Prelim Plan		
Filter type:	NO GLOBAL FILTER: Using user defined selection & filtering criteria		
Interpolation Method:	MD Interval 100.00usft	**Error Model:**	ISCWSA
Depth Range:	Unlimited	**Scan Method:**	Closest Approach 3D
Results Limited by:	Maximum center-center distance of 9,999.00 usft	**Error Surface:**	Pedal Curve
Warning Levels Evaluated at:	2.00 **Sigma**	**Casing Method:**	Not applied

Survey Tool Program **Date** 12/14/2017

From (usft)	To (usft)	Survey (Wellbore)	Tool Name	Description
0.00	17,658.52	Prelim Plan (OH)	MWD+HDGM	OWSG MWD + HDGM

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (usft)	Offset Measured Depth (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Separation Factor	Warning
Rio Blanco 4-33 (Offsets)						
Rio Blanco 33 Fed 1 - OH - Surveys	13,782.62	10,152.44	77.32	-148.45	0.342	Level 1, CC, ES, SF
Rio Blanco 33 Fed 2 SWD - OH - Surveys	15,694.82	10,163.37	126.37	13.81	1.123	Level 2, CC
Rio Blanco 33 Fed 2 SWD - OH - Surveys	15,700.00	10,163.36	126.47	13.46	1.119	Level 2, ES, SF
Rio Blanco 4 Fed 1 - OH - Surveys	10,641.52	10,146.24	93.46	34.19	1.577	CC, ES, SF
Rio Blanco 4-33 Fed Com						
1H - OH - Plan 1	2,500.00	2,503.00	170.04	152.55	9.723	CC, ES
1H - OH - Plan 1	2,900.00	2,902.68	183.99	163.70	9.065	SF
2H - OH - Surveys	1,315.17	1,317.92	96.23	89.13	13.544	CC, ES
2H - OH - Surveys	17,658.52	17,180.05	1,411.82	1,167.83	5.786	SF
3H - OH - Surveys	1,431.78	1,435.31	42.18	34.32	5.366	CC
3H - OH - Surveys	1,500.00	1,503.12	42.59	34.32	5.154	ES
3H - OH - Surveys	1,600.00	1,602.63	44.39	35.54	5.018	SF

Offset Design Rio Blanco 4-33 (Offsets) - Rio Blanco 33 Fed 1 - OH - Surveys — **Offset Site Error:** 0.00 usft

Survey Program: 200-2° Cone of Uncertainty, 1802-MWD, 2987-2° Cone of Uncertainty — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	5.00	0.00	0.00	17.11	3,639.01	1,120.06	3,807.49				
100.00	100.00	124.25	129.25	0.14	1.90	17.11	3,638.61	1,119.77	3,807.12	3,805.09	2.03	1,871.268	
200.00	200.00	239.59	244.58	0.49	3.74	17.10	3,637.55	1,118.99	3,806.04	3,801.80	4.24	897.678	
300.00	300.00	333.68	338.67	0.85	5.39	17.09	3,636.67	1,118.35	3,804.94	3,798.70	6.24	609.779	
400.00	400.00	427.77	432.75	1.21	7.03	17.09	3,635.92	1,117.80	3,804.00	3,795.76	8.24	461.642	
500.00	500.00	526.38	531.35	1.57	8.75	17.08	3,635.22	1,117.28	3,803.17	3,792.85	10.32	368.553	
600.00	600.00	626.37	631.35	1.93	10.49	17.08	3,634.52	1,116.77	3,802.35	3,789.93	12.42	306.084	
700.00	700.00	720.82	725.79	2.29	12.14	17.08	3,633.90	1,116.31	3,801.58	3,787.15	14.43	263.465	
800.00	800.00	813.55	818.52	2.65	13.76	17.07	3,633.43	1,115.98	3,801.00	3,784.59	16.41	231.686	
900.00	900.00	919.39	924.36	3.00	15.61	17.07	3,632.98	1,115.64	3,800.50	3,781.89	18.61	204.205	
1,000.00	1,000.00	1,033.71	1,038.68	3.36	17.60	17.07	3,632.17	1,115.05	3,799.67	3,778.71	20.96	181.244	
1,100.00	1,100.00	1,212.38	1,217.30	3.72	20.72	17.05	3,629.46	1,113.06	3,798.11	3,773.67	24.44	155.416	
1,200.00	1,200.00	1,388.38	1,393.12	4.08	23.79	17.01	3,622.98	1,108.31	3,793.63	3,765.76	27.86	136.150	
1,300.00	1,300.00	1,519.79	1,524.31	4.44	26.09	16.97	3,616.79	1,103.78	3,788.12	3,757.61	30.51	124.151	
1,400.00	1,400.00	1,584.34	1,588.76	4.80	27.21	16.95	3,613.93	1,101.68	3,782.83	3,750.83	32.00	118.215	

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

Company:	Devon Energy Corp.	**Local Co-ordinate Reference:**	Well 38H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Reference Site:	Rio Blanco 4-33 Fed Com	**MD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	38H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	WellPlanner1
Reference Design:	Prelim Plan	**Offset TVD Reference:**	Reference Datum

Offset Design Rio Blanco 4-33 (Offsets) - Rio Blanco 33 Fed 1 - OH - Surveys — **Offset Site Error:** 0.00 usft

Survey Program: 200-2° Cone of Uncertainty, 1802-MWD, 2987-2° Cone of Uncertainty — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
1,500.00	1,500.00	1,689.67	1,693.93	5.15	27.31	16.93	3,609.40	1,098.37	3,777.80	3,745.34	32.46	116.392	
1,600.00	1,600.00	1,797.41	1,801.51	5.51	27.32	16.90	3,604.58	1,094.83	3,772.56	3,739.75	32.81	114.965	
1,700.00	1,700.00	1,853.80	1,857.83	5.87	27.32	16.88	3,602.45	1,092.81	3,767.87	3,734.69	33.18	113.570	
1,800.00	1,800.00	1,895.00	1,898.99	6.23	27.32	16.86	3,601.33	1,091.48	3,764.40	3,730.86	33.54	112.235	
1,900.00	1,900.00	1,940.74	1,944.71	6.59	27.32	16.85	3,600.74	1,090.51	3,762.52	3,728.61	33.91	110.971	
1,978.77	1,978.77	1,974.80	1,978.77	6.87	27.32	16.85	3,600.57	1,090.26	3,762.02	3,727.83	34.19	110.020	
2,000.00	2,000.00	1,990.00	1,993.97	6.95	27.32	16.85	3,600.63	1,090.26	3,762.08	3,727.81	34.27	109.774	
2,100.00	2,100.00	2,028.24	2,032.21	7.31	27.33	16.85	3,601.06	1,090.50	3,763.16	3,728.53	34.64	108.641	
2,200.00	2,200.00	2,073.01	2,076.96	7.66	27.33	16.85	3,602.01	1,091.13	3,765.65	3,730.65	35.01	107.571	
2,300.00	2,300.00	2,118.00	2,121.91	8.02	27.33	16.86	3,603.50	1,092.35	3,769.63	3,734.26	35.37	106.565	
2,400.00	2,400.00	2,162.00	2,165.82	8.38	27.34	16.88	3,606.34	1,094.29	3,774.79	3,739.05	35.74	105.615	
2,500.00	2,500.00	2,275.10	2,278.74	8.74	27.34	16.90	3,611.31	1,097.09	3,780.75	3,744.64	36.11	104.707	
2,600.00	2,599.99	2,406.42	2,409.83	9.09	27.36	-73.03	3,617.63	1,101.50	3,786.13	3,749.67	36.47	103.824	
2,700.00	2,699.96	2,578.05	2,581.31	9.43	28.77	-73.03	3,623.27	1,105.80	3,789.09	3,750.89	38.20	99.181	
2,800.00	2,799.86	2,705.31	2,708.51	9.78	30.99	-73.07	3,626.25	1,108.12	3,790.59	3,749.83	40.77	92.978	
2,900.00	2,899.68	2,832.48	2,835.65	10.12	33.21	-73.17	3,628.45	1,109.83	3,790.87	3,747.54	43.33	87.492	
3,000.00	2,999.37	2,959.46	2,962.63	10.47	35.43	-73.31	3,629.88	1,110.95	3,789.94	3,744.05	45.89	82.592	
3,100.00	3,098.90	3,086.19	3,089.35	10.82	37.64	-73.50	3,630.54	1,111.46	3,787.80	3,739.35	48.45	78.173	
3,200.00	3,198.26	3,154.11	3,157.27	11.17	38.82	-73.63	3,631.43	1,112.15	3,785.85	3,735.87	49.98	75.743	
3,300.00	3,297.40	3,247.62	3,250.76	11.53	40.45	-73.83	3,632.35	1,112.87	3,783.33	3,731.36	51.97	72.800	
3,400.00	3,396.43	3,341.04	3,344.17	11.89	42.08	-74.01	3,633.39	1,113.68	3,780.76	3,726.81	53.96	70.070	
3,500.00	3,495.46	3,434.48	3,437.61	12.26	43.71	-74.19	3,634.54	1,114.58	3,778.38	3,722.44	55.95	67.534	
3,600.00	3,594.48	3,527.95	3,531.06	12.62	45.34	-74.37	3,635.82	1,115.57	3,776.20	3,718.26	57.94	65.171	
3,700.00	3,693.51	3,621.45	3,624.54	12.99	46.97	-74.55	3,637.22	1,116.66	3,774.21	3,714.26	59.94	62.964	
3,800.00	3,792.54	3,714.96	3,718.04	13.37	48.60	-74.73	3,638.74	1,117.84	3,772.40	3,710.46	61.94	60.901	
3,900.00	3,891.56	3,808.50	3,811.55	13.74	50.23	-74.91	3,640.38	1,119.12	3,770.79	3,706.85	63.95	58.968	
4,000.00	3,990.59	3,902.06	3,905.08	14.12	51.87	-75.09	3,642.14	1,120.49	3,769.37	3,703.42	65.95	57.153	
4,100.00	4,089.62	3,996.44	3,999.43	14.49	53.51	-75.27	3,644.04	1,121.97	3,768.14	3,700.17	67.97	55.434	
4,200.00	4,188.64	4,103.47	4,106.43	14.87	55.38	-75.47	3,646.14	1,123.60	3,766.90	3,696.68	70.22	53.644	
4,300.00	4,287.67	4,210.46	4,213.40	15.25	57.25	-75.68	3,648.05	1,125.09	3,765.50	3,693.03	72.47	51.961	
4,400.00	4,386.70	4,317.43	4,320.34	15.63	59.11	-75.88	3,649.77	1,126.43	3,763.94	3,689.22	74.72	50.377	
4,500.00	4,485.72	4,424.36	4,427.26	16.02	60.98	-76.09	3,651.30	1,127.62	3,762.21	3,685.24	76.96	48.883	
4,600.00	4,584.75	4,531.27	4,534.15	16.40	62.84	-76.30	3,652.64	1,128.67	3,760.32	3,681.11	79.21	47.470	
4,700.00	4,683.78	4,638.13	4,641.00	16.79	64.71	-76.51	3,653.79	1,129.56	3,758.27	3,676.81	81.46	46.134	
4,800.00	4,782.81	4,735.23	4,738.09	17.17	66.40	-76.70	3,654.80	1,130.35	3,756.23	3,672.68	83.54	44.961	
4,900.00	4,881.83	4,834.36	4,837.21	17.56	68.13	-76.90	3,655.83	1,131.14	3,754.22	3,668.56	85.66	43.827	
5,000.00	4,980.86	4,933.49	4,936.33	17.95	69.86	-77.10	3,656.85	1,131.94	3,752.26	3,664.48	87.78	42.748	
5,100.00	5,079.89	5,032.62	5,035.46	18.34	71.59	-77.30	3,657.87	1,132.74	3,750.34	3,660.45	89.90	41.719	
5,200.00	5,178.75	5,131.59	5,134.42	18.73	73.31	-77.54	3,658.90	1,133.53	3,748.23	3,656.22	92.02	40.735	
5,300.00	5,277.04	5,236.38	5,239.20	19.14	75.14	-77.88	3,659.90	1,134.32	3,745.37	3,651.12	94.25	39.738	
5,400.00	5,374.63	5,340.62	5,343.44	19.56	76.96	-78.28	3,660.75	1,134.97	3,741.70	3,645.21	96.49	38.778	
5,500.00	5,471.41	5,443.97	5,446.78	20.00	78.76	-78.74	3,661.42	1,135.50	3,737.31	3,638.57	98.73	37.853	
5,600.00	5,567.88	5,546.93	5,549.74	20.44	80.56	-79.14	3,661.94	1,135.91	3,732.67	3,631.70	100.97	36.967	
5,700.00	5,664.35	5,649.83	5,652.64	20.89	82.35	-79.55	3,662.31	1,136.19	3,728.05	3,624.83	103.22	36.117	
5,800.00	5,760.83	5,732.58	5,735.39	21.35	83.80	-79.88	3,662.78	1,136.55	3,723.81	3,618.69	105.11	35.426	
5,900.00	5,857.30	5,821.52	5,824.32	21.81	85.35	-80.23	3,663.40	1,137.04	3,719.91	3,612.79	107.12	34.726	
6,000.00	5,953.77	5,910.53	5,913.32	22.27	86.90	-80.58	3,664.18	1,137.65	3,716.39	3,607.25	109.13	34.054	
6,100.00	6,050.24	5,999.60	6,002.38	22.73	88.45	-80.92	3,665.13	1,138.39	3,713.24	3,602.08	111.15	33.407	
6,200.00	6,146.72	6,088.73	6,091.51	23.20	90.01	-81.27	3,666.25	1,139.26	3,710.45	3,597.28	113.17	32.786	
6,300.00	6,243.19	6,191.39	6,194.15	23.67	91.80	-81.67	3,667.58	1,140.30	3,707.90	3,592.46	115.44	32.121	
6,400.00	6,339.66	6,296.98	6,299.73	24.14	93.64	-82.09	3,668.73	1,141.19	3,705.29	3,587.53	117.75	31.466	
6,500.00	6,436.13	6,402.48	6,405.22	24.62	95.48	-82.50	3,669.65	1,141.91	3,702.62	3,582.55	120.07	30.836	

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

Company:	Devon Energy Corp.	**Local Co-ordinate Reference:**	Well 38H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Reference Site:	Rio Blanco 4-33 Fed Com	**MD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	38H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	WellPlanner1
Reference Design:	Prelim Plan	**Offset TVD Reference:**	Reference Datum

Offset Design Rio Blanco 4-33 (Offsets) - Rio Blanco 33 Fed 1 - OH - Surveys

Offset Site Error: 0.00 usft

Survey Program: 200-2° Cone of Uncertainty, 1802-MWD, 2987-2° Cone of Uncertainty

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
6,600.00	6,532.60	6,507.88	6,510.63	25.10	97.32	-82.92	3,670.34	1,142.45	3,699.90	3,577.51	122.39	30.230	
6,700.00	6,629.08	6,613.20	6,615.94	25.58	99.16	-83.35	3,670.80	1,142.80	3,697.13	3,572.42	124.71	29.645	
6,800.00	6,725.55	6,703.63	6,706.37	26.06	100.74	-83.71	3,671.18	1,143.10	3,694.53	3,567.75	126.78	29.142	
6,900.00	6,822.02	6,795.19	6,797.93	26.55	102.33	-84.08	3,671.68	1,143.49	3,692.23	3,563.38	128.86	28.654	
7,000.00	6,918.49	6,886.80	6,889.53	27.03	103.93	-84.44	3,672.29	1,143.96	3,690.25	3,559.31	130.94	28.182	
7,100.00	7,014.97	6,978.45	6,981.18	27.52	105.53	-84.81	3,673.02	1,144.53	3,688.57	3,555.55	133.03	27.727	
7,200.00	7,111.44	7,070.14	7,072.87	28.01	107.13	-85.17	3,673.87	1,145.19	3,687.21	3,552.09	135.12	27.288	
7,300.00	7,207.91	7,164.10	7,166.82	28.50	108.77	-85.55	3,674.84	1,145.94	3,686.13	3,548.88	137.25	26.857	
7,400.00	7,304.38	7,259.43	7,262.14	29.00	110.43	-85.93	3,675.86	1,146.74	3,685.28	3,545.87	139.41	26.435	
7,500.00	7,400.85	7,354.78	7,357.48	29.49	112.10	-86.30	3,676.91	1,147.56	3,684.63	3,543.06	141.57	26.027	
7,600.00	7,497.33	7,450.14	7,452.82	29.99	113.76	-86.68	3,678.00	1,148.41	3,684.20	3,540.47	143.73	25.633	
7,700.00	7,593.80	7,545.51	7,548.18	30.49	115.42	-87.06	3,679.12	1,149.28	3,683.98	3,538.08	145.89	25.252	
7,755.37	7,647.21	7,598.32	7,600.99	30.76	116.35	-87.27	3,679.76	1,149.77	3,683.94	3,536.85	147.09	25.046	
7,800.00	7,690.27	7,640.89	7,643.56	30.99	117.09	-87.44	3,680.28	1,150.18	3,683.96	3,535.91	148.05	24.883	
7,900.00	7,786.74	7,736.29	7,738.94	31.49	118.75	-87.81	3,681.46	1,151.10	3,684.16	3,533.94	150.22	24.525	
8,000.00	7,883.22	7,831.70	7,834.34	31.99	120.42	-88.19	3,682.69	1,152.05	3,684.57	3,532.19	152.38	24.179	
8,100.00	7,979.69	7,927.12	7,929.75	32.49	122.08	-88.57	3,683.94	1,153.03	3,685.19	3,530.64	154.55	23.844	
8,200.00	8,076.16	8,022.55	8,025.17	33.00	123.75	-88.94	3,685.23	1,154.03	3,686.02	3,529.30	156.72	23.520	
8,300.00	8,172.63	8,124.64	8,127.24	33.50	125.53	-89.34	3,686.58	1,155.08	3,686.99	3,527.98	159.00	23.188	
8,400.00	8,269.11	8,229.34	8,231.93	34.01	127.36	-89.76	3,687.74	1,155.99	3,687.94	3,526.60	161.34	22.858	
8,500.00	8,365.58	8,333.95	8,336.53	34.51	129.18	-90.18	3,688.68	1,156.72	3,688.85	3,525.18	163.67	22.538	
8,600.00	8,462.41	8,438.86	8,441.43	35.01	131.01	-90.59	3,689.40	1,157.28	3,689.72	3,523.73	166.00	22.228	
8,700.00	8,560.05	8,544.54	8,547.11	35.48	132.86	-90.95	3,689.89	1,157.66	3,690.49	3,522.18	168.31	21.927	
8,800.00	8,658.39	8,631.36	8,633.93	35.91	134.37	-91.21	3,690.32	1,158.00	3,691.34	3,521.08	170.26	21.681	
8,900.00	8,757.30	8,717.67	8,720.24	36.33	135.88	-91.42	3,691.06	1,158.57	3,692.52	3,520.36	172.17	21.447	
9,000.00	8,856.66	8,804.41	8,806.97	36.71	137.39	-91.59	3,692.10	1,159.38	3,694.00	3,519.94	174.06	21.223	
9,100.00	8,956.35	8,891.44	8,893.98	37.07	138.91	-91.71	3,693.45	1,160.43	3,695.75	3,519.82	175.93	21.007	
9,200.00	9,056.25	8,978.62	8,981.14	37.40	140.43	-91.79	3,695.11	1,161.73	3,697.74	3,519.96	177.78	20.799	
9,300.00	9,156.24	9,068.01	9,070.49	37.71	141.99	-1.81	3,697.13	1,163.30	3,699.97	3,520.32	179.65	20.596	
9,400.00	9,256.24	9,183.14	9,185.58	38.02	144.00	-1.78	3,699.63	1,165.24	3,702.08	3,520.12	181.96	20.345	
9,500.00	9,356.24	9,298.30	9,300.71	38.32	146.01	-1.75	3,701.64	1,166.81	3,703.79	3,519.51	184.28	20.098	
9,600.00	9,456.24	9,405.62	9,408.01	38.62	147.88	-1.73	3,703.14	1,167.98	3,705.15	3,518.69	186.46	19.871	
9,700.00	9,556.24	9,508.13	9,510.51	38.93	149.67	-1.72	3,704.47	1,169.01	3,706.42	3,517.86	188.56	19.657	
9,800.00	9,656.23	9,610.65	9,613.01	39.23	151.46	-1.27	3,705.73	1,169.99	3,706.90	3,516.25	190.65	19.443	
9,900.00	9,754.98	9,712.06	9,714.41	39.54	153.23	-1.29	3,706.91	1,170.91	3,693.27	3,500.55	192.73	19.163	
10,000.00	9,849.10	9,808.90	9,811.24	39.82	154.92	-1.38	3,707.96	1,171.73	3,660.96	3,466.26	194.70	18.803	
10,100.00	9,935.14	9,897.59	9,899.93	40.06	156.47	-1.55	3,708.88	1,172.44	3,611.17	3,414.67	196.50	18.377	
10,200.00	10,009.92	9,968.94	9,971.27	40.26	157.71	-1.85	3,709.67	1,173.06	3,545.85	3,347.90	197.95	17.913	
10,300.00	10,070.71	10,029.20	10,031.52	40.41	158.76	-2.40	3,710.36	1,173.60	3,467.34	3,268.19	199.15	17.411	
10,400.00	10,115.26	10,073.77	10,076.09	40.52	159.54	-3.58	3,710.88	1,174.00	3,378.52	3,178.50	200.02	16.891	
10,500.00	10,141.95	10,100.99	10,103.31	40.62	160.01	-7.29	3,711.21	1,174.26	3,282.65	3,082.10	200.55	16.368	
10,600.00	10,149.88	10,109.93	10,112.24	40.72	160.17	-61.76	3,711.32	1,174.34	3,183.24	2,982.51	200.74	15.858	
10,700.00	10,150.01	10,111.24	10,113.55	40.85	160.19	-62.51	3,711.33	1,174.35	3,083.28	2,882.51	200.78	15.357	
10,800.00	10,150.14	10,112.55	10,114.86	41.03	160.22	-63.27	3,711.35	1,174.37	2,983.32	2,782.50	200.82	14.856	
10,900.00	10,150.27	10,113.86	10,116.17	41.26	160.24	-64.04	3,711.36	1,174.38	2,883.37	2,682.50	200.86	14.355	
11,000.00	10,150.40	10,115.17	10,117.49	41.55	160.26	-64.83	3,711.38	1,174.39	2,783.41	2,582.50	200.91	13.854	
11,100.00	10,150.53	10,116.49	10,118.80	41.90	160.28	-65.62	3,711.40	1,174.40	2,683.46	2,482.50	200.96	13.353	
11,200.00	10,150.66	10,117.80	10,120.12	42.32	160.31	-66.43	3,711.41	1,174.42	2,583.52	2,382.51	201.01	12.853	
11,300.00	10,150.79	10,119.12	10,121.44	42.79	160.33	-67.25	3,711.43	1,174.43	2,483.57	2,282.51	201.06	12.352	
11,400.00	10,150.92	10,120.44	10,122.76	43.33	160.35	-68.08	3,711.44	1,174.44	2,383.63	2,182.51	201.12	11.852	
11,500.00	10,151.05	10,121.77	10,124.08	43.91	160.38	-68.92	3,711.46	1,174.45	2,283.69	2,082.52	201.18	11.352	
11,600.00	10,151.17	10,123.09	10,125.40	44.55	160.40	-69.77	3,711.48	1,174.47	2,183.76	1,982.52	201.24	10.852	

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

Company:	Devon Energy Corp.	**Local Co-ordinate Reference:**	Well 38H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Reference Site:	Rio Blanco 4-33 Fed Com	**MD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	38H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	WellPlanner1
Reference Design:	Prelim Plan	**Offset TVD Reference:**	Reference Datum

Offset Design Rio Blanco 4-33 (Offsets) - Rio Blanco 33 Fed 1 - OH - Surveys — **Offset Site Error:** 0.00 usft

