

Well Name: BETONNIE TSOSIE WASH UNIT	Well Location: T23N / R8W / SEC 21 / NWNE /	County or Parish/State:
Well Number: 305H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM076842	Unit or CA Name:	Unit or CA Number: NMNM135219A
US Well Number:	Well Status: Approved Application for Permit to Drill	Operator: DJR OPERATING LLC

Notice of Intent

Sundry ID: 2772601

Type of Submission: Notice of Intent Type of Action: APD Change

Date Sundry Submitted: 01/30/2024 Time Sundry Submitted: 03:51

Date proposed operation will begin: 01/30/2024

Procedure Description: Original APD approved on 11/7/2023. The subject well has been assigned US Well Number: 30-045-38327 and is located in DJRs undivided Betonnie Tsosie Wash Unit. Original plans were to drill a 9200-ft lateral. DJR is seeking approval to shorten the lateral to 8120-ft, changing the proposed depth from 5008 / 14641 to 4960 / 13103, adjusting the BHL & reducing the dedicated acres from 640 to 520. Attached please find updated C102, revised drilling plan with new casing/cement assumptions, and revised directional design. Please note: effective December 21, 2023, Enduring Resources, LLC and DJR Operating, LLC are wholly owned subsidiaries of Enduring Resources, LLC. Leases, rights of way, wells, and other property interests will continue to be held in their current entity names.

NOI Attachments

Procedure Description

305H_NOI_Change_to_APD_BLM_Rev1_20240130155118.pdf

Well Name: BETONNIE TSOSIE WASH UNIT	Well Location: T23N / R8W / SEC 21 / NWNE /	County or Parish/State:
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Operator

I certify that the foregoing is true and correct. Title 18 U.S.C. Section 1001 and Title 43 U.S.C. Section 1212, make it a crime for any person knowingly and willfully to make to any department or agency of the United States any false, fictitious or fraudulent statements or representations as to any matter within its jurisdiction. Electronic submission of Sundry Notices through this system satisfies regulations requiring a

Operator Electronic Signature: SHAW-MARIE FORD

Signed on: JAN 30, 2024 03:51 PM

Name: DJR OPERATING LLC

Title: Regulatory Specialist

Street Address: 1 ROAD 3263

City: AZTEC

State: NM

Phone: (505) 632-3476

Email address: SFORD@DJRLLC.COM

Field

Representative Name:

Street Address:

City:

State:

Zip:

Phone:

Email address:

BLM Point of Contact

BLM POC Name: KENNETH G RENNICK

BLM POC Title: Petroleum Engineer

BLM POC Phone: 5055647742

BLM POC Email Address: krennick@blm.gov

Disposition: Approved

Disposition Date: 01/31/2024

Signature: Kenneth Rennick

DISTRICT I

1625 N. French Dr., Hobbs, N.M. 88240
Phone: (575) 393-6161 Fax: (575) 393-0720

DISTRICT II

DISTRICT II
811 S. First St., Artesia, N.M. 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

DISTRICT III

1000 Rio Brazos Rd., Aztec, N.M. 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

DISTRICT IV

1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3480 Fax: (505) 476-3482

State of New Mexico
Energy, Minerals & Natural Resources Department

Form C-102
Revised August 1, 2011

Submit one copy to appropriate
District Office

OIL CONSERVATION DIVISION

1220 South St. Francis Dr.
Santa Fe, NM 87505

☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-045-38327		² Pool Code 98175	³ Pool Name BETONNIE TSOSIE WASH UNIT MANCOS OIL POOL
⁴ Property Code 325179	⁵ Property Name BETONNIE TSOSIE WASH UNIT		⁶ Well Number 305H
⁷ OGRID No. 371838	⁸ Operator Name DJR OPERATING, LLC		⁹ Elevation 6837'

¹⁰ Surface Location

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	21	23N	8W		406'	NORTH	2059'	EAST	SAN JUAN

