

UNITED STATES
DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

AUG 20 2008

FORM APPROVED
OMB NO. 1004-0137
Expires July 31, 2010

SUNDRY NOTICES AND REPORTS ON WELLS

Do not use this form for proposals to drill or to re-enter an abandoned well. Use Form 3160-3 (APD) for such proposals.

SUBMIT IN TRIPLICATE - Other instructions on page 2

1. Type of Well

☐ Oil Well ☒ Gas Well ☐ Other

2. Name of Operator

Energen Resources Corporation

3a. Address

2010 Afton Place, Farmington, NM 87401

3b. Phone No. (include area code)

(505) 325-6800

4. Location of Well (Footage, Sec., T., R., M., or Survey Description)

1840 fsl, 1565 fw1 (K) Sec 23, T32N, R6W at surface

1700 fsl, 760 fw1 (L) Sec 22, T32N, R6W at bottom

5. Lease Serial No.

USA SF 079090

6. If Indian, Allottee or Tribe Name

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

San Juan 32-5 Unit

8. Well Name and No.

San Juan 32-5 Unit #21

9. API Well No.

30-039-30534

10. Field and Pool, or Exploratory Area

Mesa Verde

11. County or Parish, State

Rio Arriba NM

12. CHECK APPROPRIATE BOX(ES) TO INDICATE NATURE OF NOTICE, REPORT, OR OTHER DATA

TYPE OF SUBMISSION

☒ Notice of Intent☐ Subsequent Report☐ Final Abandonment Notice

TYPE OF ACTION

☐ Acidize☒ Alter Casing☐ Casing Repair☐ Change Plans☐ Convert to Injection☒ Deepen☐ Fracture Treat☐ New Construction☐ Plug and Abandon☐ Plug Back☐ Production (Start/Resume)☐ Reclamation☐ Recomplete☐ Temporarily Abandon☐ Water Disposal☐ Water Shut-Off☐ Well Integrity☐ Other

13. Describe Proposed or Completed Operation (clearly state all pertinent details, including estimated starting date of any proposed work and approximate duration thereof. If the proposal is to deepen directionally or recompleat horizontally, give subsurface locations and measured and true vertical depths of all pertinent markers and zones. Attach the Bond under which the work will be performed or provide the Bond No. on file with BLM/BIA. Required subsequent reports shall be filed within 30 days following completion of the involved operations. If the operation results in a multiple completion or recompleat in a new interval, a Form 3160-4 shall be filed once testing has been completed. Final Abandonment Notices shall be filed only after all requirements, including reclamation, have been completed, and the operator has determined that the final site is ready for final inspection.)

Energen Resources would like to make the following changes to the San Juan 32-5 Unit #21 as follows:

-Change the TVD and MD of the well to 4722' TVD, 9842' MD and change the target formation from the Navajo City (Upper Cliffhouse) to the ~~Otero formation~~ Cliff House.

-Change the setting depth of the 7" intermediate to 6125' MD (4717' TVD) and cement with 875 sks lead followed by 150 sks tail.

-Change the production liner to 4 1/2" 11.60 ppf L-80 LTC and set from 6025'-9842' MD (4717'-4722' TVD).

Attached is a revised directional and operations plan.

RCVD AUG 26 '08
OIL CONS. DIV.
DIST. 3CONDITIONS OF APPROVAL
Adhere to previously issued stipulations.14. I hereby certify that the foregoing is true and correct
Name (Printed/Typed)

Nathan Smith

Title Drilling Engineer

Signature

Date 8/18/08

THIS SPACE FOR FEDERAL OR STATE OFFICE USE

Approved by

Title

Pet. Eng.

Date

8/22/08

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

Office

FFO

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

NMOCD

SJ BR

S/2 Sec.22, T32N, R6W

Eul Canyon

San Juan 32-5 Unit #21

Revised Plan

Plan: Final

Planned Wellpath

19 August, 2008

Project: S/2 Sec.22, T32N, R6W
 Site: Eul Canyon
 Well: San Juan 32-5 Unit #21
 Wellbore: Revised Plan
 Plan: Final (San Juan 32-5 Unit #21/Revised Plan)

PROJECT DETAILS: S/2 Sec.22, T32N, R6W

Geodetic System: US State Plane 1983
 Datum: North American Datum 1983
 Ellipsoid: GRS 1980
 Zone: New Mexico Central Zone