Survey Program: 200-2° Cone of Uncertainty, 1802-MWD, 2987-2° Cone of Uncertainty — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
11,700.00	10,151.30	10,124.42	10,126.73	45.24	160.42	-70.64	3,711.49	1,174.48	2,083.84	1,882.53	201.30	10.352	
11,800.00	10,151.43	10,125.74	10,128.06	45.97	160.45	-71.51	3,711.51	1,174.49	1,983.92	1,782.55	201.37	9.852	
11,900.00	10,151.56	10,127.07	10,129.39	46.73	160.47	-72.40	3,711.52	1,174.50	1,884.01	1,682.56	201.45	9.352	
12,000.00	10,151.69	10,128.40	10,130.72	47.54	160.49	-73.29	3,711.54	1,174.52	1,784.11	1,582.58	201.52	8.853	
12,100.00	10,151.82	10,129.74	10,132.05	48.38	160.52	-74.20	3,711.56	1,174.53	1,684.22	1,482.61	201.61	8.354	
12,200.00	10,151.95	10,131.07	10,133.38	49.24	160.54	-75.11	3,711.57	1,174.54	1,584.34	1,382.64	201.70	7.855	
12,300.00	10,152.08	10,132.41	10,134.72	50.14	160.56	-76.04	3,711.59	1,174.56	1,484.47	1,282.68	201.80	7.356	
12,400.00	10,152.21	10,133.75	10,136.06	51.07	160.59	-76.97	3,711.61	1,174.57	1,384.63	1,182.72	201.90	6.858	
12,500.00	10,152.34	10,135.09	10,137.40	52.02	160.61	-77.91	3,711.62	1,174.58	1,284.80	1,082.78	202.02	6.360	
12,600.00	10,152.47	10,136.43	10,138.74	53.00	160.63	-78.86	3,711.64	1,174.59	1,185.01	982.85	202.16	5.862	
12,700.00	10,152.60	10,137.77	10,140.08	54.00	160.66	-79.82	3,711.66	1,174.61	1,085.25	882.95	202.31	5.364	
12,800.00	10,152.72	10,139.12	10,141.43	55.02	160.68	-80.79	3,711.67	1,174.62	985.54	783.06	202.48	4.867	
12,900.00	10,152.85	10,140.47	10,142.78	56.06	160.70	-81.76	3,711.69	1,174.63	885.89	683.20	202.69	4.371	
13,000.00	10,152.98	10,141.82	10,144.13	57.11	160.73	-82.74	3,711.71	1,174.65	786.33	583.39	202.95	3.875	
13,100.00	10,153.11	10,143.17	10,145.48	58.19	160.75	-83.72	3,711.72	1,174.66	686.90	483.63	203.27	3.379	
13,200.00	10,153.24	10,144.52	10,146.83	59.28	160.77	-84.71	3,711.74	1,174.67	587.65	383.95	203.70	2.885	
13,300.00	10,153.37	10,145.87	10,148.19	60.39	160.80	-85.71	3,711.76	1,174.68	488.71	284.39	204.31	2.392	
13,400.00	10,153.50	10,147.23	10,149.54	61.51	160.82	-86.71	3,711.77	1,174.70	390.29	185.04	205.25	1.902	
13,500.00	10,153.63	10,148.59	10,150.90	62.65	160.84	-87.71	3,711.79	1,174.71	292.96	86.05	206.90	1.416	Level 3
13,600.00	10,153.76	10,149.95	10,152.26	63.80	160.87	-88.72	3,711.81	1,174.72	198.28	-12.08	210.36	0.943	Level 1
13,700.00	10,153.89	10,151.31	10,153.62	64.96	160.89	-89.72	3,711.82	1,174.74	113.13	-106.13	219.26	0.516	Level 1
13,782.62	10,153.99	10,152.44	10,154.75	65.93	160.91	-90.56	3,711.84	1,174.75	77.32	-148.45	225.77	0.342	Level 1, CC, ES, SF
13,800.00	10,154.02	10,152.68	10,154.99	66.14	160.92	-90.74	3,711.84	1,174.75	79.26	-143.68	222.93	0.356	Level 1
13,900.00	10,154.15	10,154.04	10,156.35	67.32	160.94	-91.75	3,711.86	1,174.76	140.57	-64.29	204.86	0.686	Level 1
14,000.00	10,154.27	10,155.41	10,157.72	68.52	160.96	-92.76	3,711.87	1,174.78	230.73	29.66	201.07	1.147	Level 2
14,100.00	10,154.40	10,156.78	10,159.09	69.72	160.99	-93.77	3,711.89	1,174.79	326.66	126.12	200.54	1.629	
14,200.00	10,154.53	10,158.15	10,160.46	70.94	161.01	-94.78	3,711.91	1,174.80	424.47	223.88	200.58	2.116	
14,300.00	10,154.66	10,159.53	10,161.83	72.16	161.04	-95.80	3,711.93	1,174.82	523.10	322.36	200.75	2.606	
14,400.00	10,154.79	10,160.90	10,163.21	73.39	161.06	-96.80	3,711.94	1,174.83	622.17	421.24	200.93	3.097	
14,500.00	10,154.92	10,162.28	10,164.59	74.63	161.08	-97.81	3,711.96	1,174.84	721.49	520.39	201.10	3.588	
14,600.00	10,155.05	10,163.66	10,165.97	75.88	161.11	-98.81	3,711.98	1,174.86	820.98	619.72	201.26	4.079	
14,700.00	10,155.18	10,165.04	10,167.35	77.14	161.13	-99.81	3,711.99	1,174.87	920.57	719.16	201.41	4.571	
14,800.00	10,155.31	10,166.42	10,168.73	78.40	161.16	-100.81	3,712.01	1,174.88	1,020.24	818.70	201.55	5.062	
14,900.00	10,155.44	10,167.81	10,170.11	79.67	161.18	-101.80	3,712.03	1,174.90	1,119.97	918.30	201.68	5.553	
15,000.00	10,155.57	10,169.19	10,171.50	80.94	161.20	-102.78	3,712.05	1,174.91	1,219.74	1,017.94	201.80	6.044	
15,100.00	10,155.70	10,170.58	10,172.89	82.22	161.23	-103.76	3,712.06	1,174.92	1,319.55	1,117.63	201.92	6.535	
15,200.00	10,155.82	10,171.97	10,174.28	83.51	161.25	-104.74	3,712.08	1,174.94	1,419.38	1,217.35	202.03	7.026	
15,300.00	10,155.95	10,173.36	10,175.67	84.80	161.28	-105.70	3,712.10	1,174.95	1,519.23	1,317.09	202.14	7.516	
15,400.00	10,156.08	10,174.76	10,177.07	86.10	161.30	-106.66	3,712.12	1,174.97	1,619.10	1,416.86	202.24	8.006	
15,500.00	10,156.21	10,176.16	10,178.46	87.40	161.33	-107.61	3,712.13	1,174.98	1,718.98	1,516.64	202.35	8.495	
15,600.00	10,156.34	10,177.55	10,179.86	88.71	161.35	-108.55	3,712.15	1,174.99	1,818.88	1,616.43	202.45	8.984	
15,700.00	10,156.47	10,178.95	10,181.26	90.02	161.37	-109.49	3,712.17	1,175.01	1,918.78	1,716.24	202.55	9.473	
15,800.00	10,156.60	10,180.36	10,182.66	91.34	161.40	-110.41	3,712.19	1,175.02	2,018.70	1,816.05	202.64	9.962	
15,900.00	10,156.73	10,181.76	10,184.07	92.66	161.42	-111.33	3,712.20	1,175.03	2,118.62	1,915.88	202.74	10.450	
16,000.00	10,156.86	10,183.17	10,185.47	93.98	161.45	-112.23	3,712.22	1,175.05	2,218.54	2,015.71	202.84	10.938	
16,100.00	10,156.99	10,184.57	10,186.88	95.31	161.47	-113.13	3,712.24	1,175.06	2,318.48	2,115.54	202.93	11.425	
16,200.00	10,157.12	10,185.98	10,188.29	96.64	161.50	-114.01	3,712.26	1,175.08	2,418.41	2,215.39	203.03	11.912	
16,300.00	10,157.25	10,187.40	10,189.70	97.97	161.52	-114.89	3,712.28	1,175.09	2,518.35	2,315.23	203.12	12.398	
16,400.00	10,157.37	10,188.81	10,191.11	99.31	161.55	-115.75	3,712.29	1,175.10	2,618.30	2,415.08	203.22	12.884	
16,500.00	10,157.50	10,190.23	10,192.53	100.65	161.57	-116.60	3,712.31	1,175.12	2,718.25	2,514.94	203.31	13.370	
16,600.00	10,157.63	10,191.64	10,193.95	102.00	161.60	-117.44	3,712.33	1,175.13	2,818.20	2,614.79	203.40	13.855	
16,700.00	10,157.76	10,193.06	10,195.37	103.35	161.62	-118.28	3,712.35	1,175.15	2,918.15	2,714.65	203.50	14.340	

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

Company:	Devon Energy Corp.	**Local Co-ordinate Reference:**	Well 38H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Reference Site:	Rio Blanco 4-33 Fed Com	**MD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	38H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	WellPlanner1
Reference Design:	Prelim Plan	**Offset TVD Reference:**	Reference Datum

Offset Design Rio Blanco 4-33 (Offsets) - Rio Blanco 33 Fed 1 - OH - Surveys

Offset Site Error: 0.00 usft

Survey Program: 200-2° Cone of Uncertainty, 1802-MWD, 2987-2° Cone of Uncertainty

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
16,800.00	10,157.89	10,194.48	10,196.79	104.70	161.65	-119.09	3,712.37	1,175.16	3,018.11	2,814.52	203.59	14.824	
16,900.00	10,158.02	10,195.91	10,198.21	106.05	161.67	-119.90	3,712.38	1,175.17	3,118.07	2,914.38	203.69	15.308	
17,000.00	10,158.15	10,197.33	10,199.64	107.40	161.70	-120.70	3,712.40	1,175.19	3,218.03	3,014.25	203.78	15.792	
17,100.00	10,158.28	10,198.76	10,201.07	108.76	161.72	-121.48	3,712.42	1,175.20	3,317.99	3,114.11	203.88	16.274	
17,200.00	10,158.41	10,200.19	10,202.49	110.12	161.75	-122.26	3,712.44	1,175.22	3,417.95	3,213.98	203.97	16.757	
17,300.00	10,158.54	10,201.62	10,203.93	111.49	161.77	-123.02	3,712.46	1,175.23	3,517.92	3,313.85	204.07	17.239	
17,400.00	10,158.67	10,203.06	10,205.36	112.85	161.80	-123.77	3,712.47	1,175.24	3,617.89	3,413.72	204.16	17.720	
17,500.00	10,158.80	10,204.49	10,206.80	114.22	161.82	-124.51	3,712.49	1,175.26	3,717.85	3,513.59	204.26	18.201	
17,600.00	10,158.92	10,205.93	10,208.23	115.59	161.85	-125.23	3,712.51	1,175.27	3,817.82	3,613.47	204.36	18.682	
17,658.52	10,159.00	10,206.77	10,209.07	116.39	161.86	-125.65	3,712.52	1,175.28	3,876.32	3,671.91	204.41	18.963	

Company:	Devon Energy Corp.	**Local Co-ordinate Reference:**	Well 38H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Reference Site:	Rio Blanco 4-33 Fed Com	**MD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	38H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	WellPlanner1
Reference Design:	Prelim Plan	**Offset TVD Reference:**	Reference Datum

Offset Design Rio Blanco 4-33 (Offsets) - Rio Blanco 33 Fed 2 SWD - OH - Surveys — **Offset Site Error:** 0.00 usft

Survey Program: 100-NS-GYRO-MS — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	6.00	0.00	0.00	13.84	5,940.11	1,463.38	6,117.72				
100.00	100.00	89.46	95.46	0.14	0.09	13.84	5,940.15	1,463.35	6,117.75	6,117.52	0.23	N/A	
200.00	200.00	201.72	207.72	0.49	0.26	13.84	5,940.14	1,463.33	6,117.74	6,116.98	0.75	8,130.225	
255.39	255.39	249.39	255.39	0.69	0.34	13.84	5,940.11	1,463.33	6,117.70	6,116.67	1.03	5,920.269	
300.00	300.00	288.12	294.12	0.85	0.41	13.84	5,940.14	1,463.31	6,117.72	6,116.46	1.26	4,855.550	
400.00	400.00	382.58	388.58	1.21	0.59	13.84	5,940.28	1,463.32	6,117.87	6,116.07	1.80	3,397.383	
500.00	500.00	482.93	488.92	1.57	0.78	13.84	5,940.35	1,463.85	6,118.07	6,115.72	2.35	2,605.919	
600.00	600.00	594.94	600.93	1.93	1.00	13.86	5,940.12	1,465.25	6,118.16	6,115.24	2.93	2,090.646	
700.00	700.00	724.88	730.86	2.29	1.27	13.87	5,939.30	1,466.87	6,117.84	6,114.27	3.56	1,717.903	
800.00	800.00	818.73	824.68	2.65	1.49	13.89	5,938.46	1,468.46	6,117.38	6,113.24	4.13	1,479.928	
900.00	900.00	910.58	916.52	3.00	1.71	13.91	5,937.73	1,470.16	6,117.05	6,112.34	4.71	1,297.500	
1,000.00	1,000.00	1,015.46	1,021.39	3.36	1.97	13.92	5,936.97	1,471.80	6,116.72	6,111.39	5.33	1,146.970	
1,100.00	1,100.00	1,107.98	1,113.90	3.72	2.20	13.94	5,936.36	1,473.17	6,116.44	6,110.51	5.92	1,032.406	
1,200.00	1,200.00	1,209.19	1,215.08	4.08	2.46	13.95	5,935.71	1,474.92	6,116.23	6,109.68	6.54	934.888	
1,300.00	1,300.00	1,300.00	1,465.16	4.44	2.70	14.04	5,930.28	1,482.80	6,115.08	6,107.94	7.14	856.639	
1,400.00	1,400.00	2,074.57	2,078.06	4.80	4.49	14.25	5,883.43	1,494.69	6,108.08	6,098.85	9.23	661.463	
1,500.00	1,500.00	2,141.04	2,144.13	5.15	4.62	14.25	5,876.44	1,492.67	6,097.17	6,087.46	9.72	627.412	
1,600.00	1,600.00	2,200.00	2,202.79	5.51	4.73	14.25	5,870.73	1,490.81	6,086.98	6,076.79	10.19	597.420	
1,700.00	1,700.00	2,250.47	2,253.04	5.87	4.83	14.25	5,866.19	1,489.37	6,077.52	6,066.87	10.65	570.645	
1,800.00	1,800.00	2,300.00	2,302.37	6.23	4.93	14.25	5,861.98	1,488.29	6,068.78	6,057.67	11.11	546.247	
1,900.00	1,900.00	2,371.19	2,373.32	6.59	5.08	14.25	5,856.34	1,486.98	6,060.68	6,049.06	11.62	521.671	
2,000.00	2,000.00	2,463.36	2,465.23	6.95	5.28	14.25	5,849.53	1,485.17	6,053.03	6,040.87	12.17	497.501	
2,100.00	2,100.00	2,593.04	2,594.50	7.31	5.56	14.24	5,839.73	1,482.12	6,045.14	6,032.35	12.79	472.512	
2,200.00	2,200.00	2,704.71	2,705.79	7.66	5.81	14.24	5,830.67	1,480.22	6,036.85	6,023.45	13.40	450.544	
2,300.00	2,300.00	2,815.76	2,816.43	8.02	6.07	14.25	5,821.50	1,478.11	6,028.38	6,014.37	14.01	430.390	
2,400.00	2,400.00	2,917.31	2,917.61	8.38	6.31	14.25	5,812.93	1,476.42	6,019.79	6,005.20	14.60	412.352	
2,500.00	2,500.00	3,010.98	3,010.93	8.74	6.54	14.25	5,805.09	1,474.70	6,011.23	5,996.06	15.18	396.110	
2,600.00	2,599.99	3,091.92	3,091.60	9.09	6.73	-75.84	5,798.55	1,473.01	6,002.67	5,986.96	15.71	381.972	
2,700.00	2,699.96	3,175.77	3,175.18	9.43	6.93	-75.94	5,792.04	1,471.21	5,993.98	5,977.72	16.25	368.780	
2,800.00	2,799.86	3,254.26	3,253.42	9.78	7.12	-76.06	5,786.20	1,469.42	5,985.15	5,968.37	16.78	356.637	
2,900.00	2,899.68	3,325.81	3,324.77	10.12	7.29	-76.19	5,781.15	1,467.85	5,976.31	5,959.01	17.30	345.475	
3,000.00	2,999.37	3,400.00	3,398.80	10.47	7.47	-76.33	5,776.27	1,466.64	5,967.61	5,949.79	17.83	334.773	
3,100.00	3,098.90	3,457.67	3,456.35	10.82	7.62	-76.47	5,772.71	1,466.08	5,959.05	5,940.73	18.32	325.220	
3,200.00	3,198.26	3,534.97	3,533.52	11.17	7.81	-76.62	5,768.20	1,465.80	5,950.61	5,931.74	18.87	315.321	
3,300.00	3,297.40	3,622.57	3,620.98	11.53	8.04	-76.81	5,763.27	1,465.42	5,941.98	5,922.53	19.45	305.502	
3,400.00	3,396.43	3,700.00	3,698.30	11.89	8.23	-76.91	5,759.22	1,464.89	5,933.50	5,913.49	20.01	296.592	
3,500.00	3,495.46	3,779.99	3,778.19	12.26	8.44	-77.01	5,755.28	1,464.50	5,925.38	5,904.81	20.57	288.025	
3,600.00	3,594.48	3,877.36	3,875.46	12.62	8.69	-77.13	5,750.61	1,464.24	5,917.47	5,896.28	21.18	279.331	
3,700.00	3,693.51	3,959.96	3,957.96	12.99	8.90	-77.23	5,746.83	1,463.53	5,909.67	5,887.90	21.76	271.574	
3,800.00	3,792.54	4,048.18	4,046.10	13.37	9.12	-77.35	5,743.06	1,462.86	5,902.20	5,879.85	22.35	264.049	
3,900.00	3,891.56	4,165.04	4,162.85	13.74	9.41	-77.50	5,738.07	1,461.71	5,894.73	5,871.72	23.01	256.144	
4,000.00	3,990.59	4,278.74	4,276.42	14.12	9.69	-77.66	5,732.92	1,459.87	5,886.90	5,863.23	23.66	248.779	
4,100.00	4,089.62	4,383.32	4,380.87	14.49	9.95	-77.81	5,728.08	1,458.02	5,878.96	5,854.67	24.29	242.012	
4,200.00	4,188.64	4,490.91	4,488.32	14.87	10.21	-77.96	5,723.05	1,455.75	5,870.95	5,846.02	24.93	235.530	
4,300.00	4,287.67	4,589.26	4,586.53	15.25	10.45	-78.10	5,718.36	1,453.69	5,862.89	5,837.34	25.54	229.521	
4,400.00	4,386.70	4,672.42	4,669.59	15.63	10.66	-78.22	5,714.41	1,452.37	5,854.98	5,828.85	26.13	224.044	
4,500.00	4,485.72	4,742.46	4,739.55	16.02	10.83	-78.31	5,711.30	1,451.42	5,847.47	5,820.78	26.69	219.061	
4,600.00	4,584.75	4,808.23	4,805.27	16.40	11.00	-78.40	5,708.76	1,450.58	5,840.55	5,813.31	27.24	214.378	
4,700.00	4,683.78	4,887.17	4,884.15	16.79	11.20	-78.51	5,706.03	1,449.74	5,834.11	5,806.28	27.83	209.644	
4,800.00	4,782.81	4,973.15	4,970.09	17.17	11.42	-78.63	5,703.27	1,448.98	5,827.98	5,799.55	28.43	204.973	
4,900.00	4,881.83	5,061.13	5,058.03	17.56	11.64	-78.75	5,700.63	1,448.23	5,822.08	5,793.04	29.04	200.465	
5,000.00	4,980.86	5,150.45	5,147.30	17.95	11.86	-78.87	5,698.12	1,447.39	5,816.39	5,786.73	29.66	196.132	

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

Company:	Devon Energy Corp.	**Local Co-ordinate Reference:**	Well 38H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Reference Site:	Rio Blanco 4-33 Fed Com	**MD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	38H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	WellPlanner1
Reference Design:	Prelim Plan	**Offset TVD Reference:**	Reference Datum

Offset Design Rio Blanco 4-33 (Offsets) - Rio Blanco 33 Fed 2 SWD - OH - Surveys — **Offset Site Error:** 0.00 usft

Survey Program: 100-NS-GYRO-MS — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.00	5,079.89	5,239.21	5,236.03	18.34	12.09	-79.00	5,695.79	1,446.45	5,810.89	5,780.62	30.26	192.001	
5,200.00	5,178.75	5,328.04	5,324.83	18.73	12.30	-79.22	5,693.66	1,445.39	5,805.40	5,774.53	30.88	188.027	
5,300.00	5,277.04	5,417.93	5,414.69	19.14	12.52	-79.51	5,691.64	1,444.15	5,799.45	5,767.95	31.50	184.133	
5,400.00	5,374.63	5,497.50	5,494.23	19.56	12.70	-79.81	5,690.07	1,442.95	5,793.17	5,761.07	32.10	180.465	
5,500.00	5,471.41	5,592.31	5,589.02	20.00	12.92	-80.16	5,688.38	1,441.47	5,786.55	5,753.80	32.75	176.673	
5,600.00	5,567.88	5,679.09	5,675.77	20.44	13.11	-80.39	5,686.92	1,440.04	5,779.93	5,746.54	33.39	173.100	
5,700.00	5,664.35	5,774.81	5,771.46	20.89	13.32	-80.65	5,685.42	1,438.37	5,773.54	5,739.49	34.05	169.558	
5,800.00	5,760.83	5,866.26	5,862.90	21.35	13.52	-80.90	5,683.99	1,436.83	5,767.28	5,732.57	34.71	166.172	
5,900.00	5,857.30	5,952.67	5,949.28	21.81	13.71	-81.14	5,682.74	1,435.47	5,761.27	5,725.92	35.36	162.951	
6,000.00	5,953.77	6,045.30	6,041.90	22.27	13.92	-81.39	5,681.54	1,434.07	5,755.55	5,719.53	36.02	159.772	
6,100.00	6,050.24	6,143.19	6,139.76	22.73	14.14	-81.65	5,680.20	1,432.73	5,749.91	5,713.20	36.71	156.628	
6,200.00	6,146.72	6,232.46	6,229.02	23.20	14.35	-81.90	5,679.02	1,431.54	5,744.45	5,707.06	37.38	153.662	
6,300.00	6,243.19	6,319.64	6,316.19	23.67	14.55	-82.13	5,678.01	1,430.47	5,739.28	5,701.23	38.05	150.817	
6,400.00	6,339.66	6,416.71	6,413.24	24.14	14.77	-82.39	5,676.89	1,429.35	5,734.27	5,695.51	38.75	147.967	
6,500.00	6,436.13	6,500.85	6,497.38	24.62	14.97	-82.62	5,676.00	1,428.55	5,729.49	5,690.06	39.43	145.308	
6,600.00	6,532.60	6,589.47	6,585.99	25.10	15.18	-82.86	5,675.21	1,427.84	5,725.01	5,684.89	40.12	142.698	
6,700.00	6,629.08	6,680.68	6,677.19	25.58	15.39	-83.10	5,674.50	1,427.05	5,720.76	5,679.95	40.81	140.178	
6,800.00	6,725.55	6,788.37	6,784.87	26.06	15.64	-83.39	5,673.63	1,426.05	5,716.61	5,675.07	41.54	137.605	
6,900.00	6,822.02	6,873.10	6,869.59	26.55	15.83	-83.62	5,672.90	1,425.28	5,712.54	5,670.31	42.22	135.290	
7,000.00	6,918.49	6,973.02	6,969.51	27.03	16.06	-83.90	5,672.20	1,424.29	5,708.73	5,665.79	42.94	132.949	
7,100.00	7,014.97	7,079.56	7,076.04	27.52	16.30	-84.19	5,671.27	1,423.16	5,704.87	5,661.20	43.67	130.623	
7,200.00	7,111.44	7,182.46	7,178.93	28.01	16.54	-84.47	5,670.23	1,421.89	5,701.01	5,656.60	44.41	128.386	
7,300.00	7,207.91	7,280.77	7,277.23	28.50	16.77	-84.74	5,669.16	1,420.65	5,697.19	5,652.06	45.13	126.240	
7,400.00	7,304.38	7,406.94	7,403.37	29.00	17.08	-85.09	5,667.51	1,418.89	5,693.29	5,647.36	45.93	123.968	
7,500.00	7,400.85	7,510.22	7,506.62	29.49	17.33	-85.37	5,665.81	1,417.19	5,689.17	5,642.50	46.67	121.895	
7,600.00	7,497.33	7,615.26	7,611.63	29.99	17.58	-85.67	5,663.93	1,415.39	5,685.04	5,637.61	47.43	119.869	
7,700.00	7,593.80	7,703.15	7,699.49	30.49	17.80	-85.91	5,662.37	1,413.86	5,681.05	5,632.91	48.14	118.006	
7,800.00	7,690.27	7,801.18	7,797.49	30.99	18.04	-86.19	5,660.67	1,411.92	5,677.23	5,628.35	48.88	116.150	
7,900.00	7,786.74	7,894.35	7,890.63	31.49	18.26	-86.46	5,659.07	1,410.12	5,673.56	5,623.95	49.61	114.373	
8,000.00	7,883.22	7,981.47	7,977.72	31.99	18.47	-86.70	5,657.64	1,408.62	5,670.11	5,619.79	50.32	112.678	
8,100.00	7,979.69	8,088.10	8,084.32	32.49	18.73	-87.00	5,655.91	1,406.80	5,666.83	5,615.74	51.09	110.927	
8,200.00	8,076.16	8,186.98	8,183.17	33.00	18.98	-87.28	5,654.14	1,405.15	5,663.52	5,611.68	51.84	109.256	
8,300.00	8,172.63	8,285.79	8,281.96	33.50	19.23	-87.56	5,652.34	1,403.52	5,660.31	5,607.72	52.59	107.630	
8,400.00	8,269.11	8,374.62	8,370.75	34.01	19.45	-87.81	5,650.74	1,402.11	5,657.27	5,603.95	53.32	106.100	
8,500.00	8,365.58	8,465.85	8,461.96	34.51	19.68	-88.07	5,649.21	1,400.54	5,654.48	5,600.42	54.05	104.609	
8,600.00	8,462.41	8,556.27	8,552.36	35.01	19.89	-88.27	5,647.78	1,398.75	5,651.94	5,597.18	54.77	103.199	
8,700.00	8,560.05	8,662.30	8,658.34	35.48	20.14	-88.48	5,646.17	1,396.03	5,649.68	5,594.20	55.48	101.828	
8,800.00	8,658.39	8,773.05	8,769.03	35.91	20.41	-88.66	5,644.18	1,393.12	5,647.31	5,591.12	56.18	100.513	
8,900.00	8,757.30	8,879.03	8,874.96	36.33	20.66	-88.80	5,642.10	1,390.60	5,644.93	5,588.08	56.85	99.287	
9,000.00	8,856.66	9,042.14	9,037.96	36.71	21.08	-88.97	5,637.81	1,386.62	5,641.99	5,584.35	57.64	97.877	
9,100.00	8,956.35	9,133.29	9,129.04	37.07	21.31	-88.99	5,634.88	1,384.69	5,638.59	5,580.35	58.24	96.818	
9,200.00	9,056.25	9,200.00	9,195.71	37.40	21.49	-88.98	5,633.07	1,383.16	5,635.75	5,577.01	58.75	95.931	
9,300.00	9,156.24	9,307.46	9,303.11	37.71	21.76	1.03	5,630.39	1,380.75	5,633.21	5,573.88	59.33	94.947	
9,400.00	9,256.24	9,367.77	9,363.39	38.02	21.91	1.01	5,629.09	1,379.48	5,630.98	5,571.20	59.79	94.186	
9,500.00	9,356.24	9,430.20	9,425.80	38.32	22.06	1.00	5,628.13	1,378.13	5,629.41	5,569.17	60.24	93.452	
9,600.00	9,456.24	9,500.00	9,495.59	38.62	22.21	0.99	5,627.56	1,376.80	5,628.53	5,567.83	60.70	92.728	
9,700.00	9,556.24	9,596.22	9,591.78	38.93	22.42	0.97	5,627.07	1,374.95	5,627.98	5,566.77	61.21	91.950	
9,800.00	9,656.23	9,683.00	9,678.55	39.23	22.60	1.38	5,626.64	1,373.16	5,626.75	5,565.05	61.69	91.206	
9,900.00	9,754.98	9,783.67	9,779.20	39.54	22.80	1.41	5,626.29	1,371.10	5,611.62	5,549.42	62.20	90.218	
10,000.00	9,849.10	9,878.29	9,873.80	39.82	23.00	1.49	5,625.90	1,369.19	5,577.88	5,515.21	62.68	88.992	
10,100.00	9,935.14	9,953.22	9,948.71	40.06	23.15	1.67	5,625.64	1,367.85	5,526.91	5,463.84	63.07	87.629	
10,200.00	10,009.92	10,017.06	10,012.54	40.26	23.27	1.99	5,625.57	1,366.71	5,460.67	5,397.28	63.39	86.145	