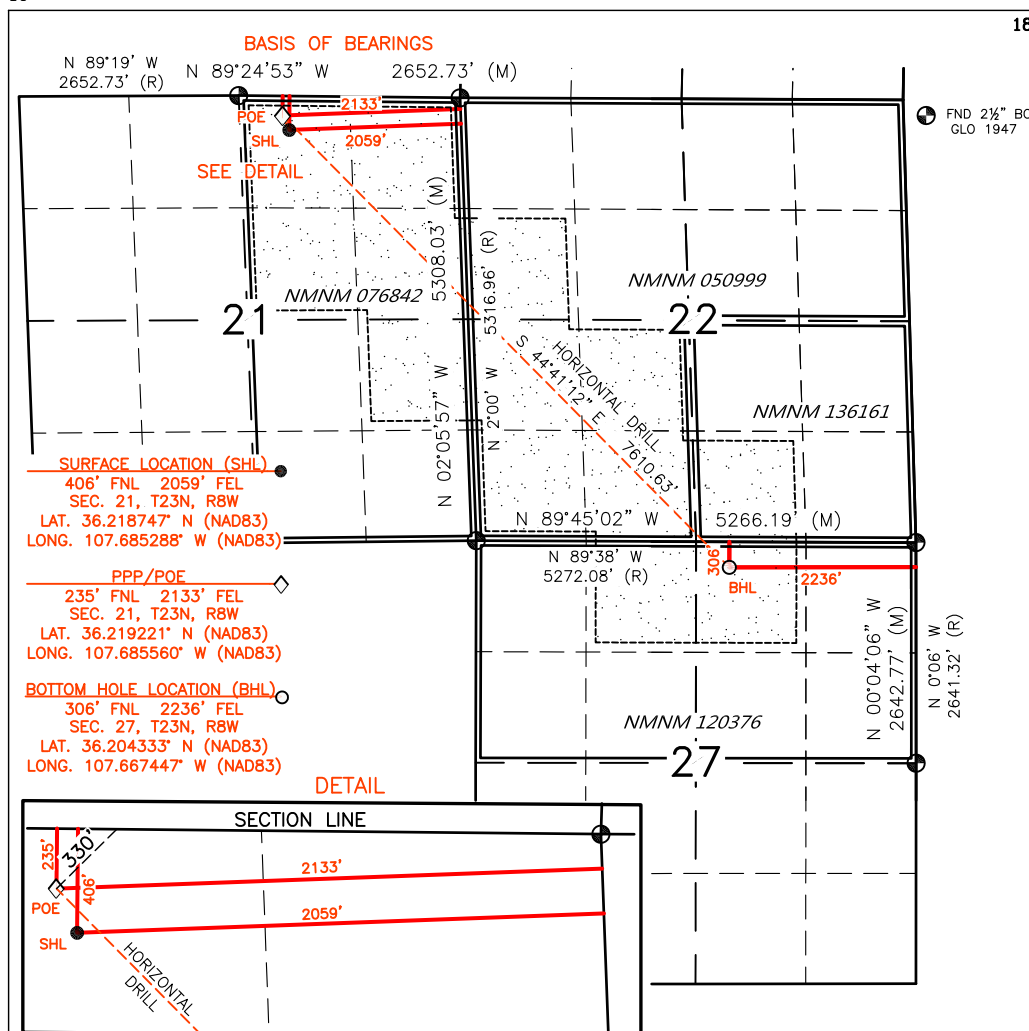
¹¹ Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
B	27	23N	8W		306'	NORTH	2236'	EAST	SAN JUAN

12 Dedicated Acres SEC 21: NE/4 & NE/SE (200 AC.); SEC 22: SW/NW, SW/4 & SW/SE (240 AC.); SEC 27: NE/NW & NW/NE (80 AC.) = 520 ACRES	13 Joint or Infill	14 Consolidation Code	15 Order No. R-13930 R-13930A
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NO ALLOWABLE WILL BE ASSIGNED TO THIS COMPLETION UNTIL ALL INTERESTS HAVE BEEN CONSOLIDATED
OR A NON-STANDARD UNIT HAS BEEN APPROVED BY THE DIVISION

16



18	17	OPERATOR CERTIFICATION
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I hereby certify that the information contained herein is true and complete to the best of my knowledge and belief, and that this organization either owns a working interest or unleased mineral interest in the land including the proposed bottom hole location or has a right to drill this well at this location pursuant to a contract with an owner of such a mineral or working interest, or to a voluntary pooling agreement or a compulsory pooling order heretofore entered by the division.