System Datum: Mean Sea Level

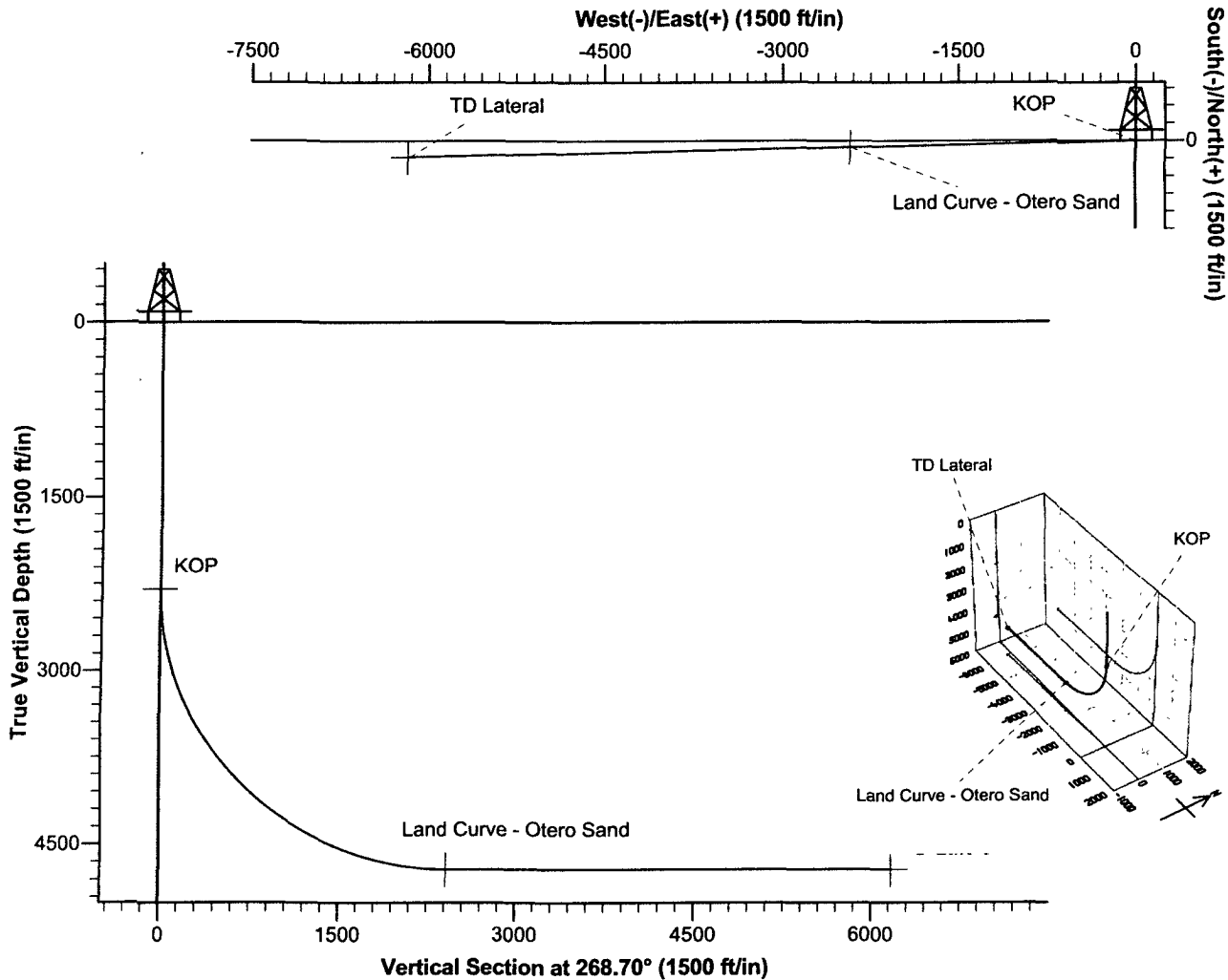


Azimuths to True North
 Magnetic North: 10.11°

Magnetic Field
 Strength: 51213.4snT
 Dip Angle: 63.80°
 Date: 8/19/2008
 Model: IGRF200510

SECTION DETAILS

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	DLeg	TFace	VSec	Target
1	0.0	0.00	0.00	0.0	0.0	0.0	0.00	0.00	0.0	
2	2300.0	0.00	0.00	2300.0	0.0	0.0	0.00	0.00	0.0	KOP
3	6096.6	90.00	268.70	4717.0	-54.8	-2416.4	2.37	268.70	2417.0	Land Curve - Otero Sand
4	9849.2	90.00	268.70	4717.0	-140.0	-6168.0	0.00	0.00	6169.6	TD Lateral