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

Company:	Devon Energy Corp.	**Local Co-ordinate Reference:**	Well 38H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Reference Site:	Rio Blanco 4-33 Fed Com	**MD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	38H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	WellPlanner1
Reference Design:	Prelim Plan	**Offset TVD Reference:**	Reference Datum

Offset Design Rio Blanco 4-33 (Offsets) - Rio Blanco 33 Fed 2 SWD - OH - Surveys — **Offset Site Error:** 0.00 usft

Survey Program: 100-NS-GYRO-MS — **Offset Well Error:** 0.00 usft

Reference		Offset		Semi Major Axis			Offset Wellbore Centre		Distance				
Measured Depth (usft)	Vertical Depth (usft)	Measured Depth (usft)	Vertical Depth (usft)	Reference (usft)	Offset (usft)	Highside Toolface (°)	+N/-S (usft)	+E/-W (usft)	Between Centres (usft)	Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,300.00	10,070.71	10,073.26	10,068.74	40.41	23.38	2.57	5,625.59	1,365.69	5,381.48	5,317.85	63.63	84.573	
10,400.00	10,115.26	10,125.03	10,120.50	40.52	23.48	3.84	5,625.62	1,364.73	5,292.17	5,228.35	63.81	82.930	
10,500.00	10,141.95	10,166.93	10,162.39	40.62	23.56	8.15	5,625.53	1,363.95	5,195.92	5,131.98	63.94	81.267	
10,600.00	10,149.88	10,178.73	10,174.19	40.72	23.59	98.00	5,625.48	1,363.73	5,096.37	5,032.41	63.96	79.675	
10,700.00	10,150.01	10,178.27	10,173.72	40.85	23.59	97.80	5,625.48	1,363.74	4,996.40	4,932.45	63.96	78.119	
10,800.00	10,150.14	10,177.81	10,173.27	41.03	23.58	97.59	5,625.48	1,363.75	4,896.44	4,832.48	63.95	76.562	
10,900.00	10,150.27	10,177.37	10,172.82	41.26	23.58	97.39	5,625.48	1,363.76	4,796.47	4,732.52	63.95	75.005	
11,000.00	10,150.40	10,176.93	10,172.39	41.55	23.58	97.20	5,625.49	1,363.76	4,696.51	4,632.56	63.94	73.446	
11,100.00	10,150.53	10,176.51	10,171.96	41.90	23.58	97.01	5,625.49	1,363.77	4,596.55	4,532.60	63.94	71.887	
11,200.00	10,150.66	10,176.09	10,171.55	42.32	23.58	96.82	5,625.49	1,363.78	4,496.58	4,432.65	63.94	70.328	
11,300.00	10,150.79	10,175.68	10,171.14	42.79	23.58	96.64	5,625.49	1,363.79	4,396.63	4,332.69	63.93	68.768	
11,400.00	10,150.92	10,175.28	10,170.74	43.33	23.58	96.46	5,625.49	1,363.80	4,296.67	4,232.74	63.93	67.208	
11,500.00	10,151.05	10,174.89	10,170.34	43.91	23.58	96.28	5,625.50	1,363.80	4,196.71	4,132.78	63.93	65.647	
11,600.00	10,151.17	10,174.50	10,169.96	44.55	23.58	96.11	5,625.50	1,363.81	4,096.76	4,032.83	63.93	64.086	
11,700.00	10,151.30	10,174.12	10,169.58	45.24	23.58	95.94	5,625.50	1,363.82	3,996.81	3,932.88	63.92	62.524	
11,800.00	10,151.43	10,173.75	10,169.21	45.97	23.58	95.77	5,625.50	1,363.82	3,896.86	3,832.94	63.92	60.963	
11,900.00	10,151.56	10,173.39	10,168.85	46.73	23.58	95.61	5,625.50	1,363.83	3,796.91	3,732.99	63.92	59.401	
12,000.00	10,151.69	10,173.03	10,168.49	47.54	23.58	95.45	5,625.50	1,363.84	3,696.97	3,633.05	63.92	57.840	
12,100.00	10,151.82	10,172.68	10,168.14	48.38	23.57	95.29	5,625.50	1,363.84	3,597.03	3,533.12	63.92	56.278	
12,200.00	10,151.95	10,172.34	10,167.80	49.24	23.57	95.13	5,625.51	1,363.85	3,497.10	3,433.18	63.91	54.716	
12,300.00	10,152.08	10,172.00	10,167.46	50.14	23.57	94.98	5,625.51	1,363.86	3,397.16	3,333.25	63.91	53.155	
12,400.00	10,152.21	10,171.67	10,167.13	51.07	23.57	94.83	5,625.51	1,363.86	3,297.24	3,233.33	63.91	51.593	
12,500.00	10,152.34	10,171.35	10,166.81	52.02	23.57	94.69	5,625.51	1,363.87	3,197.31	3,133.41	63.90	50.032	
12,600.00	10,152.47	10,171.03	10,166.49	53.00	23.57	94.54	5,625.51	1,363.88	3,097.39	3,033.49	63.90	48.472	
12,700.00	10,152.60	10,170.72	10,166.17	54.00	23.57	94.40	5,625.51	1,363.88	2,997.48	2,933.58	63.90	46.911	
12,800.00	10,152.72	10,170.41	10,165.87	55.02	23.57	94.26	5,625.51	1,363.89	2,897.57	2,833.68	63.89	45.351	
12,900.00	10,152.85	10,170.11	10,165.56	56.06	23.57	94.12	5,625.51	1,363.89	2,797.67	2,733.78	63.89	43.791	
13,000.00	10,152.98	10,169.81	10,165.27	57.11	23.57	93.99	5,625.52	1,363.90	2,697.78	2,633.90	63.88	42.232	
13,100.00	10,153.11	10,169.52	10,164.97	58.19	23.57	93.86	5,625.52	1,363.90	2,597.89	2,534.02	63.87	40.674	
13,200.00	10,153.24	10,169.23	10,164.69	59.28	23.57	93.73	5,625.52	1,363.91	2,498.01	2,434.15	63.86	39.116	
13,300.00	10,153.37	10,168.95	10,164.41	60.39	23.57	93.60	5,625.52	1,363.91	2,398.15	2,334.30	63.85	37.559	
13,400.00	10,153.50	10,168.67	10,164.13	61.51	23.57	93.47	5,625.52	1,363.92	2,298.29	2,234.45	63.84	36.002	
13,500.00	10,153.63	10,168.40	10,163.85	62.65	23.57	93.35	5,625.52	1,363.92	2,198.45	2,134.63	63.82	34.446	
13,600.00	10,153.76	10,168.13	10,163.59	63.80	23.57	93.23	5,625.52	1,363.93	2,098.62	2,034.82	63.80	32.891	
13,700.00	10,153.89	10,167.86	10,163.32	64.96	23.56	93.11	5,625.52	1,363.93	1,998.82	1,935.03	63.78	31.337	
13,800.00	10,154.02	10,167.60	10,163.06	66.14	23.56	92.99	5,625.52	1,363.94	1,899.03	1,835.26	63.76	29.783	
13,900.00	10,154.15	10,167.35	10,162.81	67.32	23.56	92.88	5,625.52	1,363.94	1,799.26	1,735.53	63.73	28.231	
14,000.00	10,154.27	10,167.10	10,162.56	68.52	23.56	92.76	5,625.53	1,363.95	1,699.52	1,635.82	63.70	26.679	
14,100.00	10,154.40	10,166.85	10,162.31	69.72	23.56	92.65	5,625.53	1,363.95	1,599.82	1,536.15	63.67	25.127	
14,200.00	10,154.53	10,166.61	10,162.06	70.94	23.56	92.54	5,625.53	1,363.96	1,500.15	1,436.52	63.63	23.577	
14,300.00	10,154.66	10,166.37	10,161.82	72.16	23.56	92.43	5,625.53	1,363.96	1,400.53	1,336.95	63.58	22.026	
14,400.00	10,154.79	10,166.13	10,161.59	73.39	23.56	92.32	5,625.53	1,363.97	1,300.97	1,237.43	63.54	20.476	
14,500.00	10,154.92	10,165.90	10,161.36	74.63	23.56	92.22	5,625.53	1,363.97	1,201.48	1,138.00	63.48	18.926	
14,600.00	10,155.05	10,165.67	10,161.13	75.88	23.56	92.11	5,625.53	1,363.98	1,102.09	1,038.66	63.43	17.376	
14,700.00	10,155.18	10,165.44	10,160.90	77.14	23.56	92.01	5,625.53	1,363.98	1,002.81	939.44	63.37	15.824	
14,800.00	10,155.31	10,165.22	10,160.68	78.40	23.56	91.91	5,625.53	1,363.98	903.70	840.37	63.32	14.271	
14,900.00	10,155.44	10,165.00	10,160.46	79.67	23.56	91.81	5,625.53	1,363.99	804.80	741.50	63.30	12.714	
15,000.00	10,155.57	10,164.78	10,160.24	80.94	23.56	91.71	5,625.53	1,363.99	706.22	642.89	63.33	11.152	
15,100.00	10,155.70	10,164.57	10,160.03	82.22	23.56	91.62	5,625.53	1,364.00	608.09	544.62	63.48	9.580	
15,200.00	10,155.82	10,164.36	10,159.82	83.51	23.56	91.52	5,625.54	1,364.00	510.70	446.81	63.89	7.993	
15,300.00	10,155.95	10,164.16	10,159.61	84.80	23.56	91.43	5,625.54	1,364.00	414.55	349.61	64.94	6.384	
15,400.00	10,156.08	10,163.95	10,159.41	86.10	23.56	91.34	5,625.54	1,364.01	320.76	253.18	67.58	4.746	

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

Company:	Devon Energy Corp.	**Local Co-ordinate Reference:**	Well 38H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Reference Site:	Rio Blanco 4-33 Fed Com	**MD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	38H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	WellPlanner1
Reference Design:	Prelim Plan	**Offset TVD Reference:**	Reference Datum

Offset Design Rio Blanco 4-33 (Offsets) - Rio Blanco 33 Fed 2 SWD - OH - Surveys — **Offset Site Error:** 0.00 usft

Survey Program: 100-NS-GYRO-MS — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
15,500.00	10,156.21	10,163.75	10,159.21	87.40	23.56	91.25	5,625.54	1,364.01	232.22	157.73	74.49	3.118	
15,600.00	10,156.34	10,163.55	10,159.01	88.71	23.56	91.16	5,625.54	1,364.01	157.99	66.26	91.73	1.722	
15,694.82	10,156.46	10,163.37	10,158.83	89.95	23.56	91.07	5,625.54	1,364.02	126.37	13.81	112.56	1.123	Level 2, CC
15,700.00	10,156.47	10,163.36	10,158.82	90.02	23.56	91.07	5,625.54	1,364.02	126.47	13.46	113.01	1.119	Level 2, ES, SF
15,800.00	10,156.60	10,163.17	10,158.63	91.34	23.56	90.98	5,625.54	1,364.02	164.41	60.18	104.23	1.577	
15,900.00	10,156.73	10,162.98	10,158.44	92.66	23.55	90.89	5,625.54	1,364.03	240.97	150.49	90.48	2.663	
16,000.00	10,156.86	10,162.79	10,158.25	93.98	23.55	90.81	5,625.54	1,364.03	330.31	247.67	82.64	3.997	
16,100.00	10,156.99	10,162.61	10,158.06	95.31	23.55	90.73	5,625.54	1,364.03	424.43	346.20	78.23	5.425	
16,200.00	10,157.12	10,162.42	10,157.88	96.64	23.55	90.64	5,625.54	1,364.04	520.74	445.19	75.56	6.892	
16,300.00	10,157.25	10,162.24	10,157.70	97.97	23.55	90.56	5,625.54	1,364.04	618.23	544.42	73.82	8.375	
16,400.00	10,157.37	10,162.07	10,157.53	99.31	23.55	90.48	5,625.54	1,364.04	716.41	643.79	72.62	9.866	
16,500.00	10,157.50	10,161.89	10,157.35	100.65	23.55	90.40	5,625.54	1,364.05	815.03	743.28	71.76	11.358	
16,600.00	10,157.63	10,161.72	10,157.18	102.00	23.55	90.32	5,625.54	1,364.05	913.96	842.84	71.12	12.851	
16,700.00	10,157.76	10,161.55	10,157.01	103.35	23.55	90.25	5,625.54	1,364.05	1,013.09	942.45	70.63	14.343	
16,800.00	10,157.89	10,161.38	10,156.84	104.70	23.55	90.17	5,625.55	1,364.06	1,112.38	1,042.12	70.26	15.833	
16,900.00	10,158.02	10,161.21	10,156.67	106.05	23.55	90.10	5,625.55	1,364.06	1,211.78	1,141.82	69.96	17.321	
17,000.00	10,158.15	10,161.05	10,156.51	107.40	23.55	90.02	5,625.55	1,364.06	1,311.28	1,241.55	69.73	18.806	
17,100.00	10,158.28	10,160.89	10,156.35	108.76	23.55	89.95	5,625.55	1,364.06	1,410.85	1,341.31	69.54	20.289	
17,200.00	10,158.41	10,160.73	10,156.19	110.12	23.55	89.88	5,625.55	1,364.07	1,510.47	1,441.08	69.39	21.769	
17,300.00	10,158.54	10,160.57	10,156.03	111.49	23.55	89.80	5,625.55	1,364.07	1,610.14	1,540.88	69.27	23.246	
17,400.00	10,158.67	10,160.42	10,155.88	112.85	23.55	89.73	5,625.55	1,364.07	1,709.85	1,640.68	69.17	24.720	
17,500.00	10,158.80	10,160.26	10,155.72	114.22	23.55	89.66	5,625.55	1,364.08	1,809.59	1,740.50	69.09	26.191	
17,600.00	10,158.92	10,160.11	10,155.57	115.59	23.55	89.60	5,625.55	1,364.08	1,909.36	1,840.33	69.03	27.659	
17,658.52	10,159.00	10,160.02	10,155.48	116.39	23.55	89.56	5,625.55	1,364.08	1,967.76	1,898.75	69.00	28.517	

Company:	Devon Energy Corp.	**Local Co-ordinate Reference:**	Well 38H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Reference Site:	Rio Blanco 4-33 Fed Com	**MD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	38H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	WellPlanner1
Reference Design:	Prelim Plan	**Offset TVD Reference:**	Reference Datum

Offset Design Rio Blanco 4-33 (Offsets) - Rio Blanco 4 Fed 1 - OH - Surveys — **Offset Site Error:** 0.00 usft

Survey Program: 200-NS-GYRO-MS — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	0.00	8.00	0.00	0.00	66.25	662.09	1,504.47	1,643.74				
100.00	100.00	96.26	104.26	0.14	0.11	66.25	661.91	1,504.42	1,643.60	1,643.35	0.25	6,622.710	
200.00	200.00	200.89	208.89	0.49	0.23	66.27	661.30	1,504.23	1,643.20	1,642.47	0.73	2,256.562	
257.38	257.38	249.38	257.38	0.70	0.33	66.28	660.97	1,504.23	1,643.05	1,642.02	1.03	1,599.314	
300.00	300.00	285.53	293.53	0.85	0.40	66.29	660.80	1,504.38	1,643.13	1,641.88	1.25	1,315.083	
400.00	400.00	370.33	378.32	1.21	0.56	66.30	660.63	1,505.25	1,643.99	1,642.21	1.77	928.493	
500.00	500.00	460.80	468.77	1.57	0.75	66.33	660.66	1,506.89	1,645.65	1,643.34	2.32	710.406	
600.00	600.00	554.29	562.24	1.93	0.95	66.36	660.48	1,509.11	1,647.75	1,644.87	2.88	572.983	
700.00	700.00	655.87	663.78	2.29	1.18	66.41	660.12	1,511.89	1,650.11	1,646.65	3.46	476.320	
800.00	800.00	765.22	773.11	2.65	1.44	66.44	660.20	1,514.13	1,652.02	1,647.94	4.08	404.824	
900.00	900.00	871.21	879.08	3.00	1.69	66.45	660.66	1,515.57	1,653.44	1,648.74	4.70	352.060	
1,000.00	1,000.00	975.61	983.48	3.36	1.95	66.46	660.91	1,516.75	1,654.57	1,649.26	5.31	311.498	
1,100.00	1,100.00	1,076.82	1,084.68	3.72	2.21	66.47	660.89	1,517.79	1,655.51	1,649.58	5.93	279.233	
1,200.00	1,200.00	1,177.04	1,184.89	4.08	2.47	66.50	660.56	1,518.94	1,656.43	1,649.88	6.55	253.026	
1,300.00	1,300.00	1,274.79	1,282.63	4.44	2.72	66.53	660.11	1,520.16	1,657.39	1,650.23	7.16	231.547	
1,400.00	1,400.00	1,371.80	1,379.64	4.80	2.97	66.55	659.98	1,521.42	1,658.53	1,650.76	7.77	213.522	
1,500.00	1,500.00	1,477.58	1,485.41	5.15	3.23	66.57	659.89	1,522.76	1,659.66	1,651.27	8.39	197.914	
1,600.00	1,600.00	1,586.95	1,594.77	5.51	3.50	66.61	659.04	1,523.84	1,660.25	1,651.25	9.01	184.320	
1,700.00	1,700.00	1,693.87	1,701.69	5.87	3.71	66.66	657.77	1,524.50	1,660.35	1,650.77	9.58	173.347	
1,800.00	1,800.00	1,800.50	1,808.31	6.23	3.91	66.70	656.63	1,524.64	1,660.05	1,649.91	10.14	163.684	
1,900.00	1,900.00	1,911.99	1,919.78	6.59	4.08	66.74	655.17	1,524.25	1,659.21	1,648.53	10.67	155.494	
2,000.00	2,000.00	2,023.44	2,031.21	6.95	4.26	66.80	653.02	1,523.30	1,657.67	1,646.47	11.20	148.023	
2,100.00	2,100.00	2,128.98	2,136.72	7.31	4.40	66.85	650.76	1,521.96	1,655.65	1,643.95	11.70	141.458	
2,200.00	2,200.00	2,233.59	2,241.28	7.66	4.56	66.90	648.41	1,520.24	1,653.26	1,641.04	12.22	135.338	
2,300.00	2,300.00	2,334.30	2,341.95	8.02	4.71	66.96	645.97	1,518.52	1,650.74	1,638.01	12.73	129.650	
2,400.00	2,400.00	2,436.97	2,444.58	8.38	4.88	67.02	643.28	1,516.78	1,648.15	1,634.90	13.26	124.342	
2,500.00	2,500.00	2,543.32	2,550.87	8.74	5.06	67.08	640.56	1,514.58	1,645.26	1,631.47	13.79	119.313	
2,600.00	2,599.99	2,644.92	2,652.40	9.09	5.23	-22.91	638.07	1,512.09	1,641.23	1,626.92	14.31	114.676	
2,700.00	2,699.96	2,741.07	2,748.50	9.43	5.40	-22.92	635.72	1,509.87	1,635.74	1,620.92	14.82	110.350	
2,800.00	2,799.86	2,837.77	2,845.15	9.78	5.58	-22.95	633.33	1,507.87	1,628.87	1,613.52	15.35	106.143	
2,900.00	2,899.68	2,935.37	2,942.70	10.12	5.77	-23.01	630.84	1,506.04	1,620.53	1,604.65	15.89	102.011	
3,000.00	2,999.37	3,032.30	3,039.58	10.47	5.97	-23.10	628.32	1,504.39	1,610.73	1,594.31	16.42	98.079	
3,100.00	3,098.90	3,128.00	3,135.25	10.82	6.15	-23.23	626.41	1,502.72	1,599.54	1,582.59	16.95	94.352	
3,200.00	3,198.26	3,221.97	3,229.20	11.17	6.34	-23.42	625.24	1,501.02	1,587.00	1,569.51	17.49	90.762	
3,300.00	3,297.40	3,311.16	3,318.38	11.53	6.53	-23.62	624.24	1,499.86	1,573.38	1,555.36	18.02	87.295	
3,400.00	3,396.43	3,400.44	3,407.65	11.89	6.71	-23.78	623.10	1,499.36	1,559.60	1,541.04	18.56	84.015	
3,500.00	3,495.46	3,492.78	3,499.97	12.26	6.93	-23.94	622.12	1,499.28	1,546.35	1,527.23	19.13	80.852	
3,600.00	3,594.48	3,585.18	3,592.37	12.62	7.14	-24.12	621.65	1,499.40	1,533.54	1,513.85	19.69	77.884	
3,700.00	3,693.51	3,684.14	3,691.34	12.99	7.28	-24.33	621.61	1,499.61	1,521.00	1,500.82	20.19	75.346	
3,800.00	3,792.54	3,784.29	3,791.49	13.37	7.41	-24.55	621.82	1,499.63	1,508.42	1,487.75	20.67	72.969	
3,900.00	3,891.56	3,891.65	3,898.85	13.74	7.53	-24.81	622.06	1,499.32	1,495.58	1,474.43	21.15	70.711	
4,000.00	3,990.59	4,000.21	4,007.40	14.12	7.66	-25.06	621.84	1,498.45	1,482.13	1,460.51	21.63	68.530	
4,100.00	4,089.62	4,101.08	4,108.26	14.49	7.83	-25.30	621.45	1,497.29	1,468.32	1,446.17	22.16	66.273	
4,200.00	4,188.64	4,201.90	4,209.08	14.87	8.00	-25.55	621.14	1,495.95	1,454.40	1,431.72	22.68	64.114	
4,300.00	4,287.67	4,300.74	4,307.91	15.25	8.16	-25.80	620.90	1,494.53	1,440.44	1,417.23	23.21	62.057	
4,400.00	4,386.70	4,399.61	4,406.77	15.63	8.33	-26.07	620.69	1,493.09	1,426.51	1,402.77	23.74	60.090	
4,500.00	4,485.72	4,500.86	4,508.00	16.02	8.50	-26.34	620.55	1,491.48	1,412.52	1,388.24	24.27	58.194	
4,600.00	4,584.75	4,602.04	4,609.16	16.40	8.67	-26.63	620.52	1,489.62	1,398.39	1,373.58	24.81	56.372	
4,700.00	4,683.78	4,699.69	4,706.80	16.79	8.86	-26.92	620.37	1,487.84	1,384.25	1,358.89	25.36	54.588	
4,800.00	4,782.81	4,797.48	4,804.58	17.17	9.05	-27.19	619.89	1,486.30	1,370.21	1,344.30	25.91	52.884	
4,900.00	4,881.83	4,903.09	4,910.17	17.56	9.26	-27.49	619.34	1,484.41	1,356.00	1,329.52	26.48	51.206	
5,000.00	4,980.86	5,008.66	5,015.70	17.95	9.47	-27.83	619.09	1,481.75	1,341.32	1,314.27	27.05	49.582	

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

Company:	Devon Energy Corp.	**Local Co-ordinate Reference:**	Well 38H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Reference Site:	Rio Blanco 4-33 Fed Com	**MD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	38H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	WellPlanner1
Reference Design:	Prelim Plan	**Offset TVD Reference:**	Reference Datum