Shaw-Marie Ford 1/30/24

Signature

Date

Shaw-Marie Ford

Printed Name

sford@dirllc.com

E-mail Address

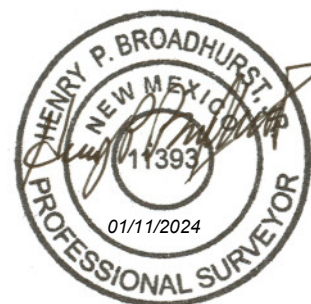
SURVEYOR CERTIFICATION

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

MARCH 15, 2021

Date of Survey

Signature and Seal of Professional Surveyor:



Certificate Number

11393



ENDURING RESOURCES IV, LLC
6300 S SYRACUSE WAY, SUITE 525
CENTENNIAL, COLORADO 80211

DRILLING PLAN: Drill, complete, and equip single lateral in the Mancos-Gallup formation

WELL INFORMATION:

Name: BETONNIE TSOSIE WASH UNIT 305H

API Number: 30-045-38327

State: New Mexico

County: San Juan

Surface Elevation: 6,837 ft ASL (GL)

6,862 ft ASL (KB)

Surface Location: 21-23N-08W Sec-Twn-Rng

406 ft FNL

2,059 ft FEL

36.218747 ° N latitude

107.685288 ° W longitude

(NAD 83)

BH Location: 27-23N-08W Sec-Twn-Rng

306 ft FNL

2,236 ft FEL

36.204333 ° N latitude

107.667447 ° W longitude

(NAD 83)

Driving Directions: FROM THE INTERSECTION OF US HWY 550 & US HWY 64 IN BLOOMFIELD, NM:

South on US Hwy 550 for 39.0 miles to MM 112.7, Right (Southwest) on CR #7900 / IR #7061 for 1.7 miles to 4-way, Left (East) leaving CR #7900 for 0.5 miles to new access road; Right for .1 miles into to Betonnie Tsošie B21 PAD (from North to South: BTU 721H, 305H and 306H wells).

GEOLOGIC AND RESERVOIR INFORMATION:

Prognosis:	Formation Tops	TVD (ft ASL)	TVD (ft KB)	MD (ft KB)	O / G / W	Pressure
	Ojo Alamo	6,100	762	762	W	normal
	Kirtland	6,030	832	832	W	normal
	Fruitland	5,842	1,020	1,020	G, W	sub
	Pictured Cliffs	5,489	1,373	1,375	G, W	sub
	Lewis	5,357	1,505	1,511	G, W	normal
	Chacra	5,119	1,743	1,760	G, W	normal
	Cliff House	4,026	2,836	2,903	G, W	sub
	Menefee	3,996	2,866	2,934	G, W	normal
	Point Lookout	3,080	3,782	3,891	G, W	normal
	Mancos	2,877	3,985	4,098	O,G	sub (~0.38)
	Gallup (MNCS_A)	2,562	4,300	4,413	O,G	sub (~0.38)
	MNCS_B	2,466	4,396	4,509	O,G	sub (~0.38)
	MNCS_C	2,384	4,478	4,592	O,G	sub (~0.38)
	MNCS_Cms	2,339	4,523	4,637	O,G	sub (~0.38)
	MNCS_D	2,209	4,653	4,773	O,G	sub (~0.38)
	MNCS_E	2,081	4,781	4,925	O,G	sub (~0.38)
	MNCS_F	2,031	4,831	4,993	O,G	sub (~0.38)
	MNCS_G	1,961	4,901	5,106	O,G	sub (~0.38)
	MNCS_H	1,912	4,950	5,207	O,G	sub (~0.38)
	MNCS_I	1,862	5,000	4,346	O,G	sub (~0.38)
	FTP TARGET	1,574	5,288	4,983	O,G	sub (~0.38)
	PROJECTED TD	1,902	4,960	13,103	O,G	sub (~0.38)