Energen

Planned Wellpath

Company: SJ BR
Project: S/2 Sec.22, T32N, R6W
Site: Eul Canyon
Well: San Juan 32-5 Unit #21
Wellbore: Revised Plan
Design: Final

Local Co-ordinate Reference: Well San Juan 32-5 Unit #21
TVD Reference: KB @ 6352.0ft (D&J #2)
MD Reference: KB @ 6352.0ft (D&J #2)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.16 Single User Db

Project	S/2 Sec.22, T32N, R6W		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Central Zone		

Site	Eul Canyon		
Site Position:		Northing:	2,172,215.70 ft
From:	Lat/Long	Easting:	1,295,395.92 ft
Position Uncertainty:	0.0 ft	Slot Radius:	"
		Latitude:	36° 57' 49.284 N
		Longitude:	107° 25' 51.528 W
		Grid Convergence:	-0.71 °

Well	San Juan 32-5 Unit #21		
Well Position	+N/-S	0.0 ft	Northing: 2,172,215.70 ft
	+E/-W	0.0 ft	Easting: 1,295,395.92 ft
Position Uncertainty	0.0 ft	Wellhead Elevation:	6,340.0 ft
		Ground Level:	6,340.0 ft

Wellbore	Revised Plan				
Magnetics	Model Name	Sample Date	Declination	Dip Angle	Field Strength
	IGRF200510	8/19/2008	(°)	(°)	(nT)
			10.11	63.80	51,213

Design	Final				
Audit Notes:					
Version:	Phase:	PROTOTYPE		Tie On Depth:	0.0
Vertical Section:	Depth From (TVD)	+N/-S	+E/-W	Direction	
	(ft)	(ft)	(ft)	(°)	
	0.0	0.0	0.0	268.70	

Survey Tool Program	Date 8/19/2008				
From	To	Survey (Wellbore)	Tool Name	Description	
(ft)	(ft)				
0.0	9,849.2	Final (Revised Plan)			

Planned Survey							
MD	TVD	Inc	Azi	Build	V. Sec	N/S	E/W
(ft)	(ft)	(°)	(°)	(°/100ft)	(ft)	(ft)	(ft)
2,000.0	2,000.0	0.00	0.00	0.00	0.0	0.0	0.0
2,100.0	2,100.0	0.00	0.00	0.00	0.0	0.0	0.0
2,200.0	2,200.0	0.00	0.00	0.00	0.0	0.0	0.0
2,300.0	2,300.0	0.00	0.00	0.00	0.0	0.0	0.0
KOP							
2,400.0	2,400.0	2.37	268.70	2.37	2.1	0.0	-2.1
2,500.0	2,499.8	4.74	268.70	2.37	8.3	-0.2	-8.3
2,600.0	2,599.2	7.11	268.70	2.37	18.6	-0.4	-18.6
2,700.0	2,698.2	9.48	268.70	2.37	33.0	-0.7	-33.0
2,800.0	2,796.4	11.85	268.70	2.37	51.5	-1.2	-51.5
2,900.0	2,893.9	14.22	268.70	2.37	74.1	-1.7	-74.1
3,000.0	2,990.3	16.59	268.70	2.37	100.7	-2.3	-100.6