Offset Design Rio Blanco 4-33 (Offsets) - Rio Blanco 4 Fed 1 - OH - Surveys

Offset Site Error: 0.00 usft

Survey Program: 200-NS-GYRO-MS

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.00	5,079.89	5,099.86	5,106.87	18.34	9.66	-28.12	618.79	1,479.57	1,326.75	1,299.13	27.62	48.035	
5,200.00	5,178.75	5,192.19	5,199.19	18.73	9.85	-28.53	618.15	1,478.04	1,311.72	1,283.53	28.19	46.530	
5,300.00	5,277.04	5,296.12	5,303.10	19.14	10.08	-29.12	617.33	1,476.41	1,293.82	1,265.03	28.79	44.944	
5,400.00	5,374.63	5,399.98	5,406.94	19.56	10.31	-29.88	616.83	1,473.99	1,272.48	1,243.10	29.39	43.300	
5,500.00	5,471.41	5,493.67	5,500.59	20.00	10.52	-30.67	616.28	1,471.68	1,248.20	1,218.21	29.99	41.625	
5,600.00	5,567.88	5,587.29	5,594.19	20.44	10.72	-31.28	615.25	1,469.84	1,223.22	1,192.63	30.59	39.990	
5,700.00	5,664.35	5,680.09	5,686.97	20.89	10.94	-31.90	614.11	1,468.33	1,198.59	1,167.39	31.20	38.418	
5,800.00	5,760.83	5,772.76	5,779.63	21.35	11.15	-32.55	613.43	1,466.86	1,174.38	1,142.57	31.81	36.914	
5,900.00	5,857.30	5,871.40	5,878.25	21.81	11.37	-33.30	613.11	1,465.16	1,150.44	1,118.01	32.43	35.475	
6,000.00	5,953.77	5,972.21	5,979.03	22.27	11.58	-34.12	612.93	1,462.83	1,126.30	1,093.25	33.05	34.081	
6,100.00	6,050.24	6,066.23	6,073.02	22.73	11.78	-34.93	612.85	1,460.37	1,102.17	1,068.50	33.67	32.737	
6,200.00	6,146.72	6,157.99	6,164.76	23.20	11.98	-35.74	612.72	1,458.39	1,078.60	1,044.31	34.29	31.455	
6,300.00	6,243.19	6,257.05	6,263.80	23.67	12.20	-36.63	612.42	1,456.58	1,055.44	1,020.51	34.93	30.213	
6,400.00	6,339.66	6,361.81	6,368.53	24.14	12.44	-37.61	611.52	1,454.16	1,031.84	996.25	35.59	28.993	
6,500.00	6,436.13	6,456.66	6,463.34	24.62	12.67	-38.54	610.30	1,451.61	1,007.95	971.70	36.25	27.804	
6,600.00	6,532.60	6,546.21	6,552.86	25.10	12.89	-39.44	609.38	1,449.63	984.85	947.93	36.92	26.673	
6,700.00	6,629.08	6,639.20	6,645.84	25.58	13.10	-40.42	608.75	1,448.00	962.58	924.98	37.60	25.601	
6,800.00	6,725.55	6,736.76	6,743.37	26.06	13.33	-41.53	608.43	1,445.95	940.59	902.31	38.28	24.573	
6,900.00	6,822.02	6,833.53	6,840.11	26.55	13.55	-42.71	608.43	1,443.45	918.81	879.84	38.96	23.581	
7,000.00	6,918.49	6,929.49	6,936.04	27.03	13.77	-43.91	608.12	1,441.19	897.38	857.72	39.66	22.626	
7,100.00	7,014.97	7,024.93	7,031.46	27.52	14.00	-45.12	607.37	1,439.35	876.34	835.97	40.37	21.709	
7,200.00	7,111.44	7,118.32	7,124.83	28.01	14.21	-46.37	606.88	1,437.57	855.90	814.82	41.08	20.835	
7,300.00	7,207.91	7,212.08	7,218.57	28.50	14.43	-47.71	606.90	1,435.66	836.21	794.41	41.80	20.004	
7,400.00	7,304.38	7,308.94	7,315.42	29.00	14.65	-49.15	606.88	1,433.82	817.08	774.55	42.54	19.209	
7,500.00	7,400.85	7,405.96	7,412.42	29.49	14.88	-50.62	606.46	1,432.24	798.36	755.08	43.28	18.448	
7,600.00	7,497.33	7,502.11	7,508.56	29.99	15.12	-52.14	605.88	1,430.78	780.12	736.08	44.04	17.713	
7,700.00	7,593.80	7,598.30	7,604.74	30.49	15.36	-53.72	605.29	1,429.29	762.44	717.62	44.82	17.013	
7,800.00	7,690.27	7,699.41	7,705.83	30.99	15.61	-55.48	604.53	1,427.32	745.04	699.44	45.60	16.339	
7,900.00	7,786.74	7,800.12	7,806.49	31.49	15.86	-57.36	603.51	1,424.56	727.68	681.29	46.39	15.685	
8,000.00	7,883.22	7,893.32	7,899.65	31.99	16.09	-59.20	602.59	1,421.67	710.93	663.73	47.20	15.062	
8,100.00	7,979.69	7,986.59	7,992.87	32.49	16.32	-61.12	601.99	1,418.86	695.34	647.32	48.01	14.482	
8,200.00	8,076.16	8,083.21	8,089.44	33.00	16.55	-63.20	601.51	1,415.97	680.77	631.93	48.83	13.941	
8,300.00	8,172.63	8,180.32	8,186.50	33.50	16.79	-65.38	600.83	1,412.96	666.95	617.29	49.66	13.431	
8,400.00	8,269.11	8,277.38	8,283.51	34.01	17.03	-67.64	599.95	1,409.90	653.94	603.45	50.49	12.951	
8,500.00	8,365.58	8,374.47	8,380.55	34.51	17.28	-69.96	598.79	1,406.91	641.80	590.47	51.33	12.503	
8,600.00	8,462.41	8,468.53	8,474.56	35.01	17.51	-71.97	597.57	1,404.22	631.18	579.02	52.15	12.102	
8,700.00	8,560.05	8,562.49	8,568.49	35.48	17.75	-73.75	596.64	1,402.08	623.01	570.07	52.94	11.769	
8,800.00	8,658.39	8,660.25	8,666.24	35.91	18.00	-75.34	595.89	1,400.36	616.86	563.17	53.68	11.491	
8,900.00	8,757.30	8,760.55	8,766.51	36.33	18.26	-76.71	594.88	1,398.67	611.87	557.48	54.39	11.249	
9,000.00	8,856.66	8,860.44	8,866.38	36.71	18.51	-77.79	593.65	1,396.97	607.78	552.72	55.06	11.038	
9,100.00	8,956.35	8,960.12	8,966.04	37.07	18.77	-78.59	592.39	1,395.18	604.58	548.88	55.70	10.854	
9,200.00	9,056.25	9,060.43	9,066.33	37.40	19.03	-79.09	591.11	1,393.27	602.12	545.82	56.31	10.694	
9,300.00	9,156.24	9,161.14	9,167.00	37.71	19.29	10.68	589.73	1,391.20	600.22	543.34	56.88	10.552	
9,400.00	9,256.24	9,262.31	9,268.13	38.02	19.55	10.50	588.22	1,388.97	598.34	540.90	57.45	10.416	
9,500.00	9,356.24	9,363.75	9,369.53	38.32	19.81	10.30	586.47	1,386.63	596.23	538.22	58.01	10.278	
9,600.00	9,456.24	9,464.16	9,469.90	38.62	20.07	10.11	584.56	1,384.24	593.94	535.36	58.58	10.139	
9,700.00	9,556.24	9,564.01	9,569.70	38.93	20.33	9.92	582.65	1,381.92	591.65	532.51	59.15	10.003	
9,800.00	9,656.23	9,663.49	9,669.14	39.23	20.59	10.21	580.78	1,379.66	588.71	528.99	59.72	9.858	
9,900.00	9,754.98	9,761.32	9,766.93	39.54	20.84	10.62	579.03	1,377.48	572.08	511.81	60.27	9.492	
10,000.00	9,849.10	9,854.86	9,860.43	39.82	21.09	11.89	577.43	1,375.41	537.36	476.60	60.77	8.843	
10,100.00	9,935.14	9,940.35	9,945.89	40.06	21.31	14.49	575.91	1,373.51	485.80	424.62	61.18	7.940	
10,200.00	10,009.92	10,014.19	10,019.69	40.26	21.50	19.52	574.55	1,371.84	419.51	358.03	61.48	6.823	

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

Company:	Devon Energy Corp.	**Local Co-ordinate Reference:**	Well 38H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Reference Site:	Rio Blanco 4-33 Fed Com	**MD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	38H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	WellPlanner1
Reference Design:	Prelim Plan	**Offset TVD Reference:**	Reference Datum

Offset Design Rio Blanco 4-33 (Offsets) - Rio Blanco 4 Fed 1 - OH - Surveys — **Offset Site Error:** 0.00 usft

Survey Program: 200-NS-GYRO-MS — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,300.00	10,070.71	10,073.16	10,078.64	40.41	21.65	29.59	573.46	1,370.58	341.48	279.87	61.61	5.542	
10,400.00	10,115.26	10,115.93	10,121.39	40.52	21.76	49.78	572.68	1,369.72	255.80	194.32	61.47	4.161	
10,500.00	10,141.95	10,140.80	10,146.26	40.62	21.83	77.77	572.23	1,369.24	169.39	108.63	60.76	2.788	
10,600.00	10,149.88	10,146.93	10,152.38	40.72	21.84	91.50	572.12	1,369.12	102.26	43.20	59.07	1.731	
10,641.52	10,149.94	10,146.24	10,151.70	40.77	21.84	91.08	572.14	1,369.14	93.46	34.19	59.27	1.577	CC, ES, SF
10,700.00	10,150.01	10,145.27	10,150.73	40.85	21.84	90.49	572.15	1,369.16	110.24	49.01	61.23	1.801	
10,800.00	10,150.14	10,143.62	10,149.07	41.03	21.83	89.47	572.18	1,369.19	183.97	121.17	62.80	2.929	
10,900.00	10,150.27	10,141.96	10,147.42	41.26	21.83	88.46	572.21	1,369.22	274.82	211.77	63.05	4.359	
11,000.00	10,150.40	10,140.30	10,145.76	41.55	21.83	87.44	572.24	1,369.25	370.42	307.33	63.09	5.872	
11,100.00	10,150.53	10,138.64	10,144.10	41.90	21.82	86.43	572.27	1,369.28	467.85	404.77	63.08	7.417	
11,200.00	10,150.66	10,136.98	10,142.44	42.32	21.82	85.42	572.30	1,369.31	566.17	503.11	63.06	8.978	
11,300.00	10,150.79	10,135.31	10,140.78	42.79	21.81	84.41	572.33	1,369.34	664.99	601.94	63.05	10.547	
11,400.00	10,150.92	10,133.65	10,139.11	43.33	21.81	83.41	572.36	1,369.37	764.11	701.07	63.04	12.121	
11,500.00	10,151.05	10,131.99	10,137.45	43.91	21.80	82.41	572.39	1,369.41	863.44	800.40	63.03	13.698	
11,600.00	10,151.17	10,130.32	10,135.78	44.55	21.80	81.41	572.42	1,369.44	962.90	899.86	63.03	15.276	
11,700.00	10,151.30	10,128.65	10,134.12	45.24	21.80	80.42	572.45	1,369.47	1,062.45	999.42	63.03	16.856	
11,800.00	10,151.43	10,126.98	10,132.45	45.97	21.79	79.44	572.48	1,369.50	1,162.09	1,099.05	63.04	18.436	
11,900.00	10,151.56	10,125.31	10,130.78	46.73	21.79	78.46	572.51	1,369.53	1,261.77	1,198.73	63.04	20.015	
12,000.00	10,151.69	10,123.64	10,129.11	47.54	21.78	77.49	572.54	1,369.57	1,361.51	1,298.46	63.05	21.595	
12,100.00	10,151.82	10,121.97	10,127.44	48.38	21.78	76.52	572.58	1,369.60	1,461.27	1,398.22	63.06	23.174	
12,200.00	10,151.95	10,120.30	10,125.76	49.24	21.77	75.57	572.61	1,369.63	1,561.07	1,498.00	63.07	24.753	
12,300.00	10,152.08	10,118.62	10,124.09	50.14	21.77	74.62	572.64	1,369.66	1,660.88	1,597.81	63.08	26.331	
12,400.00	10,152.21	10,116.95	10,122.41	51.07	21.77	73.68	572.67	1,369.70	1,760.72	1,697.63	63.09	27.908	
12,500.00	10,152.34	10,115.27	10,120.74	52.02	21.76	72.75	572.70	1,369.73	1,860.57	1,797.47	63.11	29.483	
12,600.00	10,152.47	10,113.59	10,119.06	53.00	21.76	71.83	572.73	1,369.76	1,960.44	1,897.32	63.12	31.058	
12,700.00	10,152.60	10,111.91	10,117.38	54.00	21.75	70.91	572.76	1,369.79	2,060.32	1,997.18	63.14	32.631	
12,800.00	10,152.72	10,110.23	10,115.70	55.02	21.75	70.01	572.79	1,369.83	2,160.21	2,097.05	63.16	34.203	
12,900.00	10,152.85	10,108.55	10,114.02	56.06	21.74	69.12	572.82	1,369.86	2,260.10	2,196.92	63.18	35.774	
13,000.00	10,152.98	10,106.86	10,112.33	57.11	21.74	68.24	572.85	1,369.89	2,360.01	2,296.81	63.20	37.343	
13,100.00	10,153.11	10,105.18	10,110.65	58.19	21.74	67.37	572.88	1,369.93	2,459.92	2,396.70	63.22	38.911	
13,200.00	10,153.24	10,103.49	10,108.96	59.28	21.73	66.51	572.91	1,369.96	2,559.83	2,496.59	63.24	40.476	
13,300.00	10,153.37	10,101.80	10,107.28	60.39	21.73	65.66	572.94	1,369.99	2,659.76	2,596.49	63.27	42.041	
13,400.00	10,153.50	10,100.12	10,105.59	61.51	21.72	64.82	572.97	1,370.03	2,759.68	2,696.39	63.29	43.603	
13,500.00	10,153.63	10,098.43	10,103.90	62.65	21.72	63.99	573.00	1,370.06	2,859.61	2,796.30	63.32	45.163	
13,600.00	10,153.76	10,096.73	10,102.21	63.80	21.71	63.18	573.03	1,370.10	2,959.55	2,896.20	63.34	46.722	
13,700.00	10,153.89	10,095.04	10,100.52	64.96	21.71	62.38	573.06	1,370.13	3,059.48	2,996.11	63.37	48.278	
13,800.00	10,154.02	10,093.35	10,098.82	66.14	21.70	61.58	573.10	1,370.16	3,159.43	3,096.02	63.40	49.833	
13,900.00	10,154.15	10,091.65	10,097.13	67.32	21.70	60.80	573.13	1,370.20	3,259.37	3,195.94	63.43	51.385	
14,000.00	10,154.27	10,089.96	10,095.43	68.52	21.70	60.04	573.16	1,370.23	3,359.31	3,295.85	63.46	52.935	
14,100.00	10,154.40	10,088.26	10,093.74	69.72	21.69	59.28	573.19	1,370.27	3,459.26	3,395.77	63.49	54.483	
14,200.00	10,154.53	10,086.56	10,092.04	70.94	21.69	58.53	573.22	1,370.30	3,559.21	3,495.69	63.53	56.028	
14,300.00	10,154.66	10,084.86	10,090.34	72.16	21.68	57.80	573.25	1,370.34	3,659.17	3,595.61	63.56	57.571	
14,400.00	10,154.79	10,083.16	10,088.64	73.39	21.68	57.08	573.28	1,370.37	3,759.12	3,695.53	63.59	59.112	
14,500.00	10,154.92	10,081.46	10,086.94	74.63	21.67	56.37	573.31	1,370.40	3,859.08	3,795.45	63.63	60.650	
14,600.00	10,155.05	10,079.75	10,085.23	75.88	21.67	55.67	573.34	1,370.44	3,959.03	3,895.37	63.66	62.185	
14,700.00	10,155.18	10,078.05	10,083.53	77.14	21.66	54.98	573.37	1,370.47	4,058.99	3,995.29	63.70	63.718	
14,800.00	10,155.31	10,076.34	10,081.82	78.40	21.66	54.31	573.41	1,370.51	4,158.95	4,095.21	63.74	65.249	
14,900.00	10,155.44	10,074.63	10,080.12	79.67	21.66	53.64	573.44	1,370.54	4,258.91	4,195.13	63.78	66.776	
15,000.00	10,155.57	10,072.92	10,078.41	80.94	21.65	52.99	573.47	1,370.58	4,358.88	4,295.06	63.82	68.301	
15,100.00	10,155.70	10,071.21	10,076.70	82.22	21.65	52.35	573.50	1,370.62	4,458.84	4,394.98	63.86	69.823	
15,200.00	10,155.82	10,069.50	10,074.99	83.51	21.64	51.72	573.53	1,370.65	4,558.80	4,494.90	63.90	71.342	
15,300.00	10,155.95	10,067.79	10,073.27	84.80	21.64	51.10	573.56	1,370.69	4,658.77	4,594.83	63.94	72.859	

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

Company:	Devon Energy Corp.	**Local Co-ordinate Reference:**	Well 38H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Reference Site:	Rio Blanco 4-33 Fed Com	**MD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	38H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	WellPlanner1
Reference Design:	Prelim Plan	**Offset TVD Reference:**	Reference Datum

Offset Design Rio Blanco 4-33 (Offsets) - Rio Blanco 4 Fed 1 - OH - Surveys — **Offset Site Error:** 0.00 usft

Survey Program: 200-NS-GYRO-MS — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
15,400.00	10,156.08	10,066.07	10,071.56	86.10	21.63	50.49	573.59	1,370.72	4,758.73	4,694.75	63.99	74.372	
15,500.00	10,156.21	10,064.36	10,069.85	87.40	21.63	49.89	573.63	1,370.76	4,858.70	4,794.67	64.03	75.882	
15,600.00	10,156.34	10,062.64	10,068.13	88.71	21.62	49.30	573.66	1,370.79	4,958.67	4,894.59	64.07	77.389	
15,700.00	10,156.47	10,060.92	10,066.41	90.02	21.62	48.72	573.69	1,370.83	5,058.64	4,994.52	64.12	78.893	
15,800.00	10,156.60	10,059.21	10,064.69	91.34	21.62	48.15	573.72	1,370.87	5,158.61	5,094.44	64.17	80.394	
15,900.00	10,156.73	10,057.48	10,062.97	92.66	21.61	47.59	573.75	1,370.90	5,258.58	5,194.36	64.21	81.892	
16,000.00	10,156.86	10,055.76	10,061.25	93.98	21.61	47.04	573.78	1,370.94	5,358.55	5,294.28	64.26	83.386	
16,100.00	10,156.99	10,054.04	10,059.53	95.31	21.60	46.51	573.82	1,370.98	5,458.52	5,394.21	64.31	84.877	
16,200.00	10,157.12	10,052.31	10,057.81	96.64	21.60	45.98	573.85	1,371.01	5,558.49	5,494.13	64.36	86.365	
16,300.00	10,157.25	10,050.59	10,056.08	97.97	21.59	45.46	573.88	1,371.05	5,658.46	5,594.05	64.41	87.849	
16,400.00	10,157.37	10,048.86	10,054.35	99.31	21.59	44.94	573.91	1,371.09	5,758.43	5,693.97	64.46	89.330	
16,500.00	10,157.50	10,047.13	10,052.63	100.65	21.58	44.44	573.94	1,371.12	5,858.40	5,793.89	64.51	90.808	
16,600.00	10,157.63	10,045.40	10,050.90	102.00	21.58	43.95	573.97	1,371.16	5,958.38	5,893.81	64.57	92.281	
16,700.00	10,157.76	10,043.67	10,049.17	103.35	21.58	43.47	574.01	1,371.20	6,058.35	5,993.73	64.62	93.752	
16,800.00	10,157.89	10,041.94	10,047.43	104.70	21.57	42.99	574.04	1,371.23	6,158.33	6,093.65	64.68	95.219	
16,900.00	10,158.02	10,040.21	10,045.70	106.05	21.57	42.52	574.07	1,371.27	6,258.30	6,193.57	64.73	96.682	
17,000.00	10,158.15	10,038.47	10,043.97	107.40	21.56	42.06	574.10	1,371.31	6,358.27	6,293.49	64.79	98.141	
17,100.00	10,158.28	10,036.73	10,042.23	108.76	21.56	41.61	574.13	1,371.35	6,458.25	6,393.41	64.84	99.597	
17,200.00	10,158.41	10,035.00	10,040.49	110.12	21.55	41.17	574.17	1,371.38	6,558.22	6,493.32	64.90	101.049	
17,300.00	10,158.54	10,033.26	10,038.76	111.49	21.55	40.73	574.20	1,371.42	6,658.20	6,593.24	64.96	102.497	
17,400.00	10,158.67	10,031.52	10,037.02	112.85	21.54	40.30	574.23	1,371.46	6,758.18	6,693.16	65.02	103.941	
17,500.00	10,158.80	10,029.78	10,035.28	114.22	21.54	39.88	574.26	1,371.50	6,858.15	6,793.07	65.08	105.382	
17,600.00	10,158.92	10,028.03	10,033.53	115.59	21.54	39.47	574.29	1,371.54	6,958.13	6,892.99	65.14	106.819	
17,658.52	10,159.00	10,027.01	10,032.51	116.39	21.53	39.23	574.31	1,371.56	7,016.63	6,951.46	65.18	107.658	

Company:	Devon Energy Corp.	**Local Co-ordinate Reference:**	Well 38H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Reference Site:	Rio Blanco 4-33 Fed Com	**MD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	38H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	WellPlanner1
Reference Design:	Prelim Plan	**Offset TVD Reference:**	Reference Datum

Offset Design Rio Blanco 4-33 Fed Com - 1H - OH - Plan 1 — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+HDGM — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	3.00	0.00	0.00	0.00	-90.48	-1.41	-170.03	170.04				
100.00	100.00	103.00	100.00	0.14	0.15	-90.48	-1.41	-170.03	170.04	169.75	0.28	604.634	
200.00	200.00	203.00	200.00	0.49	0.50	-90.48	-1.41	-170.03	170.04	169.04	1.00	170.349	
300.00	300.00	303.00	300.00	0.85	0.86	-90.48	-1.41	-170.03	170.04	168.32	1.72	99.140	
400.00	400.00	403.00	400.00	1.21	1.22	-90.48	-1.41	-170.03	170.04	167.60	2.43	69.915	
500.00	500.00	503.00	500.00	1.57	1.58	-90.48	-1.41	-170.03	170.04	166.89	3.15	53.997	
600.00	600.00	603.00	600.00	1.93	1.94	-90.48	-1.41	-170.03	170.04	166.17	3.87	43.983	
700.00	700.00	703.00	700.00	2.29	2.30	-90.48	-1.41	-170.03	170.04	165.45	4.58	37.102	
800.00	800.00	803.00	800.00	2.65	2.65	-90.48	-1.41	-170.03	170.04	164.74	5.30	32.083	
900.00	900.00	903.00	900.00	3.00	3.01	-90.48	-1.41	-170.03	170.04	164.02	6.02	28.260	
1,000.00	1,000.00	1,003.00	1,000.00	3.36	3.37	-90.48	-1.41	-170.03	170.04	163.30	6.73	25.251	
1,100.00	1,100.00	1,103.00	1,100.00	3.72	3.73	-90.48	-1.41	-170.03	170.04	162.59	7.45	22.822	
1,200.00	1,200.00	1,203.00	1,200.00	4.08	4.09	-90.48	-1.41	-170.03	170.04	161.87	8.17	20.818	
1,300.00	1,300.00	1,303.00	1,300.00	4.44	4.45	-90.48	-1.41	-170.03	170.04	161.15	8.88	19.138	
1,400.00	1,400.00	1,403.00	1,400.00	4.80	4.81	-90.48	-1.41	-170.03	170.04	160.43	9.60	17.709	
1,500.00	1,500.00	1,503.00	1,500.00	5.15	5.16	-90.48	-1.41	-170.03	170.04	159.72	10.32	16.479	
1,600.00	1,600.00	1,603.00	1,600.00	5.51	5.52	-90.48	-1.41	-170.03	170.04	159.00	11.04	15.408	
1,700.00	1,700.00	1,703.00	1,700.00	5.87	5.88	-90.48	-1.41	-170.03	170.04	158.28	11.75	14.468	
1,800.00	1,800.00	1,803.00	1,800.00	6.23	6.24	-90.48	-1.41	-170.03	170.04	157.57	12.47	13.636	
1,900.00	1,900.00	1,903.00	1,900.00	6.59	6.60	-90.48	-1.41	-170.03	170.04	156.85	13.19	12.895	
2,000.00	2,000.00	2,003.00	2,000.00	6.95	6.96	-90.48	-1.41	-170.03	170.04	156.13	13.90	12.230	
2,100.00	2,100.00	2,103.00	2,100.00	7.31	7.31	-90.48	-1.41	-170.03	170.04	155.42	14.62	11.630	
2,200.00	2,200.00	2,203.00	2,200.00	7.66	7.67	-90.48	-1.41	-170.03	170.04	154.70	15.34	11.087	
2,300.00	2,300.00	2,303.00	2,300.00	8.02	8.03	-90.48	-1.41	-170.03	170.04	153.98	16.05	10.592	
2,400.00	2,400.00	2,403.00	2,400.00	8.38	8.39	-90.48	-1.41	-170.03	170.04	153.26	16.77	10.139	
2,500.00	2,500.00	2,503.00	2,500.00	8.74	8.75	-90.48	-1.41	-170.03	170.04	152.55	17.49	9.723	CC, ES
2,600.00	2,599.99	2,602.99	2,599.99	9.09	9.11	179.53	-1.41	-170.03	170.91	152.71	18.20	9.393	
2,700.00	2,699.96	2,702.96	2,699.96	9.43	9.47	179.53	-1.41	-170.03	173.53	154.63	18.90	9.184	
2,800.00	2,799.86	2,802.86	2,799.86	9.78	9.82	179.55	-1.41	-170.03	177.89	158.29	19.60	9.078	
2,900.00	2,899.68	2,902.68	2,899.68	10.12	10.18	179.56	-1.41	-170.03	183.99	163.70	20.30	9.065	SF
3,000.00	2,999.37	3,002.37	2,999.37	10.47	10.54	179.58	-1.41	-170.03	191.84	170.84	21.00	9.136	
3,100.00	3,098.90	3,101.90	3,098.90	10.82	10.90	179.60	-1.41	-170.03	201.42	179.72	21.70	9.282	
3,200.00	3,198.26	3,201.26	3,198.26	11.17	11.25	179.62	-1.41	-170.03	212.74	190.34	22.40	9.497	
3,300.00	3,297.40	3,300.40	3,297.40	11.53	11.61	179.64	-1.41	-170.03	225.79	202.69	23.10	9.774	
3,400.00	3,396.43	3,400.57	3,396.43	11.89	11.97	179.66	-1.41	-170.03	239.71	215.90	23.81	10.069	
3,500.00	3,495.46	3,501.54	3,495.46	12.26	12.33	179.68	-1.41	-170.03	253.63	229.11	24.52	10.346	
3,600.00	3,594.48	3,602.52	3,594.48	12.62	12.69	179.70	-1.41	-170.03	267.55	242.32	25.23	10.606	
3,700.00	3,693.51	3,703.49	3,693.51	12.99	13.05	179.71	-1.41	-170.03	281.46	255.53	25.94	10.852	
3,800.00	3,792.54	3,804.46	3,792.54	13.37	13.41	179.72	-1.41	-170.03	295.38	268.73	26.65	11.084	
3,900.00	3,891.56	3,905.44	3,891.56	13.74	13.78	179.74	-1.41	-170.03	309.30	281.94	27.36	11.304	
4,000.00	3,990.59	4,006.41	3,990.59	14.12	14.14	179.75	-1.41	-170.03	323.21	295.14	28.08	11.512	
4,100.00	4,089.62	4,107.38	4,089.62	14.49	14.50	179.76	-1.41	-170.03	337.13	308.34	28.79	11.710	
4,200.00	4,188.64	4,208.36	4,188.64	14.87	14.86	179.77	-1.41	-170.03	351.05	321.54	29.51	11.897	
4,300.00	4,287.67	4,309.33	4,287.67	15.25	15.22	179.78	-1.41	-170.03	364.97	334.74	30.22	12.076	
4,400.00	4,386.70	4,389.70	4,386.70	15.63	15.51	179.78	-1.41	-170.03	378.88	348.02	30.87	12.275	
4,500.00	4,485.72	4,488.72	4,485.72	16.02	15.87	179.79	-1.41	-170.03	392.80	361.22	31.58	12.439	
4,600.00	4,584.75	4,587.75	4,584.75	16.40	16.22	179.80	-1.41	-170.03	406.72	374.43	32.29	12.596	
4,700.00	4,683.78	4,686.78	4,683.78	16.79	16.58	179.81	-1.41	-170.03	420.63	387.63	33.00	12.746	
4,800.00	4,782.81	4,785.81	4,782.81	17.17	16.93	179.81	-1.41	-170.03	434.55	400.84	33.71	12.890	
4,900.00	4,881.83	4,884.83	4,881.83	17.56	17.29	179.82	-1.41	-170.03	448.47	414.04	34.43	13.027	
5,000.00	4,980.86	4,983.86	4,980.86	17.95	17.64	179.82	-1.41	-170.03	462.39	427.25	35.14	13.158	
5,100.00	5,079.89	5,082.89	5,079.89	18.34	18.00	179.83	-1.41	-170.03	476.30	440.45	35.85	13.285	