Surface: Nacimiento

Oil & Gas Zones: Several gas bearing zones will be encountered; target formation is the Gallup

Pressure: Normal (0.43 psi/ft) or sub-normal pressure gradients anticipated in all formations

Max. pressure gradient: 0.43 psi/ft Evacuated hole gradient: 0.22 psi/ft

Maximum anticipated BH pressure, assuming maximum pressure gradient: 2,280 psi

Maximum anticipated surface pressure, assuming partially evacuated hole: 1,120 psi

Temperature: Maximum anticipated BHT is 125° F or less

H₂S INFORMATION:

H₂S Zones: Encountering hydrogen-sulfide bearing zones is **NOT** anticipated.

Safety: Sensors and alarms will be placed in the substructure, on the rig floor, above the pits, and at the shakers.

LOGGING, CORING, AND TESTING:

Mud Logs: None planned; remote geo-steering from drill out of 7" casing to TD; gas detection from drillout of 9-5/8" casing to TD.

MWD / LWD: Gamma Ray from drillout of 9-5/8" casing to TD

Open Hole Logs: None planned

Testing: None planned

Coring: None planned

Cased Hole Logs: CBL on 7" casing from deepest free-fall depth to surface

DRILLING RIG INFORMATION:

Contractor: Aztec

Rig No.: 1000

Draw Works: E80 AC 1,500 hp

Mast: Hyduke Triple (136 ft, 600,000 lbs, 10 lines)

Top Drive: NOV IDS-350PE (350 ton)

Prime Movers: 4 - GE Jenbacher Natural Gas Generator

Pumps: 2 - RS F-1600 (7,500 psi)

BOPE 1: Cameron single & double gate rams (11", 3,000 psi)

BOPE 2: Cameron annular (11", 3,000 psi)

Choke 3", 5,000 psi

KB-GL (ft): 25

Note: Actual drilling rig may vary depending on availability at time the well is scheduled to be drilled.

BOPE REQUIREMENTS:

- 1) Rig will be equipped with upper and lower kelly cocks with handles available.
- 2) Inside BOP and TIW valves will be available to use on all sizes and threads of drill pipe used while drilling the well.
- 2) BOP accumulator will have enough capacity to open the HCR valve, close all rams and annular preventer, and retain minimum of 200 psi above precharge on the closing manifold without the use of closing pumps. The fluid reservoir capacity shall be at least double the usable fluid volume of the accumulator system capacity, and the fluid level shall be maintained at manufacturer's recommendation. There will be two additional sources of power for the closing pumps (electric and air). Sufficient nitrogen bottles will be available and will be recharged when pressure falls below manufacturer's recommended minimum.
- 3) BOP testing shall be conducted (a) when initially installed, (b) whenever any seal is broken or repaired, (c) if the time since the previous test exceeds 30 days. Tests will be conducted using a test plug. BOP ram preventers will be tested to 3,000 psig for 10 minutes, and the annular preventer will be tested to 1,500 psi for 10 minutes. Ram and annular preventers will be tested to 250 psi for 5 minutes. Additionally, BOP and casing strings will be tested to .22 psi/ft or 1,500 psi, whichever is greater but not exceeding 70% of yield strength of the casing, for 30 minutes, prior to drilling out 13-3/8" and 9-5/8" casing. Rams and hydraulically operated remote choke line valve will be function tested daily at a minimum.
- 4) Remote valve for BOP rams, HCR, and choke shall be placed in a location that is readily available to the driller. The remote BOP valve shall be capable of closing and opening the rams.
- 5) Manual locking devices (hand wheels) shall be installed on rams. A valve will be installed on the annular preventer's closing line as close as possible to the preventer to act as a locking device. The valve will be maintained in the open position and shall only be closed when there is no power to the accumulator.

FLUIDS AND SOLIDS CONTROL PROGRAM:

Fluid Measurement:

Pumps shall be equipped with stroke counters with displays in the dog-house. Slow pump speed shall be recorded daily and after mudding up, at a minimum, on the drilling report. A Pit Volume Totalizer will be installed and the readout will be displayed in the dog-house. Gas-detecting equipment will be installed at the shakers, and readouts will be available in the dog-house and the in the geologist's work-station (if geologist or mud-logger is on-site).