Energen

Planned Wellpath

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Planned Survey

MD (ft)	TVD (ft)	Inc (°)	Azi (°)	Buidd (°/100ft)	V. Sec (ft)	N/S (ft)	E/W (ft)
3,100.0	3,085.5	18.96	268.70	2.37	131.2	-3.0	-131.2
3,200.0	3,179.3	21.33	268.70	2.37	165.6	-3.8	-165.6
3,300.0	3,271.7	23.71	268.70	2.37	203.9	-4.6	-203.9
3,400.0	3,362.4	26.08	268.70	2.37	246.0	-5.6	-246.0
3,500.0	3,451.3	28.45	268.70	2.37	291.8	-6.6	-291.7
3,600.0	3,538.2	30.82	268.70	2.37	341.3	-7.7	-341.2
3,700.0	3,623.0	33.19	268.70	2.37	394.3	-8.9	-394.1
3,800.0	3,705.5	35.56	268.70	2.37	450.7	-10.2	-450.6
3,900.0	3,785.7	37.93	268.70	2.37	510.5	-11.6	-510.4
4,000.0	3,863.3	40.30	268.70	2.37	573.6	-13.0	-573.5
4,100.0	3,938.2	42.67	268.70	2.37	639.8	-14.5	-639.7
4,200.0	4,010.3	45.04	268.70	2.37	709.1	-16.1	-708.9
4,300.0	4,079.5	47.41	268.70	2.37	781.3	-17.7	-781.1
4,400.0	4,145.6	49.78	268.70	2.37	856.3	-19.4	-856.1
4,500.0	4,208.6	52.15	268.70	2.37	934.0	-21.2	-933.8
4,600.0	4,268.3	54.52	268.70	2.37	1,014.2	-23.0	-1,013.9
4,700.0	4,324.6	56.89	268.70	2.37	1,096.8	-24.9	-1,096.5
4,800.0	4,377.5	59.26	268.70	2.37	1,181.7	-26.8	-1,181.4
4,900.0	4,426.8	61.63	268.70	2.37	1,268.7	-28.8	-1,268.3
5,000.0	4,472.5	64.00	268.70	2.37	1,357.6	-30.8	-1,357.3
5,100.0	4,514.4	66.37	268.70	2.37	1,448.4	-32.8	-1,448.0
5,200.0	4,552.6	68.75	268.70	2.37	1,540.8	-34.9	-1,540.4
5,300.0	4,586.9	71.12	268.70	2.37	1,634.7	-37.1	-1,634.3
5,400.0	4,617.3	73.49	268.70	2.37	1,730.0	-39.2	-1,729.5
5,500.0	4,643.7	75.86	268.70	2.37	1,826.4	-41.4	-1,826.0
5,600.0	4,666.2	78.23	268.70	2.37	1,923.9	-43.6	-1,923.4
5,700.0	4,684.5	80.60	268.70	2.37	2,022.2	-45.8	-2,021.6
5,800.0	4,698.8	82.97	268.70	2.37	2,121.1	-48.1	-2,120.6
5,900.0	4,709.0	85.34	268.70	2.37	2,220.6	-50.3	-2,220.0
6,000.0	4,715.1	87.71	268.70	2.37	2,320.4	-52.6	-2,319.8
6,096.6	4,717.0	90.00	268.70	2.37	2,417.0	-54.8	-2,416.4
Land Curve - Otero Sand							
6,100.0	4,717.0	90.00	268.70	0.00	2,420.4	-54.9	-2,419.8
6,200.0	4,717.0	90.00	268.70	0.00	2,520.4	-57.1	-2,519.7
6,300.0	4,717.0	90.00	268.70	0.00	2,620.4	-59.4	-2,619.7
6,400.0	4,717.0	90.00	268.70	0.00	2,720.4	-61.7	-2,719.7
6,500.0	4,717.0	90.00	268.70	0.00	2,820.4	-63.9	-2,819.7
6,600.0	4,717.0	90.00	268.70	0.00	2,920.4	-66.2	-2,919.6
6,700.0	4,717.0	90.00	268.70	0.00	3,020.4	-68.5	-3,019.6
6,800.0	4,717.0	90.00	268.70	0.00	3,120.4	-70.7	-3,119.6
6,900.0	4,717.0	90.00	268.70	0.00	3,220.4	-73.0	-3,219.6
7,000.0	4,717.0	90.00	268.70	0.00	3,320.4	-75.3	-3,319.5
7,100.0	4,717.0	90.00	268.70	0.00	3,420.4	-77.5	-3,419.5
7,200.0	4,717.0	90.00	268.70	0.00	3,520.4	-79.8	-3,519.5
7,300.0	4,717.0	90.00	268.70	0.00	3,620.4	-82.1	-3,619.5

Energen

Planned Wellpath

Company: SJ BR
Project: S/2 Sec.22, T32N, R6W
Site: Eul Canyon
Well: San Juan 32-5 Unit #21
Wellbore: Revised Plan
Design: Final

Local Co-ordinate Reference: Well San Juan 32-5 Unit #21
TVD Reference: KB @ 6352.0ft (D&J #2)
MD Reference: KB @ 6352.0ft (D&J #2)
North Reference: True
Survey Calculation Method: Minimum Curvature
Database: EDM 2003.16 Single User Db