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

Company:	Devon Energy Corp.	**Local Co-ordinate Reference:**	Well 38H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Reference Site:	Rio Blanco 4-33 Fed Com	**MD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	38H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	WellPlanner1
Reference Design:	Prelim Plan	**Offset TVD Reference:**	Reference Datum

Offset Design Rio Blanco 4-33 Fed Com - 1H - OH - Plan 1 — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+HDGM — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,200.00	5,178.75	5,181.75	5,178.75	18.73	18.35	179.83	-1.41	-170.03	491.32	454.75	36.57	13.436	
5,300.00	5,277.04	5,280.04	5,277.04	19.14	18.70	179.84	-1.41	-170.03	509.70	472.42	37.28	13.671	
5,400.00	5,374.63	5,377.63	5,374.63	19.56	19.05	179.84	-1.41	-170.03	531.50	493.51	37.99	13.989	
5,500.00	5,471.41	5,474.41	5,471.41	20.00	19.40	179.85	-1.41	-170.03	556.65	517.95	38.70	14.383	
5,600.00	5,567.88	5,570.88	5,567.88	20.44	19.75	179.86	-1.41	-170.03	582.98	543.57	39.41	14.793	
5,700.00	5,664.35	5,667.35	5,664.35	20.89	20.09	179.86	-1.41	-170.03	609.31	569.19	40.11	15.189	
5,800.00	5,760.83	5,763.83	5,760.83	21.35	20.44	179.87	-1.41	-170.03	635.63	594.81	40.82	15.570	
5,900.00	5,857.30	5,860.30	5,857.30	21.81	20.78	179.87	-1.41	-170.03	661.96	620.43	41.53	15.938	
6,000.00	5,953.77	5,956.77	5,953.77	22.27	21.13	179.88	-1.41	-170.03	688.29	646.04	42.24	16.294	
6,100.00	6,050.24	6,053.24	6,050.24	22.73	21.47	179.88	-1.41	-170.03	714.61	671.66	42.95	16.637	
6,200.00	6,146.72	6,149.72	6,146.72	23.20	21.82	179.89	-1.41	-170.03	740.94	697.27	43.67	16.968	
6,300.00	6,243.19	6,246.19	6,243.19	23.67	22.17	179.89	-1.41	-170.03	767.27	722.89	44.38	17.289	
6,400.00	6,339.66	6,342.66	6,339.66	24.14	22.51	179.89	-1.41	-170.03	793.59	748.50	45.09	17.599	
6,500.00	6,436.13	6,439.13	6,436.13	24.62	22.86	179.90	-1.41	-170.03	819.92	774.11	45.81	17.899	
6,600.00	6,532.60	6,535.60	6,532.60	25.10	23.20	179.90	-1.41	-170.03	846.25	799.72	46.53	18.189	
6,700.00	6,629.08	6,632.08	6,629.08	25.58	23.55	179.90	-1.41	-170.03	872.57	825.33	47.24	18.470	
6,800.00	6,725.55	6,728.55	6,725.55	26.06	23.90	179.91	-1.41	-170.03	898.90	850.94	47.96	18.743	
6,900.00	6,822.02	6,825.02	6,822.02	26.55	24.24	179.91	-1.41	-170.03	925.23	876.55	48.68	19.007	
7,000.00	6,918.49	6,921.49	6,918.49	27.03	24.59	179.91	-1.41	-170.03	951.55	902.16	49.40	19.263	
7,100.00	7,014.97	7,016.98	7,013.98	27.52	24.93	179.92	-1.39	-170.04	977.89	927.78	50.11	19.514	
7,200.00	7,111.44	7,107.98	7,104.97	28.01	25.26	179.97	-0.45	-170.38	1,004.57	953.78	50.80	19.776	
7,300.00	7,207.91	7,201.43	7,195.53	28.50	25.59	-179.89	1.82	-171.21	1,031.78	980.30	51.49	20.039	
7,400.00	7,304.38	7,305.33	7,291.57	29.00	25.96	-179.72	4.97	-172.35	1,059.27	1,007.04	52.23	20.280	
7,500.00	7,400.85	7,409.23	7,387.61	29.49	26.33	-179.55	8.13	-173.50	1,086.77	1,033.79	52.98	20.513	
7,600.00	7,497.33	7,486.87	7,483.65	29.99	26.61	-179.40	11.28	-174.65	1,114.27	1,060.64	53.63	20.777	
7,700.00	7,593.80	7,582.96	7,579.69	30.49	26.95	-179.25	14.43	-175.79	1,141.78	1,087.43	54.35	21.008	
7,800.00	7,690.27	7,679.06	7,675.73	30.99	27.30	-179.10	17.58	-176.94	1,169.30	1,114.23	55.07	21.233	
7,900.00	7,786.74	7,775.16	7,771.77	31.49	27.64	-178.97	20.73	-178.09	1,196.83	1,141.04	55.79	21.453	
8,000.00	7,883.22	7,871.26	7,867.81	31.99	27.98	-178.84	23.88	-179.24	1,224.36	1,167.85	56.51	21.666	
8,100.00	7,979.69	7,967.36	7,963.85	32.49	28.33	-178.71	27.04	-180.38	1,251.89	1,194.66	57.23	21.874	
8,200.00	8,076.16	8,063.46	8,059.89	33.00	28.67	-178.59	30.19	-181.53	1,279.43	1,221.48	57.95	22.077	
8,300.00	8,172.63	8,160.79	8,157.16	33.50	29.02	-178.47	33.47	-182.68	1,306.97	1,248.29	58.68	22.272	
8,400.00	8,269.11	8,268.28	8,263.39	34.01	29.40	-177.82	48.86	-183.01	1,334.02	1,274.55	59.47	22.432	
8,500.00	8,365.58	8,367.70	8,357.51	34.51	29.73	-176.48	80.45	-181.89	1,360.71	1,300.52	60.19	22.608	
8,600.00	8,462.41	8,455.10	8,434.68	35.01	30.02	-174.82	121.26	-179.78	1,386.74	1,325.93	60.81	22.803	
8,700.00	8,560.05	8,529.43	8,494.78	35.48	30.26	-173.09	164.82	-177.22	1,411.33	1,350.01	61.32	23.016	
8,800.00	8,658.39	8,591.28	8,540.14	35.91	30.46	-171.46	206.73	-174.56	1,435.54	1,373.85	61.68	23.272	
8,900.00	8,757.30	8,642.29	8,573.98	36.33	30.62	-170.03	244.81	-172.05	1,460.22	1,398.34	61.88	23.596	
9,000.00	8,856.66	8,684.35	8,599.24	36.71	30.76	-168.80	278.35	-169.77	1,485.97	1,424.07	61.91	24.004	
9,100.00	8,956.35	8,719.19	8,618.24	37.07	30.87	-167.78	307.47	-167.74	1,513.20	1,451.45	61.75	24.507	
9,200.00	9,056.25	8,750.00	8,633.55	37.40	30.97	-166.88	334.14	-165.86	1,542.13	1,480.70	61.43	25.104	
9,300.00	9,156.24	8,772.63	8,643.86	37.71	31.04	-76.22	354.23	-164.42	1,573.01	1,512.10	60.92	25.823	
9,400.00	9,256.24	8,800.00	8,655.26	38.02	31.13	-75.28	379.05	-162.63	1,608.11	1,547.76	60.36	26.643	
9,500.00	9,356.24	8,800.00	8,655.26	38.32	31.13	-75.28	379.05	-162.63	1,648.10	1,588.64	59.45	27.720	
9,600.00	9,456.24	8,826.69	8,665.22	38.62	31.22	-74.35	403.74	-160.82	1,692.54	1,633.76	58.78	28.795	
9,700.00	9,556.24	8,850.00	8,672.97	38.93	31.30	-73.52	425.66	-159.20	1,741.46	1,683.41	58.04	30.002	
9,800.00	9,656.23	8,850.00	8,672.97	39.23	31.30	-71.28	425.66	-159.20	1,794.07	1,737.01	57.06	31.441	
9,900.00	9,754.98	8,867.61	8,678.22	39.54	31.36	-64.47	442.42	-157.95	1,846.37	1,790.14	56.23	32.838	
10,000.00	9,849.10	8,900.00	8,686.53	39.82	31.47	-58.25	473.64	-155.61	1,895.25	1,839.74	55.51	34.142	
10,100.00	9,935.14	8,900.00	8,686.53	40.06	31.47	-53.87	473.64	-155.61	1,938.52	1,884.01	54.51	35.564	
10,200.00	10,009.92	8,933.25	8,693.21	40.26	31.58	-49.92	506.11	-153.14	1,974.84	1,920.98	53.86	36.665	
10,300.00	10,070.71	8,950.00	8,695.86	40.41	31.64	-47.27	522.60	-151.88	2,003.09	1,949.92	53.17	37.672	

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

Company:	Devon Energy Corp.	**Local Co-ordinate Reference:**	Well 38H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Reference Site:	Rio Blanco 4-33 Fed Com	**MD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	38H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	WellPlanner1
Reference Design:	Prelim Plan	**Offset TVD Reference:**	Reference Datum

Offset Design Rio Blanco 4-33 Fed Com - 1H - OH - Plan 1 — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+HDGM — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,400.00	10,115.26	9,000.00	8,700.86	40.52	31.81	-45.29	572.19	-148.03	2,022.20	1,969.35	52.85	38.266	
10,500.00	10,141.95	9,014.78	8,701.51	40.62	31.86	-44.50	586.90	-146.88	2,031.29	1,978.82	52.47	38.716	
10,600.00	10,149.88	9,071.01	8,702.12	40.72	32.06	-44.40	642.97	-142.62	2,030.10	1,977.59	52.52	38.658	
10,700.00	10,150.01	9,150.94	8,702.78	40.85	32.38	-44.29	722.74	-137.49	2,024.59	1,971.77	52.82	38.327	
10,800.00	10,150.14	9,231.03	8,703.43	41.03	32.74	-44.21	802.72	-133.47	2,020.07	1,966.85	53.22	37.958	
10,900.00	10,150.27	9,311.22	8,704.09	41.26	33.12	-44.15	882.86	-130.57	2,016.52	1,962.82	53.70	37.554	
11,000.00	10,150.40	9,391.50	8,704.75	41.55	33.55	-44.11	963.11	-128.78	2,013.95	1,959.69	54.26	37.115	
11,100.00	10,150.53	9,471.84	8,705.41	41.90	34.02	-44.10	1,043.44	-128.12	2,012.36	1,957.45	54.91	36.646	
11,200.00	10,150.66	9,559.65	8,706.13	42.32	34.56	-44.10	1,131.24	-128.57	2,011.68	1,955.98	55.70	36.116	
11,300.00	10,150.79	9,659.64	8,706.95	42.79	35.23	-44.12	1,231.24	-129.32	2,011.18	1,954.51	56.67	35.492	
11,400.00	10,150.92	9,759.64	8,707.77	43.33	35.94	-44.13	1,331.23	-130.07	2,010.68	1,952.98	57.70	34.844	
11,500.00	10,151.05	9,859.64	8,708.59	43.91	36.70	-44.14	1,431.22	-130.82	2,010.18	1,951.37	58.82	34.177	
11,600.00	10,151.17	9,959.64	8,709.41	44.55	37.49	-44.16	1,531.21	-131.57	2,009.69	1,949.69	60.00	33.495	
11,700.00	10,151.30	10,059.63	8,710.23	45.24	38.33	-44.17	1,631.20	-132.32	2,009.19	1,947.94	61.25	32.805	
11,800.00	10,151.43	10,159.63	8,711.05	45.97	39.20	-44.19	1,731.19	-133.07	2,008.69	1,946.14	62.55	32.111	
11,900.00	10,151.56	10,259.63	8,711.87	46.73	40.11	-44.20	1,831.18	-133.82	2,008.20	1,944.27	63.92	31.417	
12,000.00	10,151.69	10,359.63	8,712.69	47.54	41.04	-44.21	1,931.18	-134.57	2,007.70	1,942.36	65.34	30.726	
12,100.00	10,151.82	10,459.62	8,713.51	48.38	42.01	-44.23	2,031.17	-135.32	2,007.20	1,940.39	66.81	30.042	
12,200.00	10,151.95	10,559.62	8,714.33	49.24	43.00	-44.24	2,131.16	-136.07	2,006.71	1,938.37	68.33	29.367	
12,300.00	10,152.08	10,659.62	8,715.15	50.14	44.02	-44.25	2,231.15	-136.82	2,006.21	1,936.31	69.90	28.703	
12,400.00	10,152.21	10,759.62	8,715.97	51.07	45.07	-44.27	2,331.14	-137.57	2,005.71	1,934.21	71.50	28.051	
12,500.00	10,152.34	10,859.61	8,716.79	52.02	46.13	-44.28	2,431.13	-138.32	2,005.22	1,932.07	73.15	27.414	
12,600.00	10,152.47	10,959.61	8,717.61	53.00	47.22	-44.30	2,531.12	-139.07	2,004.72	1,929.89	74.83	26.791	
12,700.00	10,152.60	11,059.61	8,718.43	54.00	48.32	-44.31	2,631.12	-139.82	2,004.22	1,927.68	76.54	26.184	
12,800.00	10,152.72	11,159.61	8,719.26	55.02	49.45	-44.32	2,731.11	-140.57	2,003.73	1,925.44	78.29	25.593	
12,900.00	10,152.85	11,259.60	8,720.08	56.06	50.59	-44.34	2,831.10	-141.32	2,003.23	1,923.16	80.07	25.019	
13,000.00	10,152.98	11,359.60	8,720.90	57.11	51.74	-44.35	2,931.09	-142.07	2,002.74	1,920.86	81.87	24.461	
13,100.00	10,153.11	11,459.60	8,721.72	58.19	52.91	-44.36	3,031.08	-142.82	2,002.24	1,918.54	83.71	23.920	
13,200.00	10,153.24	11,559.60	8,722.54	59.28	54.10	-44.38	3,131.07	-143.58	2,001.75	1,916.18	85.56	23.395	
13,300.00	10,153.37	11,659.60	8,723.36	60.39	55.30	-44.39	3,231.06	-144.33	2,001.25	1,913.81	87.44	22.887	
13,400.00	10,153.50	11,759.59	8,724.18	61.51	56.51	-44.41	3,331.06	-145.08	2,000.76	1,911.41	89.34	22.394	
13,500.00	10,153.63	11,859.59	8,725.00	62.65	57.73	-44.42	3,431.05	-145.83	2,000.26	1,908.99	91.27	21.917	
13,600.00	10,153.76	11,959.59	8,725.82	63.80	58.96	-44.43	3,531.04	-146.58	1,999.77	1,906.56	93.21	21.455	
13,700.00	10,153.89	12,059.59	8,726.64	64.96	60.20	-44.45	3,631.03	-147.33	1,999.27	1,904.10	95.17	21.008	
13,800.00	10,154.02	12,159.58	8,727.46	66.14	61.45	-44.46	3,731.02	-148.08	1,998.78	1,901.63	97.14	20.576	
13,900.00	10,154.15	12,259.58	8,728.28	67.32	62.71	-44.47	3,831.01	-148.83	1,998.28	1,899.15	99.14	20.157	
14,000.00	10,154.27	12,359.58	8,729.10	68.52	63.98	-44.49	3,931.00	-149.58	1,997.79	1,896.64	101.14	19.752	
14,100.00	10,154.40	12,459.58	8,729.92	69.72	65.25	-44.50	4,031.00	-150.33	1,997.29	1,894.13	103.17	19.360	
14,200.00	10,154.53	12,559.57	8,730.74	70.94	66.53	-44.52	4,130.99	-151.08	1,996.80	1,891.60	105.20	18.981	
14,300.00	10,154.66	12,659.57	8,731.56	72.16	67.82	-44.53	4,230.98	-151.83	1,996.30	1,889.05	107.25	18.614	
14,400.00	10,154.79	12,759.57	8,732.38	73.39	69.12	-44.54	4,330.97	-152.58	1,995.81	1,886.50	109.31	18.258	
14,500.00	10,154.92	12,859.57	8,733.20	74.63	70.42	-44.56	4,430.96	-153.33	1,995.32	1,883.93	111.38	17.914	
14,600.00	10,155.05	12,959.56	8,734.02	75.88	71.73	-44.57	4,530.95	-154.08	1,994.82	1,881.36	113.47	17.581	
14,700.00	10,155.18	13,059.56	8,734.84	77.14	73.04	-44.59	4,630.94	-154.83	1,994.33	1,878.77	115.56	17.258	
14,800.00	10,155.31	13,159.56	8,735.66	78.40	74.36	-44.60	4,730.94	-155.58	1,993.83	1,876.17	117.66	16.945	
14,900.00	10,155.44	13,259.56	8,736.48	79.67	75.69	-44.61	4,830.93	-156.33	1,993.34	1,873.57	119.78	16.642	
15,000.00	10,155.57	13,359.55	8,737.30	80.94	77.02	-44.63	4,930.92	-157.08	1,992.85	1,870.95	121.90	16.349	
15,100.00	10,155.70	13,459.55	8,738.12	82.22	78.35	-44.64	5,030.91	-157.83	1,992.35	1,868.33	124.03	16.064	
15,200.00	10,155.82	13,559.55	8,738.94	83.51	79.69	-44.66	5,130.90	-158.58	1,991.86	1,865.70	126.17	15.788	
15,300.00	10,155.95	13,659.55	8,739.76	84.80	81.03	-44.67	5,230.89	-159.33	1,991.37	1,863.06	128.31	15.520	
15,400.00	10,156.08	13,759.55	8,740.58	86.10	82.37	-44.68	5,330.88	-160.08	1,990.88	1,860.41	130.47	15.260	
15,500.00	10,156.21	13,859.54	8,741.40	87.40	83.72	-44.70	5,430.88	-160.84	1,990.38	1,857.76	132.63	15.007	

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Company:	Devon Energy Corp.	**Local Co-ordinate Reference:**	Well 38H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Reference Site:	Rio Blanco 4-33 Fed Com	**MD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	38H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	WellPlanner1
Reference Design:	Prelim Plan	**Offset TVD Reference:**	Reference Datum

Offset Design Rio Blanco 4-33 Fed Com - 1H - OH - Plan 1 — **Offset Site Error:** 0.00 usft

Survey Program: 0-MWD+HDGM — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
15,600.00	10,156.34	13,971.87	8,742.60	88.71	85.24	-44.72	5,543.19	-161.68	1,989.73	1,854.74	134.99	14.739	
15,700.00	10,156.47	14,071.83	8,744.29	90.02	86.60	-44.75	5,643.14	-162.43	1,988.62	1,851.43	137.19	14.495	
15,800.00	10,156.60	14,171.78	8,745.98	91.34	87.95	-44.78	5,743.07	-163.18	1,987.51	1,848.11	139.40	14.258	
15,900.00	10,156.73	14,271.74	8,747.67	92.66	89.32	-44.81	5,843.01	-163.93	1,986.40	1,844.79	141.61	14.027	
16,000.00	10,156.86	14,371.69	8,749.35	93.98	90.68	-44.84	5,942.94	-164.68	1,985.30	1,841.47	143.83	13.803	
16,100.00	10,156.99	14,471.64	8,751.03	95.31	92.05	-44.88	6,042.88	-165.43	1,984.20	1,838.15	146.05	13.585	
16,200.00	10,157.12	14,571.59	8,752.71	96.64	93.42	-44.91	6,142.81	-166.18	1,983.10	1,834.82	148.28	13.374	
16,300.00	10,157.25	14,671.55	8,754.38	97.97	94.79	-44.94	6,242.75	-166.93	1,982.00	1,831.48	150.52	13.168	
16,400.00	10,157.37	14,771.50	8,756.05	99.31	96.17	-44.97	6,342.68	-167.68	1,980.91	1,828.15	152.76	12.967	
16,500.00	10,157.50	14,871.45	8,757.72	100.65	97.54	-45.00	6,442.62	-168.43	1,979.82	1,824.81	155.01	12.772	
16,600.00	10,157.63	14,971.40	8,759.39	102.00	98.92	-45.03	6,542.56	-169.18	1,978.73	1,821.47	157.26	12.582	
16,700.00	10,157.76	15,071.35	8,761.06	103.35	100.30	-45.06	6,642.49	-169.93	1,977.64	1,818.12	159.52	12.398	
16,800.00	10,157.89	15,171.31	8,762.72	104.70	101.69	-45.10	6,742.43	-170.68	1,976.56	1,814.78	161.78	12.217	
16,900.00	10,158.02	15,271.26	8,764.38	106.05	103.07	-45.13	6,842.36	-171.43	1,975.47	1,811.43	164.05	12.042	
17,000.00	10,158.15	15,371.21	8,766.04	107.40	104.46	-45.16	6,942.30	-172.18	1,974.39	1,808.08	166.32	11.871	
17,100.00	10,158.28	15,471.17	8,767.69	108.76	105.85	-45.19	7,042.24	-172.93	1,973.32	1,804.72	168.60	11.704	
17,200.00	10,158.41	15,571.12	8,769.34	110.12	107.24	-45.22	7,142.17	-173.68	1,972.24	1,801.37	170.88	11.542	
17,300.00	10,158.54	15,671.07	8,770.99	111.49	108.63	-45.25	7,242.11	-174.43	1,971.17	1,798.01	173.16	11.383	
17,400.00	10,158.67	15,771.02	8,772.64	112.85	110.02	-45.28	7,342.05	-175.18	1,970.10	1,794.65	175.45	11.229	
17,500.00	10,158.80	15,870.98	8,774.28	114.22	111.42	-45.32	7,441.98	-175.93	1,969.03	1,791.29	177.74	11.078	
17,600.00	10,158.92	15,970.93	8,775.92	115.59	112.82	-45.35	7,541.92	-176.68	1,967.97	1,787.93	180.04	10.931	
17,655.50	10,159.00	16,005.48	8,776.49	116.35	113.30	-45.36	7,576.46	-176.94	1,967.49	1,786.52	180.97	10.872	
17,658.52	10,159.00	16,005.48	8,776.49	116.39	113.30	-45.36	7,576.46	-176.94	1,967.49	1,786.50	180.99	10.871	

Company:	Devon Energy Corp.	**Local Co-ordinate Reference:**	Well 38H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Reference Site:	Rio Blanco 4-33 Fed Com	**MD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	38H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	WellPlanner1
Reference Design:	Prelim Plan	**Offset TVD Reference:**	Reference Datum

Offset Design Rio Blanco 4-33 Fed Com - 2H - OH - Surveys — **Offset Site Error:** 0.00 usft