Planned Survey

MD (ft)	TVD (ft)	Inc (°)	Azi (°)	Build (°/100ft)	V. Sec (ft)	N/S (ft)	E/W (ft)
7,400.0	4,717.0	90.00	268.70	0.00	3,720.4	-84.4	-3,719.4
7,500.0	4,717.0	90.00	268.70	0.00	3,820.4	-86.6	-3,819.4
7,600.0	4,717.0	90.00	268.70	0.00	3,920.4	-88.9	-3,919.4
7,700.0	4,717.0	90.00	268.70	0.00	4,020.4	-91.2	-4,019.4
7,800.0	4,717.0	90.00	268.70	0.00	4,120.4	-93.4	-4,119.3
7,900.0	4,717.0	90.00	268.70	0.00	4,220.4	-95.7	-4,219.3
8,000.0	4,717.0	90.00	268.70	0.00	4,320.4	-98.0	-4,319.3
8,100.0	4,716.9	90.00	268.70	0.00	4,420.4	-100.2	-4,419.2
8,200.0	4,716.9	90.00	268.70	0.00	4,520.4	-102.5	-4,519.2
8,300.0	4,716.9	90.00	268.70	0.00	4,620.4	-104.8	-4,619.2
8,400.0	4,716.9	90.00	268.70	0.00	4,720.4	-107.0	-4,719.2
8,500.0	4,716.9	90.00	268.70	0.00	4,820.4	-109.3	-4,819.1
8,600.0	4,716.9	90.00	268.70	0.00	4,920.4	-111.6	-4,919.1
8,700.0	4,716.9	90.00	268.70	0.00	5,020.4	-113.8	-5,019.1
8,800.0	4,716.9	90.00	268.70	0.00	5,120.4	-116.1	-5,119.1
8,900.0	4,716.9	90.00	268.70	0.00	5,220.4	-118.4	-5,219.0
9,000.0	4,716.9	90.00	268.70	0.00	5,320.4	-120.6	-5,319.0
9,100.0	4,716.9	90.00	268.70	0.00	5,420.4	-122.9	-5,419.0
9,200.0	4,716.9	90.00	268.70	0.00	5,520.4	-125.2	-5,519.0
9,300.0	4,716.9	90.00	268.70	0.00	5,620.4	-127.4	-5,618.9
9,400.0	4,716.9	90.00	268.70	0.00	5,720.4	-129.7	-5,718.9
9,500.0	4,716.9	90.00	268.70	0.00	5,820.4	-132.0	-5,818.9
9,600.0	4,716.9	90.00	268.70	0.00	5,920.4	-134.2	-5,918.9
9,700.0	4,716.9	90.00	268.70	0.00	6,020.4	-136.5	-6,018.8
9,800.0	4,716.8	90.00	268.70	0.00	6,120.4	-138.8	-6,118.8
9,849.2	4,717.0	90.00	268.70	-0.01	6,169.6	-140.0	-6,168.0
TD Lateral							

Targets

Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (ft)	Easting (ft)	Latitude	Longitude
Land Curve - Otero - plan hits target - Point	0.00	0.00	4,717.0	-54.8	-2,416.4	2,172,190.86	1,292,979.03	36° 57' 48.741 N	107° 26' 21.301 W
KOP - plan hits target - Point	0.00	0.00	2,300.0	0.0	0.0	2,172,215.70	1,295,395.92	36° 57' 49.284 N	107° 25' 51.528 W
TD Lateral - plan hits target - Point	0.00	0.00	4,717.0	-140.0	-6,168.0	2,172,152.17	1,289,226.66	36° 57' 47.893 N	107° 27' 7.524 W

Checked By: _____ Approved By: _____ Date: _____

Drilling Plan
Revised August 19, 2008

San Juan 32-5 Unit #21

General Information

Location	1840 fsl, 1565 fwl at surface 1700 fsl, 760 fwl at bottom nws 22, T32N, R6W Rio Arriba County, New Mexico
Elevations	6340' GL
Total Depth	9842' (MD), 4722' (TVD)
Formation Objective	Lewis Shale - Otero

Formation Tops

San Jose	Surface
Nacimiento	760' (TVD)
Ojo Alamo Ss	2060' (TVD)
Kirtland Sh	2410' (TVD), 2411' (MD)
Fruitland Fm	2830' (TVD), 2846' (MD)
Top Coal Interval	2920' (TVD), 2939' (MD)
Pictured Cliffs	3040' (TVD), 3065' (MD)
Lewis Shale	3360' (TVD), 3411' (MD)
Huerfanito Bentonite	4130' (TVD), 4395' (MD)
Top of Otero	4712' (TVD), 5941' (MD)
Base of Otero	4722' (TVD)
Total Depth	4722' (TVD), 9842' (MD)

Drilling

Surface Wellbore: wellbore will be drilled with spud mud.