Survey Program: 136-MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	2.41	0.01	0.00	0.00	-90.49	-1.03	-120.00	120.01				
100.00	100.00	102.64	100.24	0.14	0.10	-90.58	-1.20	-119.90	119.90	119.67	0.23	517.069	
200.00	200.00	202.70	200.30	0.49	0.26	-90.75	-1.56	-119.64	119.65	118.90	0.76	157.868	
300.00	300.00	304.24	301.83	0.85	0.48	-90.83	-1.72	-118.88	118.91	117.58	1.33	89.405	
400.00	400.00	405.57	403.14	1.21	0.70	-90.97	-1.97	-116.70	116.76	114.85	1.91	61.066	
500.00	500.00	505.67	503.20	1.57	0.92	-91.15	-2.29	-113.94	114.00	111.51	2.49	45.786	
600.00	600.00	606.04	603.53	1.93	1.15	-91.28	-2.48	-111.01	111.09	108.02	3.07	36.197	
700.00	700.00	705.68	703.11	2.29	1.37	-91.40	-2.63	-107.70	107.78	104.14	3.64	29.613	
800.00	800.00	805.44	802.84	2.65	1.57	-91.55	-2.84	-105.19	105.27	101.07	4.20	25.050	
900.00	900.00	905.58	902.94	3.00	1.79	-91.78	-3.18	-102.27	102.37	97.60	4.77	21.465	
1,000.00	1,000.00	1,004.70	1,002.02	3.36	1.99	-92.23	-3.88	-99.73	99.82	94.49	5.33	18.736	
1,100.00	1,100.00	1,104.12	1,101.42	3.72	2.19	-92.94	-5.03	-98.00	98.14	92.26	5.89	16.673	
1,200.00	1,200.00	1,203.68	1,200.96	4.08	2.40	-93.88	-6.56	-96.69	96.92	90.47	6.45	15.025	
1,300.00	1,300.00	1,303.05	1,300.31	4.44	2.61	-95.13	-8.61	-95.87	96.25	89.24	7.02	13.713	
1,315.17	1,315.17	1,317.92	1,315.17	4.49	2.64	-95.36	-8.99	-95.81	96.23	89.13	7.11	13.544	CC, ES
1,400.00	1,400.00	1,401.25	1,398.45	4.80	2.81	-96.95	-11.72	-96.20	96.92	89.34	7.59	12.774	
1,500.00	1,500.00	1,499.85	1,496.94	5.15	3.02	-99.39	-16.19	-97.90	99.28	91.12	8.16	12.166	
1,600.00	1,600.00	1,598.81	1,595.72	5.51	3.24	-102.04	-21.46	-100.62	102.97	94.23	8.74	11.787	
1,700.00	1,700.00	1,698.16	1,694.87	5.87	3.45	-104.48	-26.83	-103.87	107.40	98.09	9.31	11.536	
1,800.00	1,800.00	1,797.53	1,794.03	6.23	3.66	-106.54	-31.99	-107.73	112.54	102.66	9.88	11.390	
1,900.00	1,900.00	1,897.64	1,893.96	6.59	3.87	-108.12	-36.59	-111.80	117.79	107.34	10.45	11.272	
2,000.00	2,000.00	1,997.94	1,994.10	6.95	4.09	-109.36	-40.65	-115.68	122.76	111.74	11.02	11.143	
2,100.00	2,100.00	2,097.82	2,093.84	7.31	4.30	-110.38	-44.35	-119.38	127.50	115.91	11.59	11.005	
2,200.00	2,200.00	2,197.63	2,193.50	7.66	4.51	-111.42	-48.31	-123.12	132.42	120.26	12.15	10.894	
2,300.00	2,300.00	2,298.24	2,293.97	8.02	4.73	-112.39	-52.20	-126.68	137.15	124.42	12.73	10.777	
2,400.00	2,400.00	2,398.35	2,393.97	8.38	4.95	-113.27	-55.80	-129.77	141.38	128.09	13.30	10.634	
2,500.00	2,500.00	2,497.92	2,493.43	8.74	5.17	-113.97	-59.15	-133.05	145.76	131.89	13.86	10.513	
2,600.00	2,599.99	2,598.37	2,593.77	9.09	5.39	155.65	-62.13	-136.53	150.93	136.50	14.43	10.461	
2,700.00	2,699.96	2,698.83	2,694.15	9.43	5.60	155.61	-64.77	-139.65	157.22	142.24	14.98	10.494	
2,800.00	2,799.86	2,799.65	2,794.91	9.78	5.82	155.94	-66.88	-142.42	164.55	149.01	15.54	10.590	
2,900.00	2,899.68	2,899.68	2,894.89	10.12	6.04	156.62	-68.37	-144.92	173.03	156.94	16.10	10.751	
3,000.00	2,999.37	3,001.18	2,996.37	10.47	6.25	157.49	-69.52	-146.87	182.46	165.80	16.66	10.954	
3,100.00	3,098.90	3,101.92	3,097.10	10.82	6.46	158.43	-70.41	-147.91	192.64	175.42	17.22	11.190	
3,200.00	3,198.26	3,202.28	3,197.45	11.17	6.67	159.47	-71.00	-148.41	203.88	186.11	17.78	11.470	
3,300.00	3,297.40	3,302.47	3,297.65	11.53	6.88	160.54	-71.43	-148.37	216.27	197.93	18.34	11.795	
3,400.00	3,396.43	3,401.55	3,396.72	11.89	7.09	161.58	-71.82	-148.02	229.24	210.35	18.89	12.134	
3,500.00	3,495.46	3,500.74	3,495.92	12.26	7.30	162.55	-72.05	-147.82	242.37	222.92	19.45	12.461	
3,600.00	3,594.48	3,600.02	3,595.20	12.62	7.51	163.48	-72.01	-147.59	255.47	235.45	20.01	12.766	
3,700.00	3,693.51	3,699.62	3,694.80	12.99	7.72	164.36	-71.76	-147.27	268.47	247.90	20.57	13.049	
3,800.00	3,792.54	3,799.17	3,794.34	13.37	7.92	165.16	-71.45	-146.76	281.34	260.20	21.14	13.310	
3,900.00	3,891.56	3,898.02	3,893.19	13.74	8.13	165.93	-70.91	-146.29	294.23	272.53	21.70	13.562	
4,000.00	3,990.59	3,997.06	3,992.23	14.12	8.33	166.72	-69.95	-145.99	307.25	284.99	22.26	13.805	
4,100.00	4,089.62	4,096.85	4,092.01	14.49	8.54	167.49	-68.77	-145.61	320.19	297.37	22.82	14.030	
4,200.00	4,188.64	4,197.15	4,192.29	14.87	8.75	168.22	-67.45	-144.99	332.93	309.54	23.39	14.235	
4,300.00	4,287.67	4,298.34	4,293.47	15.25	8.96	168.88	-66.10	-143.83	345.20	321.24	23.96	14.409	
4,400.00	4,386.70	4,397.84	4,392.95	15.63	9.16	169.47	-64.81	-142.21	357.04	332.52	24.52	14.561	
4,500.00	4,485.72	4,495.97	4,491.06	16.02	9.36	169.97	-63.80	-140.83	369.19	344.12	25.07	14.724	
4,600.00	4,584.75	4,594.61	4,589.69	16.40	9.56	170.44	-62.86	-139.62	381.55	355.93	25.63	14.887	
4,700.00	4,683.78	4,692.63	4,687.70	16.79	9.76	171.00	-61.14	-138.73	394.13	367.94	26.19	15.051	
4,800.00	4,782.81	4,791.10	4,786.15	17.17	9.95	171.45	-60.03	-138.04	407.03	380.29	26.74	15.221	
4,900.00	4,881.83	4,888.70	4,883.74	17.56	10.15	171.83	-59.15	-137.49	420.11	392.82	27.29	15.392	
5,000.00	4,980.86	4,987.43	4,982.47	17.95	10.35	172.17	-58.56	-137.23	433.56	405.70	27.85	15.565	

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

Company:	Devon Energy Corp.	**Local Co-ordinate Reference:**	Well 38H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Reference Site:	Rio Blanco 4-33 Fed Com	**MD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	38H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	WellPlanner1
Reference Design:	Prelim Plan	**Offset TVD Reference:**	Reference Datum

Offset Design Rio Blanco 4-33 Fed Com - 2H - OH - Surveys — **Offset Site Error:** 0.00 usft

Survey Program: 136-MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.00	5,079.89	5,086.23	5,081.27	18.34	10.56	172.51	-57.76	-136.97	446.99	418.57	28.42	15.728	
5,200.00	5,178.75	5,184.56	5,179.60	18.73	10.76	172.81	-57.01	-136.82	461.64	432.66	28.98	15.929	
5,300.00	5,277.04	5,280.19	5,275.23	19.14	10.95	173.10	-56.49	-136.94	479.94	450.41	29.53	16.252	
5,400.00	5,374.63	5,374.96	5,369.99	19.56	11.15	173.39	-56.10	-137.61	502.25	472.16	30.08	16.696	
5,500.00	5,471.41	5,475.24	5,470.27	20.00	11.36	173.78	-55.18	-138.39	527.90	497.24	30.66	17.217	
5,600.00	5,567.88	5,571.06	5,566.07	20.44	11.56	174.26	-53.41	-138.78	554.31	523.09	31.22	17.755	
5,700.00	5,664.35	5,665.46	5,660.44	20.89	11.75	174.71	-51.56	-139.42	581.00	549.23	31.77	18.287	
5,800.00	5,760.83	5,770.63	5,765.59	21.35	11.97	175.21	-49.06	-139.65	607.25	574.89	32.37	18.761	
5,900.00	5,857.30	5,868.12	5,863.02	21.81	12.17	175.70	-45.93	-139.08	632.70	599.77	32.94	19.210	
6,000.00	5,953.77	5,963.33	5,958.18	22.27	12.37	176.13	-42.90	-138.55	658.22	624.73	33.49	19.653	
6,100.00	6,050.24	6,058.62	6,053.43	22.73	12.56	176.52	-40.13	-138.19	683.95	649.91	34.05	20.088	
6,200.00	6,146.72	6,156.10	6,150.88	23.20	12.76	176.86	-37.52	-137.90	709.81	675.19	34.61	20.507	
6,300.00	6,243.19	6,263.64	6,258.35	23.67	12.98	177.27	-33.94	-136.52	734.69	699.47	35.22	20.859	
6,400.00	6,339.66	6,361.74	6,356.36	24.14	13.18	177.66	-30.11	-134.53	758.87	723.07	35.80	21.199	
6,500.00	6,436.13	6,456.07	6,450.60	24.62	13.38	178.00	-26.50	-132.75	783.22	746.86	36.36	21.543	
6,600.00	6,532.60	6,550.27	6,544.73	25.10	13.57	178.30	-23.17	-131.28	807.92	771.00	36.91	21.886	
6,700.00	6,629.08	6,648.61	6,643.01	25.58	13.77	178.57	-20.09	-129.97	832.87	795.38	37.49	22.216	
6,800.00	6,725.55	6,753.82	6,748.11	26.06	13.99	178.90	-16.00	-127.65	856.96	818.86	38.10	22.495	
6,900.00	6,822.02	6,850.39	6,844.55	26.55	14.19	179.22	-11.59	-125.14	880.70	842.03	38.67	22.775	
7,000.00	6,918.49	6,945.04	6,939.10	27.03	14.39	179.50	-7.65	-122.93	904.72	865.48	39.24	23.058	
7,100.00	7,014.97	7,041.03	7,034.99	27.52	14.58	179.74	-4.02	-120.83	928.90	889.10	39.81	23.335	
7,200.00	7,111.44	7,133.49	7,127.37	28.01	14.77	179.95	-0.77	-118.97	953.28	912.92	40.36	23.617	
7,300.00	7,207.91	7,220.82	7,214.67	28.50	14.96	-179.90	1.63	-117.92	978.44	937.54	40.90	23.922	
7,400.00	7,304.38	7,308.01	7,301.84	29.00	15.14	-179.80	3.38	-117.77	1,004.61	963.18	41.44	24.245	
7,500.00	7,400.85	7,400.13	7,393.94	29.49	15.33	-179.73	4.68	-118.25	1,031.43	989.44	41.99	24.562	
7,600.00	7,497.33	7,499.60	7,493.41	29.99	15.54	-179.69	5.47	-118.86	1,058.37	1,015.78	42.59	24.852	
7,700.00	7,593.80	7,604.97	7,598.76	30.49	15.76	-179.60	7.40	-118.73	1,084.58	1,041.37	43.21	25.102	
7,800.00	7,690.27	7,698.53	7,692.25	30.99	15.96	-179.42	10.91	-118.22	1,110.41	1,066.63	43.77	25.367	
7,900.00	7,786.74	7,784.77	7,778.39	31.49	16.14	-179.21	15.09	-118.48	1,137.07	1,092.76	44.31	25.663	
8,000.00	7,883.22	7,877.27	7,870.79	31.99	16.33	-179.02	19.22	-119.30	1,164.31	1,119.44	44.87	25.949	
8,100.00	7,979.69	7,981.79	7,975.25	32.49	16.55	-178.86	22.93	-120.21	1,191.56	1,146.07	45.49	26.194	
8,200.00	8,076.16	8,088.18	8,081.54	33.00	16.77	-178.67	27.36	-119.77	1,217.53	1,171.41	46.12	26.399	
8,300.00	8,172.63	8,180.68	8,173.89	33.50	16.97	-178.45	32.52	-119.40	1,243.60	1,196.91	46.69	26.637	
8,400.00	8,269.11	8,275.04	8,268.12	34.01	17.17	-178.24	37.66	-119.27	1,269.93	1,222.67	47.26	26.870	
8,500.00	8,365.58	8,371.38	8,364.35	34.51	17.37	-178.07	42.12	-119.23	1,296.34	1,248.49	47.85	27.094	
8,600.00	8,462.41	8,466.17	8,459.08	35.01	17.57	-177.97	45.42	-119.24	1,321.39	1,272.97	48.42	27.290	
8,700.00	8,560.05	8,566.57	8,559.43	35.48	17.79	-177.88	48.80	-119.40	1,343.22	1,294.20	49.02	27.403	
8,800.00	8,658.39	8,665.58	8,658.33	35.91	18.00	-177.72	53.46	-119.13	1,361.26	1,311.66	49.60	27.442	
8,900.00	8,757.30	8,759.17	8,751.81	36.33	18.20	-177.57	57.89	-119.12	1,376.14	1,325.98	50.16	27.435	
9,000.00	8,856.66	8,847.87	8,840.45	36.71	18.39	-177.46	61.17	-119.61	1,388.08	1,337.40	50.68	27.388	
9,100.00	8,956.35	8,940.82	8,933.33	37.07	18.58	-177.36	64.20	-120.91	1,397.36	1,346.15	51.22	27.283	
9,200.00	9,056.25	9,048.16	9,040.59	37.40	18.81	-177.20	68.40	-122.31	1,403.14	1,351.32	51.82	27.078	
9,300.00	9,156.24	9,148.17	9,140.49	37.71	19.03	-87.02	73.00	-123.07	1,405.05	1,352.69	52.37	26.830	
9,400.00	9,256.24	9,256.19	9,248.42	38.02	19.26	-86.85	77.22	-123.87	1,406.01	1,353.06	52.95	26.552	
9,500.00	9,356.24	9,349.56	9,341.71	38.32	19.46	-86.69	81.14	-124.36	1,406.78	1,353.31	53.47	26.311	
9,600.00	9,456.24	9,477.58	9,468.01	38.62	19.75	-85.92	100.05	-122.90	1,406.51	1,352.35	54.16	25.969	
9,637.93	9,494.17	9,505.00	9,494.17	38.74	19.81	-85.59	108.19	-122.18	1,406.35	1,352.02	54.33	25.886	
9,700.00	9,556.24	9,550.13	9,536.20	38.93	19.93	-84.92	124.57	-121.12	1,406.79	1,352.18	54.60	25.763	
9,800.00	9,656.23	9,599.00	9,580.02	39.23	20.07	-83.49	146.15	-120.42	1,410.01	1,355.12	54.89	25.686	
9,900.00	9,754.98	9,647.00	9,621.00	39.54	20.21	-82.12	171.12	-120.65	1,415.51	1,360.38	55.13	25.677	
10,000.00	9,849.10	9,704.38	9,666.88	39.82	20.41	-80.73	205.51	-121.86	1,421.96	1,366.56	55.39	25.670	
10,100.00	9,935.14	9,764.01	9,711.40	40.06	20.63	-79.58	245.09	-124.17	1,428.59	1,372.91	55.67	25.660	

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

Company:	Devon Energy Corp.	**Local Co-ordinate Reference:**	Well 38H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Reference Site:	Rio Blanco 4-33 Fed Com	**MD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	38H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	WellPlanner1
Reference Design:	Prelim Plan	**Offset TVD Reference:**	Reference Datum

Offset Design Rio Blanco 4-33 Fed Com - 2H - OH - Surveys — **Offset Site Error:** 0.00 usft

Survey Program: 136-MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,200.00	10,009.92	9,836.00	9,760.30	40.26	20.95	-78.73	297.80	-127.24	1,434.09	1,377.99	56.10	25.564	
10,300.00	10,070.71	9,939.55	9,821.71	40.41	21.50	-78.40	380.99	-130.09	1,436.56	1,379.63	56.93	25.234	
10,400.00	10,115.26	10,008.51	9,854.72	40.52	21.93	-78.54	441.49	-131.10	1,436.49	1,378.97	57.52	24.974	
10,500.00	10,141.95	10,089.00	9,883.38	40.62	22.50	-79.08	516.60	-130.59	1,433.50	1,375.16	58.34	24.570	
10,600.00	10,149.88	10,140.02	9,894.87	40.72	22.91	-79.72	566.28	-130.45	1,429.86	1,370.89	58.97	24.247	
10,695.66	10,150.01	10,189.43	9,900.77	40.84	23.32	-79.95	615.31	-131.05	1,428.29	1,368.66	59.63	23.954	
10,700.00	10,150.01	10,191.49	9,900.92	40.85	23.34	-79.96	617.38	-131.09	1,428.29	1,368.64	59.65	23.943	
10,800.00	10,150.14	10,255.57	9,902.00	41.03	23.92	-80.01	681.40	-133.01	1,430.04	1,369.55	60.49	23.639	
10,900.00	10,150.27	10,363.86	9,899.51	41.26	24.97	-79.92	789.62	-135.77	1,432.22	1,370.34	61.89	23.143	
11,000.00	10,150.40	10,455.15	9,898.15	41.55	25.87	-79.87	880.86	-138.52	1,434.72	1,371.56	63.16	22.715	
11,100.00	10,150.53	10,558.64	9,897.07	41.90	26.96	-79.84	984.29	-141.72	1,437.23	1,372.53	64.71	22.211	
11,200.00	10,150.66	10,673.12	9,896.32	42.32	28.24	-79.82	1,098.72	-145.09	1,439.58	1,373.05	66.53	21.639	
11,300.00	10,150.79	10,803.93	9,895.68	42.79	29.79	-79.79	1,229.52	-146.27	1,439.79	1,371.09	68.70	20.956	
11,400.00	10,150.92	10,921.62	9,894.95	43.33	31.30	-79.75	1,347.20	-145.27	1,438.33	1,367.48	70.85	20.301	
11,500.00	10,151.05	11,013.12	9,893.52	43.91	32.53	-79.67	1,438.68	-144.17	1,436.71	1,364.03	72.68	19.767	
11,600.00	10,151.17	11,107.59	9,890.63	44.55	33.83	-79.54	1,533.10	-143.29	1,435.62	1,361.01	74.61	19.241	
11,700.00	10,151.30	11,216.89	9,887.74	45.24	35.31	-79.41	1,642.35	-142.20	1,434.41	1,357.61	76.81	18.676	
11,800.00	10,151.43	11,324.56	9,886.33	45.97	36.76	-79.33	1,750.00	-140.52	1,432.39	1,353.37	79.02	18.128	
11,900.00	10,151.56	11,421.01	9,887.02	46.73	38.10	-79.34	1,846.45	-139.41	1,430.41	1,349.29	81.13	17.632	
12,000.00	10,151.69	11,512.48	9,888.16	47.54	39.40	-79.37	1,937.91	-138.70	1,428.71	1,345.50	83.22	17.169	
12,100.00	10,151.82	11,597.95	9,889.86	48.38	40.64	-79.43	2,023.36	-139.02	1,428.00	1,342.74	85.26	16.749	
12,138.95	10,151.87	11,633.20	9,890.67	48.71	41.16	-79.46	2,058.60	-139.38	1,427.95	1,341.83	86.11	16.582	
12,200.00	10,151.95	11,689.55	9,891.93	49.24	42.00	-79.51	2,114.92	-140.14	1,428.06	1,340.58	87.48	16.324	
12,300.00	10,152.08	11,787.44	9,892.39	50.14	43.49	-79.53	2,212.80	-141.42	1,428.55	1,338.68	89.87	15.897	
12,400.00	10,152.21	11,892.89	9,893.82	51.07	45.11	-79.58	2,318.23	-142.74	1,428.81	1,336.36	92.45	15.455	
12,500.00	10,152.34	12,007.35	9,895.03	52.02	46.90	-79.62	2,432.68	-143.52	1,428.61	1,333.33	95.27	14.995	
12,600.00	10,152.47	12,107.92	9,894.18	53.00	48.48	-79.57	2,533.25	-142.89	1,427.42	1,329.60	97.82	14.592	
12,700.00	10,152.60	12,208.83	9,895.51	54.00	50.05	-79.62	2,634.14	-142.98	1,426.56	1,326.16	100.40	14.209	
12,800.00	10,152.72	12,341.61	9,899.10	55.02	52.10	-79.74	2,766.87	-141.90	1,424.60	1,320.94	103.66	13.743	
12,900.00	10,152.85	12,437.91	9,902.67	56.06	53.62	-79.86	2,863.09	-140.28	1,421.57	1,315.33	106.24	13.381	
13,000.00	10,152.98	12,538.24	9,904.99	57.11	55.22	-79.92	2,963.36	-138.30	1,418.51	1,309.58	108.93	13.023	
13,100.00	10,153.11	12,628.15	9,905.60	58.19	56.68	-79.92	3,053.25	-136.28	1,415.49	1,304.08	111.41	12.705	
13,185.78	10,153.22	12,680.37	9,905.30	59.13	57.52	-79.91	3,105.47	-135.98	1,414.47	1,301.48	112.99	12.519	
13,200.00	10,153.24	12,689.02	9,905.19	59.28	57.66	-79.90	3,114.12	-136.04	1,414.50	1,301.25	113.25	12.491	
13,300.00	10,153.37	12,792.45	9,903.54	60.39	59.33	-79.83	3,217.52	-137.19	1,415.17	1,299.16	116.00	12.199	
13,400.00	10,153.50	12,882.02	9,901.97	61.51	60.78	-79.77	3,307.08	-137.96	1,415.62	1,297.15	118.47	11.949	
13,500.00	10,153.63	12,982.79	9,900.12	62.65	62.40	-79.69	3,407.83	-139.32	1,416.55	1,295.37	121.19	11.689	
13,600.00	10,153.76	13,097.95	9,898.91	63.80	64.25	-79.64	3,522.97	-140.33	1,416.89	1,292.64	124.25	11.403	
13,622.93	10,153.79	13,117.61	9,898.82	64.07	64.57	-79.63	3,542.63	-140.46	1,416.89	1,292.07	124.81	11.352	
13,700.00	10,153.89	13,195.03	9,898.72	64.96	65.83	-79.63	3,620.05	-141.09	1,416.97	1,290.02	126.95	11.161	
13,800.00	10,154.02	13,314.54	9,899.03	66.14	67.79	-79.62	3,739.56	-140.90	1,416.02	1,285.82	130.19	10.876	
13,900.00	10,154.15	13,418.23	9,899.04	67.32	69.51	-79.61	3,843.24	-140.07	1,414.51	1,281.41	133.10	10.627	
14,000.00	10,154.27	13,540.36	9,897.09	68.52	71.54	-79.50	3,965.34	-137.83	1,412.33	1,275.95	136.37	10.356	
14,100.00	10,154.40	13,628.06	9,896.01	69.72	72.98	-79.43	4,053.00	-135.52	1,409.28	1,270.37	138.91	10.145	
14,200.00	10,154.53	13,713.00	9,895.05	70.94	74.38	-79.37	4,137.92	-134.45	1,407.52	1,266.13	141.39	9.955	
14,300.00	10,154.66	13,809.50	9,893.44	72.16	75.96	-79.30	4,234.41	-133.84	1,406.49	1,262.36	144.13	9.759	
14,400.00	10,154.79	13,899.90	9,892.75	73.39	77.45	-79.26	4,324.80	-133.56	1,405.63	1,258.89	146.75	9.579	
14,431.14	10,154.83	13,925.99	9,892.73	73.78	77.88	-79.25	4,350.90	-133.70	1,405.58	1,258.06	147.52	9.528	
14,500.00	10,154.92	13,992.14	9,893.00	74.63	78.98	-79.26	4,417.04	-134.35	1,405.69	1,256.25	149.44	9.406	
14,600.00	10,155.05	14,084.56	9,893.71	75.88	80.52	-79.29	4,509.46	-135.48	1,406.04	1,253.89	152.16	9.241	
14,700.00	10,155.18	14,166.85	9,893.92	77.14	81.89	-79.30	4,591.72	-137.19	1,407.34	1,252.72	154.61	9.102	
14,800.00	10,155.31	14,259.91	9,893.98	78.40	83.44	-79.32	4,684.73	-140.29	1,409.86	1,252.52	157.35	8.960	

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

Company:	Devon Energy Corp.	**Local Co-ordinate Reference:**	Well 38H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Reference Site:	Rio Blanco 4-33 Fed Com	**MD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	38H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	WellPlanner1
Reference Design:	Prelim Plan	**Offset TVD Reference:**	Reference Datum

Offset Design Rio Blanco 4-33 Fed Com - 2H - OH - Surveys

Offset Site Error: 0.00 usft

Survey Program: 136-MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
14,900.00	10,155.44	14,365.26	9,895.12	79.67	85.20	-79.38	4,790.02	-143.61	1,412.04	1,251.61	160.43	8.802	
15,000.00	10,155.57	14,471.76	9,897.62	80.94	86.99	-79.49	4,896.44	-146.97	1,414.00	1,250.41	163.59	8.644	
15,100.00	10,155.70	14,578.04	9,900.81	82.22	88.78	-79.63	5,002.63	-149.83	1,415.39	1,248.64	166.75	8.488	
15,200.00	10,155.82	14,679.72	9,903.67	83.51	90.49	-79.75	5,104.24	-152.26	1,416.52	1,246.71	169.81	8.342	
15,300.00	10,155.95	14,795.77	9,904.47	84.80	92.45	-79.78	5,220.27	-153.95	1,417.12	1,243.94	173.18	8.183	
15,400.00	10,156.08	14,910.02	9,903.88	86.10	94.39	-79.74	5,334.52	-153.71	1,416.25	1,239.79	176.46	8.026	
15,500.00	10,156.21	15,004.42	9,902.68	87.40	95.98	-79.68	5,428.91	-153.43	1,415.47	1,236.21	179.26	7.896	
15,600.00	10,156.34	15,132.44	9,900.89	88.71	98.14	-79.59	5,556.91	-152.49	1,414.40	1,231.59	182.81	7.737	
15,700.00	10,156.47	15,228.47	9,899.79	90.02	99.75	-79.52	5,652.91	-150.15	1,411.52	1,225.86	185.66	7.603	
15,800.00	10,156.60	15,312.44	9,898.68	91.34	101.16	-79.46	5,736.86	-149.04	1,409.74	1,221.51	188.23	7.489	
15,900.00	10,156.73	15,400.23	9,897.41	92.66	102.63	-79.39	5,824.64	-148.79	1,409.00	1,218.13	190.88	7.382	
16,000.00	10,156.86	15,496.88	9,897.45	93.98	104.26	-79.39	5,921.28	-149.38	1,408.87	1,215.10	193.78	7.271	
16,049.74	10,156.92	15,547.68	9,898.68	94.64	105.12	-79.44	5,972.07	-149.90	1,408.80	1,213.48	195.32	7.213	
16,100.00	10,156.99	15,586.33	9,899.61	95.31	105.77	-79.47	6,010.70	-150.49	1,408.96	1,212.41	196.55	7.168	
16,200.00	10,157.12	15,667.85	9,900.72	96.64	107.15	-79.52	6,092.20	-152.37	1,410.26	1,211.16	199.10	7.083	
16,300.00	10,157.25	15,751.39	9,899.73	97.97	108.57	-79.50	6,175.69	-154.99	1,412.83	1,211.20	201.63	7.007	
16,400.00	10,157.37	15,843.95	9,897.21	99.31	110.15	-79.41	6,268.14	-158.50	1,416.34	1,211.96	204.38	6.930	
16,500.00	10,157.50	15,961.62	9,893.66	100.65	112.16	-79.29	6,385.69	-162.47	1,419.52	1,211.70	207.82	6.830	
16,600.00	10,157.63	16,102.83	9,890.71	102.00	114.57	-79.17	6,526.85	-164.41	1,420.58	1,208.76	211.83	6.706	
16,700.00	10,157.76	16,204.13	9,890.22	103.35	116.29	-79.14	6,628.15	-164.46	1,420.00	1,205.15	214.85	6.609	
16,800.00	10,157.89	16,299.67	9,889.99	104.70	117.90	-79.12	6,723.69	-164.69	1,419.57	1,201.83	217.74	6.520	
16,900.00	10,158.02	16,399.36	9,889.39	106.05	119.59	-79.09	6,823.37	-165.03	1,419.31	1,198.58	220.73	6.430	
17,000.00	10,158.15	16,501.23	9,888.23	107.40	121.33	-79.03	6,925.24	-165.17	1,418.94	1,195.18	223.76	6.341	
17,100.00	10,158.28	16,597.76	9,887.97	108.76	122.97	-79.02	7,021.77	-165.55	1,418.66	1,191.97	226.69	6.258	
17,200.00	10,158.41	16,697.40	9,888.03	110.12	124.67	-79.01	7,121.40	-166.25	1,418.63	1,188.92	229.71	6.176	
17,300.00	10,158.54	16,809.03	9,887.73	111.49	126.57	-78.99	7,233.04	-166.35	1,418.05	1,185.05	233.01	6.086	
17,400.00	10,158.67	16,922.49	9,886.51	112.85	128.52	-78.92	7,346.48	-165.37	1,416.71	1,180.40	236.30	5.995	
17,500.00	10,158.80	17,021.98	9,885.29	114.22	130.21	-78.85	7,445.95	-163.77	1,414.65	1,175.37	239.28	5.912	
17,600.00	10,158.92	17,121.33	9,883.97	115.59	131.89	-78.78	7,545.28	-162.45	1,412.89	1,170.65	242.24	5.833	
17,658.52	10,159.00	17,180.05	9,883.46	116.39	132.89	-78.74	7,604.00	-161.68	1,411.82	1,167.83	243.99	5.786 SF	

Company:	Devon Energy Corp.	**Local Co-ordinate Reference:**	Well 38H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Reference Site:	Rio Blanco 4-33 Fed Com	**MD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	38H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	WellPlanner1
Reference Design:	Prelim Plan	**Offset TVD Reference:**	Reference Datum

Offset Design Rio Blanco 4-33 Fed Com - 3H - OH - Surveys — **Offset Site Error:** 0.00 usft

Survey Program: 157-MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
0.00	0.00	2.30	0.00	0.00	0.00	-90.52	-0.63	-69.98	69.98				
100.00	100.00	102.22	99.92	0.14	0.10	-90.52	-0.63	-70.04	70.04	69.81	0.23	299.410	
200.00	200.00	202.35	200.05	0.49	0.24	-90.58	-0.71	-70.14	70.14	69.40	0.74	94.863	
300.00	300.00	302.78	300.47	0.85	0.46	-91.26	-1.53	-69.78	69.80	68.49	1.31	53.357	
400.00	400.00	403.39	401.06	1.21	0.67	-92.63	-3.15	-68.63	68.71	66.83	1.88	36.536	
500.00	500.00	504.12	501.74	1.57	0.89	-94.72	-5.48	-66.38	66.63	64.17	2.46	27.070	
600.00	600.00	604.04	601.59	1.93	1.10	-97.27	-8.10	-63.44	63.98	60.95	3.03	21.108	
700.00	700.00	703.48	700.97	2.29	1.31	-99.57	-10.27	-60.89	61.76	58.16	3.60	17.170	
800.00	800.00	803.09	800.55	2.65	1.52	-101.70	-12.36	-59.68	60.95	56.79	4.16	14.641	
900.00	900.00	904.66	902.06	3.00	1.74	-104.38	-14.65	-57.14	59.02	54.28	4.74	12.446	
1,000.00	1,000.00	1,005.51	1,002.72	3.36	1.97	-108.18	-16.91	-51.47	54.25	48.92	5.32	10.187	
1,100.00	1,100.00	1,104.96	1,101.95	3.72	2.20	-113.35	-19.69	-45.60	49.71	43.80	5.91	8.410	
1,200.00	1,200.00	1,204.56	1,201.38	4.08	2.43	-119.30	-22.65	-40.36	46.30	39.81	6.49	7.130	
1,300.00	1,300.00	1,304.33	1,300.98	4.44	2.65	-125.80	-25.56	-35.44	43.70	36.62	7.08	6.171	
1,400.00	1,400.00	1,403.73	1,400.24	4.80	2.88	-132.60	-28.61	-31.12	42.27	34.60	7.67	5.509	
1,431.78	1,431.78	1,435.31	1,431.78	4.91	2.95	-134.70	-29.67	-29.98	42.18	34.32	7.86	5.366	CC
1,500.00	1,500.00	1,503.12	1,499.51	5.15	3.11	-139.08	-32.18	-27.89	42.59	34.32	8.26	5.154	ES
1,600.00	1,600.00	1,602.63	1,598.93	5.51	3.34	-144.46	-36.11	-25.79	44.39	35.54	8.85	5.018	SF
1,700.00	1,700.00	1,702.20	1,698.41	5.87	3.56	-147.99	-40.15	-25.10	47.38	37.96	9.42	5.030	
1,800.00	1,800.00	1,802.24	1,798.38	6.23	3.77	-149.72	-43.75	-25.55	50.69	40.70	9.99	5.075	
1,900.00	1,900.00	1,902.40	1,898.49	6.59	3.98	-149.95	-46.45	-26.87	53.68	43.13	10.55	5.087	
2,000.00	2,000.00	2,002.46	1,998.52	6.95	4.18	-149.46	-48.53	-28.63	56.36	45.25	11.11	5.071	
2,100.00	2,100.00	2,102.35	2,098.37	7.31	4.39	-148.73	-50.43	-30.63	59.03	47.35	11.68	5.054	
2,200.00	2,200.00	2,202.19	2,198.16	7.66	4.60	-147.87	-52.40	-32.90	61.90	49.65	12.25	5.055	
2,300.00	2,300.00	2,302.22	2,298.14	8.02	4.81	-146.97	-54.36	-35.33	64.86	52.04	12.81	5.062	
2,400.00	2,400.00	2,402.20	2,398.08	8.38	5.02	-146.05	-56.11	-37.78	67.67	54.30	13.37	5.060	
2,500.00	2,500.00	2,502.27	2,498.11	8.74	5.23	-144.99	-57.69	-40.42	70.46	56.53	13.94	5.056	
2,600.00	2,599.99	2,602.55	2,598.35	9.09	5.43	126.75	-58.83	-43.10	73.47	58.97	14.49	5.069	
2,700.00	2,699.96	2,702.86	2,698.62	9.43	5.63	129.54	-59.40	-45.62	77.08	62.05	15.04	5.126	
2,800.00	2,799.86	2,803.00	2,798.74	9.78	5.83	132.82	-59.71	-47.61	81.50	65.92	15.58	5.231	
2,900.00	2,899.68	2,902.80	2,898.52	10.12	6.02	136.42	-59.95	-49.28	87.14	71.02	16.13	5.404	
3,000.00	2,999.37	3,002.52	2,998.23	10.47	6.22	140.05	-60.34	-50.62	94.27	77.60	16.67	5.655	
3,100.00	3,098.90	3,101.94	3,097.64	10.82	6.42	143.66	-60.78	-51.81	103.04	85.82	17.22	5.984	
3,200.00	3,198.26	3,201.04	3,196.74	11.17	6.62	146.89	-61.68	-52.79	113.69	95.92	17.77	6.398	
3,300.00	3,297.40	3,300.67	3,296.35	11.53	6.82	149.75	-62.91	-53.33	125.93	107.61	18.32	6.873	
3,400.00	3,396.43	3,400.45	3,396.13	11.89	7.03	152.32	-63.88	-53.34	138.61	119.74	18.88	7.342	
3,500.00	3,495.46	3,499.60	3,495.27	12.26	7.23	154.39	-64.84	-53.03	151.23	131.80	19.43	7.782	
3,600.00	3,594.48	3,598.66	3,594.33	12.62	7.44	156.24	-65.53	-52.83	164.01	144.01	19.99	8.204	
3,700.00	3,693.51	3,697.26	3,692.93	12.99	7.65	157.97	-65.82	-52.93	177.05	156.50	20.55	8.616	
3,800.00	3,792.54	3,795.78	3,791.45	13.37	7.85	159.64	-65.65	-53.48	190.50	169.40	21.11	9.026	
3,900.00	3,891.56	3,896.31	3,891.98	13.74	8.06	161.10	-65.44	-53.73	203.79	182.12	21.67	9.405	
4,000.00	3,990.59	3,995.99	3,991.66	14.12	8.26	162.30	-65.35	-53.40	216.68	194.45	22.23	9.749	
4,100.00	4,089.62	4,095.82	4,091.49	14.49	8.47	163.36	-65.14	-52.76	229.32	206.53	22.79	10.064	
4,200.00	4,188.64	4,194.94	4,190.60	14.87	8.67	164.31	-64.89	-51.94	241.83	218.49	23.34	10.359	
4,300.00	4,287.67	4,293.31	4,288.97	15.25	8.88	165.16	-64.69	-51.37	254.66	230.76	23.90	10.654	
4,400.00	4,386.70	4,392.55	4,388.21	15.63	9.08	165.91	-64.61	-50.85	267.62	243.16	24.46	10.940	
4,500.00	4,485.72	4,491.84	4,487.50	16.02	9.29	166.58	-64.55	-50.24	280.54	255.52	25.03	11.210	
4,600.00	4,584.75	4,591.09	4,586.74	16.40	9.49	167.18	-64.55	-49.58	293.46	267.87	25.59	11.469	
4,700.00	4,683.78	4,690.00	4,685.66	16.79	9.70	167.72	-64.63	-48.87	306.37	280.22	26.15	11.716	
4,800.00	4,782.81	4,788.61	4,784.26	17.17	9.90	168.21	-64.69	-48.34	319.48	292.77	26.71	11.960	
4,900.00	4,881.83	4,887.92	4,883.57	17.56	10.11	168.63	-65.00	-47.81	332.67	305.39	27.28	12.195	
5,000.00	4,980.86	4,986.31	4,981.96	17.95	10.32	169.05	-65.10	-47.29	345.83	317.99	27.84	12.421	

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

Company:	Devon Energy Corp.	**Local Co-ordinate Reference:**	Well 38H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Reference Site:	Rio Blanco 4-33 Fed Com	**MD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	38H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	WellPlanner1
Reference Design:	Prelim Plan	**Offset TVD Reference:**	Reference Datum

Offset Design Rio Blanco 4-33 Fed Com - 3H - OH - Surveys — **Offset Site Error:** 0.00 usft

Survey Program: 157-MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
5,100.00	5,079.89	5,084.54	5,080.19	18.34	10.52	169.44	-65.24	-47.11	359.35	330.95	28.40	12.652	
5,200.00	5,178.75	5,185.61	5,181.26	18.73	10.73	169.78	-65.49	-46.74	373.81	344.83	28.98	12.899	
5,300.00	5,277.04	5,286.91	5,282.55	19.14	10.94	170.18	-65.54	-45.66	390.90	361.34	29.56	13.225	
5,400.00	5,374.63	5,382.83	5,378.46	19.56	11.14	170.60	-65.44	-44.44	411.17	381.05	30.12	13.653	
5,500.00	5,471.41	5,483.60	5,479.22	20.00	11.35	171.17	-64.77	-43.27	434.82	404.12	30.69	14.166	
5,600.00	5,567.88	5,581.43	5,577.02	20.44	11.56	171.86	-63.09	-41.61	459.00	427.74	31.26	14.684	
5,700.00	5,664.35	5,678.18	5,673.74	20.89	11.76	172.51	-61.15	-39.94	483.19	451.37	31.82	15.186	
5,800.00	5,760.83	5,773.26	5,768.79	21.35	11.95	173.09	-59.21	-38.49	507.62	475.25	32.37	15.680	
5,900.00	5,857.30	5,865.06	5,860.55	21.81	12.14	173.65	-56.93	-37.74	532.72	499.81	32.92	16.185	
6,000.00	5,953.77	5,961.81	5,957.26	22.27	12.34	174.25	-54.08	-37.45	558.34	524.86	33.48	16.678	
6,100.00	6,050.24	6,058.50	6,053.91	22.73	12.54	174.79	-51.23	-37.10	583.95	549.91	34.04	17.155	
6,200.00	6,146.72	6,156.53	6,151.89	23.20	12.74	175.30	-48.27	-36.63	609.47	574.87	34.61	17.611	
6,300.00	6,243.19	6,257.08	6,252.39	23.67	12.95	175.79	-45.14	-35.71	634.61	599.42	35.19	18.034	
6,400.00	6,339.66	6,351.69	6,346.96	24.14	13.14	176.21	-42.25	-34.72	659.67	623.93	35.75	18.454	
6,500.00	6,436.13	6,444.77	6,439.99	24.62	13.33	176.58	-39.45	-34.11	685.14	648.84	36.30	18.875	
6,600.00	6,532.60	6,537.07	6,532.24	25.10	13.53	176.95	-36.52	-34.05	711.20	674.35	36.85	19.301	
6,700.00	6,629.08	6,634.03	6,629.15	25.58	13.73	177.31	-33.34	-34.22	737.52	700.10	37.42	19.710	
6,800.00	6,725.55	6,731.22	6,726.29	26.06	13.93	177.65	-30.22	-34.28	763.75	725.75	37.99	20.103	
6,900.00	6,822.02	6,825.08	6,820.10	26.55	14.12	177.94	-27.43	-34.47	790.14	751.60	38.55	20.497	
7,000.00	6,918.49	6,922.41	6,917.39	27.03	14.32	178.21	-24.61	-34.75	816.65	777.52	39.13	20.872	
7,100.00	7,014.97	7,020.62	7,015.57	27.52	14.53	178.45	-22.04	-34.84	842.98	803.27	39.71	21.230	
7,200.00	7,111.44	7,117.21	7,112.13	28.01	14.73	178.66	-19.67	-34.83	869.23	828.95	40.28	21.578	
7,300.00	7,207.91	7,212.13	7,207.03	28.50	14.92	178.83	-17.66	-34.78	895.46	854.61	40.85	21.920	
7,400.00	7,304.38	7,298.68	7,293.58	29.00	15.10	178.90	-16.96	-35.38	922.43	881.05	41.38	22.294	
7,500.00	7,400.85	7,391.95	7,386.83	29.49	15.30	178.94	-16.93	-36.63	950.04	908.10	41.94	22.653	
7,600.00	7,497.33	7,487.18	7,482.06	29.99	15.50	178.96	-17.09	-38.08	977.83	935.32	42.51	23.002	
7,700.00	7,593.80	7,584.30	7,579.16	30.49	15.70	178.98	-17.18	-39.54	1,005.60	962.51	43.09	23.335	
7,800.00	7,690.27	7,681.12	7,675.98	30.99	15.90	178.99	-17.48	-40.91	1,033.29	989.61	43.68	23.658	
7,900.00	7,786.74	7,777.70	7,772.55	31.49	16.10	178.99	-17.95	-42.22	1,060.93	1,016.67	44.26	23.972	
8,000.00	7,883.22	7,875.93	7,870.76	31.99	16.31	178.97	-18.87	-43.45	1,088.47	1,043.62	44.85	24.270	
8,100.00	7,979.69	7,975.81	7,970.63	32.49	16.52	178.94	-19.86	-44.37	1,115.70	1,070.25	45.45	24.548	
8,200.00	8,076.16	8,073.12	8,067.94	33.00	16.72	178.92	-20.73	-45.13	1,142.79	1,096.75	46.04	24.824	
8,300.00	8,172.63	8,170.98	8,165.79	33.50	16.93	178.91	-21.52	-45.69	1,169.67	1,123.05	46.63	25.086	
8,400.00	8,269.11	8,265.54	8,260.35	34.01	17.12	178.88	-22.47	-46.33	1,196.67	1,149.47	47.20	25.353	
8,500.00	8,365.58	8,363.85	8,358.65	34.51	17.33	178.86	-23.42	-46.96	1,223.63	1,175.84	47.79	25.602	
8,600.00	8,462.41	8,460.36	8,455.16	35.01	17.53	178.86	-24.04	-47.44	1,249.06	1,200.68	48.38	25.820	
8,700.00	8,560.05	8,553.77	8,548.56	35.48	17.73	178.85	-24.98	-48.13	1,271.36	1,222.42	48.94	25.979	
8,800.00	8,658.39	8,652.18	8,646.96	35.91	17.93	178.82	-26.14	-49.06	1,290.46	1,240.94	49.52	26.060	
8,900.00	8,757.30	8,752.88	8,747.65	36.33	18.14	178.81	-26.88	-49.79	1,305.89	1,255.78	50.10	26.064	
9,000.00	8,856.66	8,853.97	8,848.74	36.71	18.36	178.81	-27.27	-50.53	1,317.87	1,267.18	50.68	26.001	
9,100.00	8,956.35	8,958.17	8,952.93	37.07	18.57	178.84	-26.77	-50.97	1,326.04	1,274.77	51.27	25.863	
9,200.00	9,056.25	9,061.06	9,055.82	37.40	18.79	178.89	-25.82	-51.13	1,330.46	1,278.61	51.85	25.662	
9,300.00	9,156.24	9,158.55	9,153.31	37.71	18.99	-91.06	-24.65	-51.23	1,331.46	1,279.08	52.38	25.420	
9,400.00	9,256.24	9,266.45	9,261.20	38.02	19.22	-91.01	-23.47	-51.27	1,331.49	1,278.53	52.96	25.143	
9,500.00	9,356.24	9,377.80	9,372.54	38.32	19.45	-90.97	-22.56	-50.40	1,330.69	1,277.14	53.55	24.850	
9,600.00	9,456.24	9,486.09	9,480.81	38.62	19.68	-90.94	-21.83	-48.66	1,329.06	1,274.93	54.13	24.554	
9,700.00	9,556.24	9,586.09	9,580.79	38.93	19.89	-90.95	-21.90	-46.88	1,327.28	1,272.61	54.67	24.278	
9,800.00	9,656.23	9,687.36	9,682.04	39.23	20.10	-90.63	-22.58	-44.80	1,325.25	1,270.03	55.22	24.000	
9,900.00	9,754.98	9,776.95	9,771.61	39.54	20.29	-91.36	-22.62	-43.22	1,323.75	1,268.03	55.72	23.757	
9,926.21	9,780.24	9,796.00	9,790.65	39.61	20.33	-91.55	-21.80	-43.04	1,323.65	1,267.82	55.83	23.709	
10,000.00	9,849.10	9,834.50	9,829.00	39.82	20.41	-91.89	-18.61	-43.31	1,324.81	1,268.74	56.07	23.629	
10,100.00	9,935.14	9,909.95	9,903.23	40.06	20.56	-92.51	-5.62	-45.85	1,329.64	1,273.15	56.49	23.536	

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

Company:	Devon Energy Corp.	**Local Co-ordinate Reference:**	Well 38H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Reference Site:	Rio Blanco 4-33 Fed Com	**MD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	38H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	WellPlanner1
Reference Design:	Prelim Plan	**Offset TVD Reference:**	Reference Datum

Offset Design Rio Blanco 4-33 Fed Com - 3H - OH - Surveys

Offset Site Error: 0.00 usft

Survey Program: 157-MWD

Offset Well Error: 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
10,200.00	10,009.92	9,980.60	9,970.73	40.26	20.71	-92.90	14.76	-49.54	1,337.41	1,280.50	56.91	23.502	
10,300.00	10,070.71	10,047.34	10,031.48	40.41	20.84	-92.96	41.77	-54.83	1,348.94	1,291.62	57.32	23.534	
10,400.00	10,115.26	10,108.49	10,083.78	40.52	20.98	-92.59	72.61	-61.87	1,365.02	1,307.29	57.73	23.644	
10,500.00	10,141.95	10,301.45	10,221.55	40.62	21.57	-94.86	204.32	-83.98	1,381.69	1,322.90	58.79	23.501	
10,600.00	10,149.88	10,404.59	10,270.64	40.72	22.03	-95.04	293.93	-95.54	1,396.94	1,337.43	59.50	23.476	
10,700.00	10,150.01	10,582.06	10,292.00	40.85	23.13	-95.82	467.88	-118.28	1,410.09	1,349.19	60.91	23.152	
10,800.00	10,150.14	10,698.73	10,295.53	41.03	24.00	-95.91	583.89	-130.20	1,419.74	1,357.62	62.12	22.855	
10,900.00	10,150.27	10,854.62	10,297.69	41.26	25.37	-95.94	739.19	-143.41	1,427.70	1,363.74	63.96	22.323	
11,000.00	10,150.40	11,007.90	10,297.71	41.55	26.88	-95.91	892.30	-150.17	1,431.27	1,365.28	66.00	21.687	
11,100.00	10,150.53	11,147.71	10,298.54	41.90	28.39	-95.93	1,032.10	-151.72	1,431.65	1,363.55	68.10	21.024	
11,200.00	10,150.66	11,263.22	10,298.70	42.32	29.74	-95.94	1,147.61	-150.70	1,429.99	1,359.96	70.04	20.418	
11,300.00	10,150.79	11,358.11	10,299.29	42.79	30.84	-95.97	1,242.48	-149.53	1,428.07	1,356.33	71.74	19.906	
11,400.00	10,150.92	11,468.11	10,300.89	43.33	32.17	-96.04	1,352.46	-148.17	1,426.25	1,352.50	73.74	19.341	
11,500.00	10,151.05	11,558.57	10,301.77	43.91	33.34	-96.07	1,442.91	-146.88	1,424.17	1,348.60	75.58	18.844	
11,600.00	10,151.17	11,661.75	10,301.60	44.55	34.73	-96.07	1,546.09	-145.89	1,422.45	1,344.74	77.71	18.305	
11,700.00	10,151.30	11,772.01	10,301.48	45.24	36.27	-96.07	1,656.34	-144.28	1,420.22	1,340.18	80.04	17.744	
11,800.00	10,151.43	11,890.91	10,302.23	45.97	37.94	-96.11	1,775.19	-141.16	1,416.92	1,334.35	82.56	17.162	
11,900.00	10,151.56	12,005.57	10,303.72	46.73	39.60	-96.19	1,889.75	-136.66	1,412.39	1,327.30	85.09	16.598	
12,000.00	10,151.69	12,122.13	10,305.24	47.54	41.33	-96.27	2,006.15	-130.89	1,406.86	1,319.12	87.73	16.036	
12,100.00	10,151.82	12,220.25	10,306.02	48.38	42.76	-96.33	2,104.12	-125.41	1,400.64	1,310.58	90.05	15.554	
12,200.00	10,151.95	12,308.68	10,307.40	49.24	44.00	-96.40	2,192.42	-120.88	1,394.95	1,302.76	92.19	15.131	
12,300.00	10,152.08	12,388.87	10,308.94	50.14	45.15	-96.48	2,272.53	-117.60	1,390.35	1,296.14	94.22	14.757	
12,400.00	10,152.21	12,459.82	10,309.51	51.07	46.19	-96.51	2,343.46	-115.98	1,387.46	1,291.35	96.10	14.437	
12,470.29	10,152.30	12,505.95	10,310.13	51.74	46.86	-96.53	2,389.58	-115.85	1,386.84	1,289.49	97.35	14.245	
12,500.00	10,152.34	12,528.03	10,310.52	52.02	47.19	-96.55	2,411.66	-116.06	1,386.94	1,289.01	97.93	14.162	
12,600.00	10,152.47	12,614.06	10,312.10	53.00	48.47	-96.61	2,497.66	-117.46	1,388.01	1,287.88	100.13	13.863	
12,700.00	10,152.60	12,709.04	10,314.27	54.00	49.91	-96.68	2,592.59	-119.59	1,389.74	1,287.19	102.55	13.552	
12,800.00	10,152.72	12,798.12	10,317.44	55.02	51.28	-96.80	2,681.59	-121.98	1,392.06	1,287.18	104.88	13.272	
12,900.00	10,152.85	12,898.94	10,321.18	56.06	52.87	-96.94	2,782.28	-125.09	1,394.81	1,287.29	107.52	12.973	
13,000.00	10,152.98	13,033.51	10,321.72	57.11	55.02	-96.95	2,916.83	-127.10	1,395.36	1,284.39	110.96	12.575	
13,100.00	10,153.11	13,123.84	10,320.83	58.19	56.45	-96.90	3,007.14	-128.45	1,395.95	1,282.52	113.43	12.307	
13,200.00	10,153.24	13,222.44	10,319.57	59.28	58.02	-96.84	3,105.71	-130.33	1,396.93	1,280.84	116.10	12.033	
13,300.00	10,153.37	13,346.23	10,316.88	60.39	60.04	-96.72	3,229.46	-132.13	1,397.42	1,278.04	119.38	11.706	
13,400.00	10,153.50	13,446.93	10,314.84	61.51	61.67	-96.63	3,330.14	-132.13	1,396.43	1,274.27	122.16	11.431	
13,500.00	10,153.63	13,550.80	10,313.85	62.65	63.34	-96.59	3,434.00	-132.14	1,395.57	1,270.56	125.00	11.164	
13,600.00	10,153.76	13,663.56	10,312.82	63.80	65.20	-96.55	3,546.75	-131.42	1,394.06	1,265.97	128.09	10.884	
13,700.00	10,153.89	13,755.52	10,312.96	64.96	66.70	-96.56	3,638.71	-130.66	1,392.49	1,261.77	130.72	10.653	
13,800.00	10,154.02	13,855.13	10,314.20	66.14	68.31	-96.61	3,738.31	-129.77	1,390.98	1,257.48	133.50	10.419	
13,900.00	10,154.15	13,937.71	10,315.77	67.32	69.64	-96.68	3,820.87	-129.60	1,390.24	1,254.31	135.92	10.228	
13,909.06	10,154.16	13,945.12	10,315.94	67.43	69.76	-96.68	3,828.28	-129.63	1,390.23	1,254.09	136.14	10.212	
14,000.00	10,154.27	14,019.57	10,317.48	68.52	70.96	-96.74	3,902.70	-130.47	1,390.77	1,252.46	138.31	10.055	
14,100.00	10,154.40	14,108.24	10,319.13	69.72	72.40	-96.80	3,991.34	-132.40	1,392.39	1,251.52	140.87	9.884	
14,200.00	10,154.53	14,197.28	10,320.19	70.94	73.87	-96.83	4,080.33	-135.10	1,394.78	1,251.33	143.45	9.723	
14,300.00	10,154.66	14,296.52	10,320.47	72.16	75.51	-96.82	4,179.51	-138.72	1,397.67	1,251.36	146.31	9.553	
14,400.00	10,154.79	14,405.37	10,320.82	73.39	77.33	-96.81	4,288.30	-142.31	1,400.23	1,250.79	149.44	9.370	
14,500.00	10,154.92	14,496.56	10,321.20	74.63	78.86	-96.81	4,379.44	-145.27	1,402.74	1,250.61	152.13	9.221	
14,600.00	10,155.05	14,606.82	10,322.08	75.88	80.70	-96.83	4,489.64	-148.78	1,405.24	1,249.93	155.30	9.048	
14,700.00	10,155.18	14,716.35	10,323.50	77.14	82.54	-96.87	4,599.12	-151.66	1,407.26	1,248.79	158.47	8.880	
14,800.00	10,155.31	14,840.43	10,323.96	78.40	84.64	-96.88	4,723.19	-152.89	1,407.45	1,245.45	162.00	8.688	
14,900.00	10,155.44	14,944.44	10,323.87	79.67	86.39	-96.88	4,827.21	-153.23	1,407.01	1,241.96	165.05	8.525	
15,000.00	10,155.57	15,060.52	10,323.77	80.94	88.35	-96.87	4,943.28	-152.91	1,405.98	1,237.61	168.37	8.351	
15,100.00	10,155.70	15,175.51	10,322.33	82.22	90.30	-96.82	5,058.25	-151.34	1,403.71	1,232.03	171.68	8.176	