Intermediate Wellbore: wellbore will be drilled with a Low Solids Non-Dispersed mud with densities expected to range from 8.8 ppg to 9.2 ppg, or Air/Mist as the wellbore dictates.

Production Wellbore: 6 1/4" wellbore will be drilled with a fresh water system treated with clay stabilizers.

Projected KOP is 2300' TVD with 2.37°/100' doglegs. Anticipated BHP is 500 psi.

Blowout Control Specifications:

A 3000 psi minimum double ram or annulus BOP stack will be used following nipple up of casing head. During air drilling operations, a Shaffer Type 50 or equivalent rotating head will be installed on top of the stack. A 2" nominal, 2000 psi minimum choke manifold will also be used. An upper Kelly Cock valve handle and drill string valve should be available to fit each drill string and be available on the rig floor during drilling operations.

Logging Program:

Open hole logs: FMI (Focused Micro Imaging)

Mud logs: 3300' TVD, 3361' MD to TD

Surveys: Surface to KOP every 500' and a minimum of every 200' for directional.

Tubulars

Casing, Tubing, & Casing Equipment:

String	Interval	Wellbore	Casing	Csg Wt	Grade
Surface	0'-400'	12 1/4"	9 5/8"	32.3 ppf	H-40 ST&C
Intermediate	0'-6125' (MD) 0-4717' (TVD)	8 3/4"	7"	26.0 ppf	J-55 LT&C
Prod Liner	4717'-4722' (TVD) 6025'-9842' (MD)	6 1/4"	4 1/2"	11.6 ppf	J-55 LT&C
Tubing	0'-6000' (MD)		2 3/8"	4.7 ppf	J-55

Casing Equipment:

Surface Casing: Texas Pattern Guide Shoe on bottom of first joint and an insert float valve on top of first joint. Casing centralization with 3 standard bow spring centralizers to achieve optimal standoff.

Intermediate Casing: Self fill float shoe with self fill float collar on bottom and top of first joint. Casing centralization with double bow spring and centralizers to optimize standoff.

Liner: Bull nose guide shoe on bottom of first joint, Packers Plus liner hanger and frac sleeves at frac intervals.

Wellhead

3000 psi 11" x 9 5/8" casing head. 9 5/8" x 7" x 2 3/8" 3000 psi Flanged Wellhead .

Cementing

260 Surface Casing: 220 sks Type V with 2.0 % CaCl₂ and 1/4 #/sk Flocele (15.6 ppg, 1.18 ft³/sk 206.5 ft³ of slurry to circulate to surface). WOC 12 hours. Pressure test surface casing to 750 psi for 30 min. Nipple up BOP after WOC. Test BOP to 250 psi low, 1200 psi high for 15 min each. Test choke manifold to 1200 psi for 30 min.

Intermediate Casing: Depending on wellbore conditions, cement may consist of 875 sks 65/35 with 6.0 % Bentonite, 2.0 % CaCl₂, 10 #/sk Gilsonite, and 1/2 #/sk Flocele (12.3 ppg, 1.96 ft³/sk) and a tail of 150 sks Type V with 1/4 #/sk Flocele (15.6 ppg, 1.18 ft³/sk). (1724 ft³ of slurry to 1892 ft³ circulate to surface). WOC 12 hours. Test casing to 1200 psi for 30 min. Test BOP to 250 psi low, 1200 psi high for 15 min each. Test choke manifold to 1200 psi for 30 min.

Production Liner: NO CEMENT, Open Hole Completion

****Cement volumes subject to change if caliper logs are ran****

Other Information

- 1) This well will be an open hole completion lined with an uncemented pre-drilled liner. The Otero portion of the Lewis Shale will be fracture stimulated.
- 2) If lost circulation is encountered, sufficient LCM will be added to the mud system to maintain well control. The intermediate string may need to be cemented in multiple stages with a slurry design deviated from that listed above.
- 3) If high reservoir pressures or water flows are encountered slurry design may need to be deviated to from those listed above to satisfy wellbore and formation conditions.
- 4) No abnormal temperatures or pressures are anticipated. This gas is dedicated.