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

Company:	Devon Energy Corp.	**Local Co-ordinate Reference:**	Well 38H
Project:	Lea County, NM (NAD83)	**TVD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Reference Site:	Rio Blanco 4-33 Fed Com	**MD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	38H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	WellPlanner1
Reference Design:	Prelim Plan	**Offset TVD Reference:**	Reference Datum

Offset Design Rio Blanco 4-33 Fed Com - 3H - OH - Surveys — **Offset Site Error:** 0.00 usft

Survey Program: 157-MWD — **Offset Well Error:** 0.00 usft

Reference Measured Depth (usft)	Reference Vertical Depth (usft)	Offset Measured Depth (usft)	Offset Vertical Depth (usft)	Semi Major Axis Reference (usft)	Semi Major Axis Offset (usft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (usft)	Offset Wellbore Centre +E/-W (usft)	Distance Between Centres (usft)	Distance Between Ellipses (usft)	Minimum Separation (usft)	Separation Factor	Warning
15,200.00	10,155.82	15,274.05	10,321.02	83.51	91.95	-96.77	5,156.77	-149.61	1,401.04	1,226.43	174.62	8.024	
15,300.00	10,155.95	15,374.14	10,320.05	84.80	93.62	-96.74	5,256.83	-147.75	1,398.32	1,220.74	177.58	7.874	
15,400.00	10,156.08	15,472.03	10,319.39	86.10	95.25	-96.72	5,354.70	-146.03	1,395.74	1,215.24	180.50	7.733	
15,500.00	10,156.21	15,567.52	10,318.89	87.40	96.85	-96.71	5,450.18	-144.37	1,393.19	1,209.82	183.38	7.597	
15,600.00	10,156.34	15,649.33	10,318.42	88.71	98.21	-96.69	5,531.99	-143.75	1,391.61	1,205.66	185.95	7.484	
15,663.68	10,156.42	15,700.19	10,318.21	89.54	99.05	-96.68	5,582.84	-143.92	1,391.31	1,203.78	187.54	7.419	
15,700.00	10,156.47	15,731.00	10,318.15	90.02	99.56	-96.67	5,613.65	-144.25	1,391.41	1,202.93	188.48	7.382	
15,800.00	10,156.60	15,809.69	10,318.65	91.34	100.88	-96.69	5,692.32	-145.78	1,392.64	1,201.71	190.92	7.294	
15,900.00	10,156.73	15,898.24	10,319.27	92.66	102.37	-96.70	5,780.83	-148.53	1,395.03	1,201.42	193.61	7.205	
16,000.00	10,156.86	16,000.38	10,317.53	93.98	104.10	-96.60	5,882.88	-152.37	1,397.80	1,201.10	196.70	7.106	
16,100.00	10,156.99	16,097.97	10,314.86	95.31	105.76	-96.48	5,980.36	-156.01	1,400.44	1,200.76	199.68	7.013	
16,200.00	10,157.12	16,213.90	10,311.40	96.64	107.73	-96.32	6,096.18	-159.94	1,402.73	1,199.57	203.16	6.904	
16,300.00	10,157.25	16,333.65	10,310.14	97.97	109.77	-96.25	6,215.89	-162.13	1,403.67	1,196.95	206.72	6.790	
16,385.16	10,157.36	16,421.97	10,309.92	99.11	111.28	-96.24	6,304.21	-162.67	1,403.51	1,194.13	209.39	6.703	
16,400.00	10,157.37	16,433.80	10,309.96	99.31	111.48	-96.24	6,316.04	-162.77	1,403.53	1,193.76	209.76	6.691	
16,500.00	10,157.50	16,519.75	10,311.07	100.65	112.94	-96.28	6,401.98	-164.08	1,404.40	1,191.96	212.44	6.611	
16,600.00	10,157.63	16,618.77	10,313.54	102.00	114.62	-96.37	6,500.95	-165.79	1,405.62	1,190.19	215.43	6.525	
16,700.00	10,157.76	16,719.10	10,316.65	103.35	116.33	-96.49	6,601.21	-167.56	1,406.97	1,188.51	218.46	6.440	
16,800.00	10,157.89	16,824.08	10,318.32	104.70	118.12	-96.54	6,706.16	-169.32	1,408.05	1,186.43	221.62	6.354	
16,900.00	10,158.02	16,936.31	10,319.27	106.05	120.04	-96.57	6,818.38	-170.73	1,408.64	1,183.67	224.98	6.261	
16,939.33	10,158.07	16,982.61	10,319.55	106.58	120.84	-96.58	6,864.68	-170.96	1,408.56	1,182.21	226.35	6.223	
17,000.00	10,158.15	17,034.29	10,320.40	107.40	121.72	-96.61	6,916.35	-171.30	1,408.60	1,180.62	227.98	6.179	
17,100.00	10,158.28	17,141.44	10,322.68	108.76	123.55	-96.70	7,023.47	-171.93	1,408.67	1,177.48	231.19	6.093	
17,200.00	10,158.41	17,264.05	10,323.34	110.12	125.65	-96.73	7,146.07	-171.46	1,407.60	1,172.84	234.76	5.996	
17,300.00	10,158.54	17,381.64	10,321.07	111.49	127.67	-96.64	7,263.62	-169.39	1,404.83	1,166.62	238.21	5.897	
17,400.00	10,158.67	17,494.69	10,317.93	112.85	129.60	-96.53	7,376.60	-166.69	1,401.40	1,159.85	241.55	5.802	
17,500.00	10,158.80	17,601.86	10,313.39	114.22	131.42	-96.36	7,483.61	-163.13	1,396.85	1,152.07	244.78	5.706	
17,600.00	10,158.92	17,707.23	10,309.03	115.59	133.20	-96.19	7,588.83	-159.37	1,392.08	1,144.11	247.97	5.614	
17,658.52	10,159.00	17,765.76	10,306.74	116.39	134.19	-96.11	7,647.27	-157.11	1,389.15	1,139.37	249.78	5.561	

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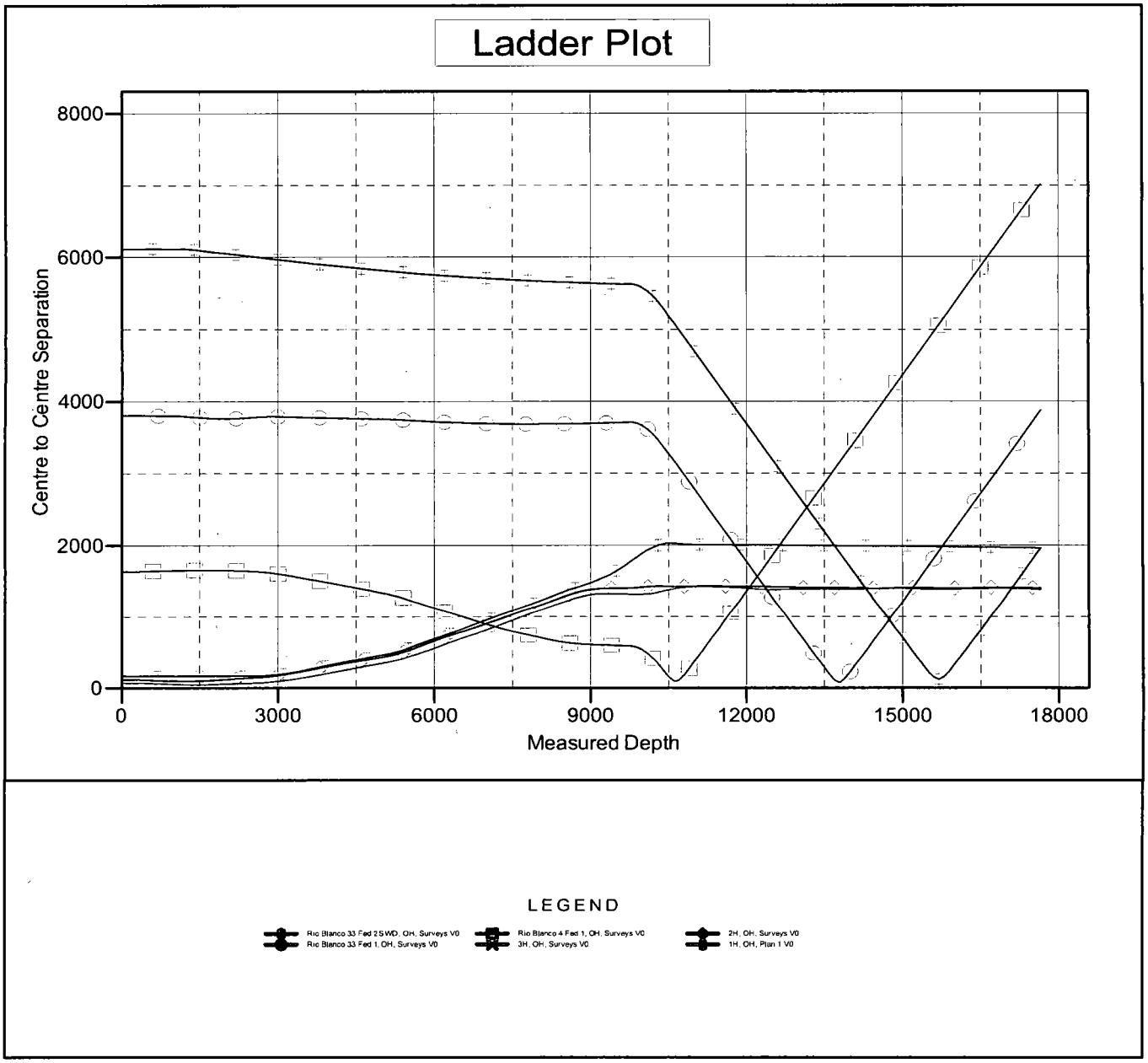
Reference Site:	Rio Blanco 4-33 Fed Com	**MD Reference:**	GL 3413'+KB 24' @ 3437.00usft (Cactus 168)
Site Error:	0.00 usft	**North Reference:**	Grid
Reference Well:	38H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
Reference Wellbore	OH	**Database:**	WellPlanner1
Reference Design:	Prelim Plan	**Offset TVD Reference:**	Reference Datum

Reference Depths are relative to GL 3413'+KB 24' @ 3437.00usft (Cac	Coordinates are relative to: 38H
Offset Depths are relative to Offset Datum	Coordinate System is US State Plane 1983, New Mexico Eastern Zone
Central Meridian is 104° 19' 60.0000 W	Grid Convergence at Surface is: 0.46°



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Well Error:	0.00 usft	**Output errors are at**	2.00 sigma
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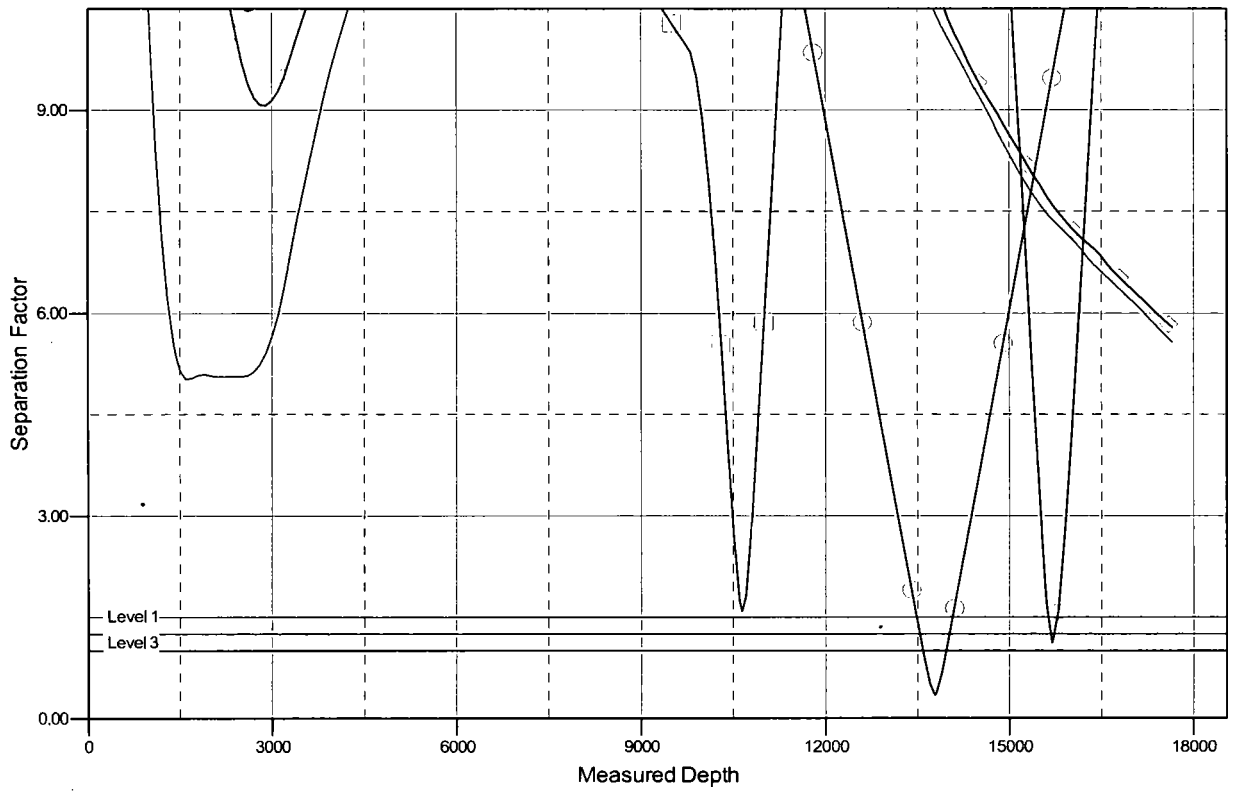
Separation Factor Plot

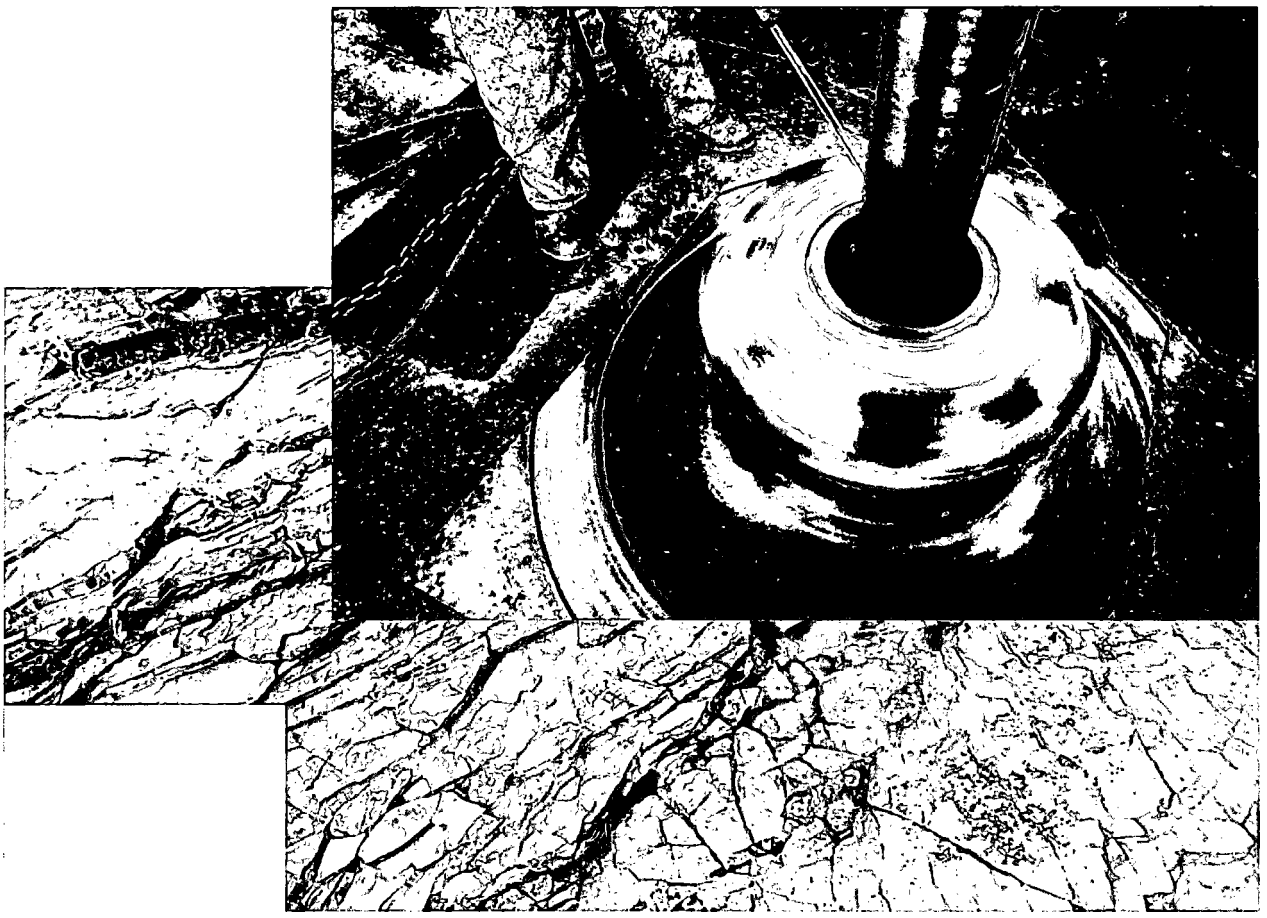


LEGEND

Rio Blanco 33 Fed 2 SWD, OH, Surveys V0
Rio Blanco 33 Fed 1, OH, Surveys V0
Rio Blanco 4 Fed 1, OH, Surveys V0
3H, OH, Surveys V0
2H, OH, Surveys V0
1H, OH, Plan 1 V0

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.

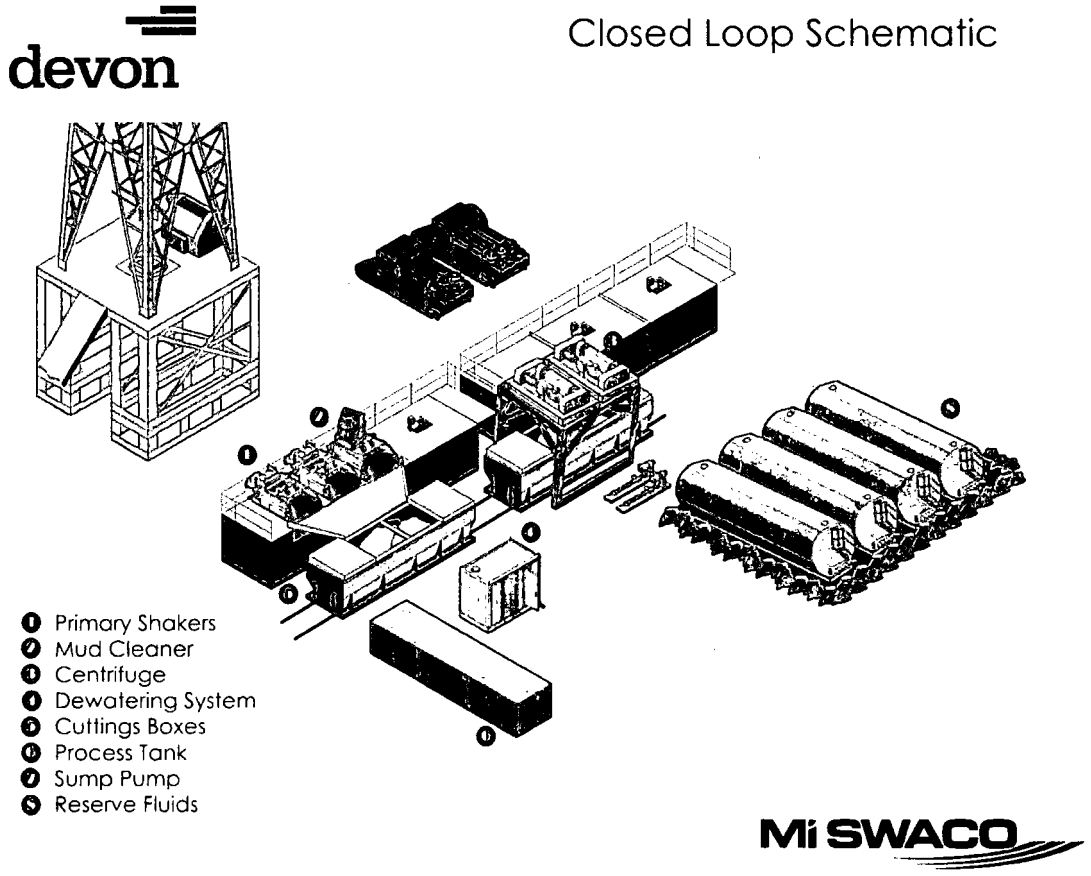
Prior to installing a closed-loop system on site, the topsoil, if present, will be stripped and stockpiled for use as the final cover or fill at the time of closure.

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

dope, or regulated chemicals are removed from soil and sent to landfills approved for these products.

These operations are monitored by Mi Swaco service technicians. Daily logs are maintained to ensure optimal equipment operation and maintenance. Screen and chemical use is logged to maintain inventory control. Fluid properties are monitored and recorded and drilling mud volumes are accounted for in the mud storage farm. This data is kept for end of well review to insure performance goals are met. Lessons learned are logged and used to help with continuous improvement.

A MI SWACO field supervisor manages from 3-5 wells. They are responsible for training personnel, supervising installations, and inspecting sites for compliance of MI SWACO safety and operational policy.

III. Closure Plan

A maximum 340' X 340' caliche pad is built per well. All of the trucks and steel tanks fit on this pad. All fluid cuttings go to the steel tanks to be hauled by various trucking companies to an agency approved disposal.

Devon Energy
APD VARIANCE DATA

OPERATOR NAME: Devon Energy

1. SUMMARY OF Variance:

Devon Energy respectfully requests approval for the following additions to the drilling plan:

1. Potential utilization of a spudder rig to pre-set surface casing.

2. Description of Operations

1. A spudder rig contractor may move in their rig to drill the surface hole section and pre-set surface casing on this well.
    a. After drilling the surface hole section, the rig will run casing and cement following all of the applicable rules and regulations (OnShore Order 2, all COAs and NMOCD regulations).
    b. Rig will utilize fresh water based mud to drill surface hole to TD.
2. The wellhead will be installed and tested once the surface casing is cut off and the WOC time has been reached.
3. A blind flange with the same pressure rating as the wellhead will be installed to seal the wellbore. Pressure will be monitored with needle valves installed on two wingvalves.
    a. A means for intervention will be maintained while the drilling rig is not over the well.
4. The BLM will be contacted and notified 24 hours prior to commencing spudder rig operations.
5. Drilling operation will be performed with the big rig. At that time an approved BOP stack will be nippled up and tested on the wellhead before drilling operations commences on each well.
    a. The BLM will be contacted / notified 24 hours before the big rig moves back on to the pad with the pre-set surface casing.
6. Devon Energy will have supervision on the rig to ensure compliance with all BLM and NMOCD regulations and to oversee operations.
7. Once the rig is removed, Devon Energy will secure the wellhead area by placing a guard rail around the cellar area.