Closed-Loop System: A fully, closed-loop system will be utilized. The system will consist of above-ground piping and above-ground storage tanks and bins. The system will not entail any earthen pits, below-grade storage, or drying pads. All equipment will be disassembled and removed from the site when drilling operations cease. The system will be capable of storing all fluids and generated cuttings and of preventing uncontrolled releases of the same. The system will be operated in an efficient manner to allow the recycling and reuse of as much fluid as possible and to minimize the amount of fluids and solids that require disposal.

Fluid Disposal: Fluids that cannot be reused, recycled, or returned to the supplier will be hauled to and disposed of at an approved disposal site (Industrial Ecosystem, Inc. or Envirotech, Inc.).

Solids Disposal: Drilling solids will be stored (until haul-off) on-site in separate containers with no other waste, debris, or garbage products. Waste solids will be hauled to and disposed of at an approved disposal site (Industrial Ecosystem, Inc. or Envirotech, Inc.).

Fluid Program: See "Detailed Drilling Plan" section and attached Newpark mud program for additional details.

DETAILED DRILLING PLAN:**SURFACE:** Drill vertically to casing setting depth (plus necessary rathole), run casing, cement casing to surface.

0 ft (MD)	to	350 ft (MD)	Hole Section Length:	350 ft
0 ft (TVD)	to	350 ft (TVD)	Casing Required:	350 ft

Fluid:	Type	MW (ppg)	FL (mL/30 min)	PV (cp)	YP (lb/100 sqft)	pH	Comments
	Fresh Water	8.4	N/C	2 - 8	2 - 12	9.0	Spud mud

Hole Size: 12-1/4"**Bit / Motor:** Mill Tooth or PDC, no motor**MWD / Survey:** No MWD, deviation survey**Logging:** None

Casing Specs:		Wt (lb/ft)	Grade	Conn.	Collapse (psi)	Burst (psi)	Tens. Body (lbs)	Tens. Conn (lbs)
Specs	9.625	36.0	K-55	STC	2,020	3,520	564,000	423,000
Loading					153	1,072	110,988	110,988
Min. S.F.					13.21	3.28	5.08	3.81

Assumptions: Collapse: fully evacuated casing with 8.4 ppg equivalent external pressure gradient

Burst: maximum anticipated surface pressure with 9.5 ppg fluid inside casing while drilling

intermediate hole and 8.4 ppg equivalent external pressure gradient

Tension: buoyed weight in 8.4 ppg fluid with 100,000 lbs over-pull

MU Torque (ft lbs): Minimum: N/A Optimum: N/A Maximum: N/A

Cement:	Type	Weight (ppg)	Yield (cuft/sk)	Water (gal/sk)	Hole Cap. (cuft/ft)	% Excess	Planned TOC (ft MD)	Total Cmt (sx)	Total Cmt (cu ft)
Redi-Mix	TYPE I-II	14.5	1.61	7.41	0.3132	50%	0	114	184

Calculated cement volumes assume gauge hole and the excess noted in table

Csg ID

8.921

Mesa Ready Mix or first available

Shoe Track L

44

Notify NMOCD & BLM if cement is not circulated to surface. Cement must achieve 500 psi compressive strength before drilling out.

INTERMEDIATE: Drill as per directional plan to casing setting depth, run casing, cement casing to surface.

350 ft (MD)	to	5,388 ft (MD)	Hole Section Length:	5,038 ft
350 ft (TVD)	to	5,009 ft (TVD)	Casing Required:	5,388 ft

Fluid:	Type	MW (ppg)	FL (mL/30 min)	PV (cp)	YP (lb/100 sqft)	pH	Comments
	LSND (KCI)	8.8 - 9.5	20	8 - 14	8 - 14	9.0 - 9.5	No OBM

Hole Size: 8.75

Bit / Motor: 8-3/4" PDC bit w/mud motor

MWD / Survey: MWD Survey with inclination and azimuth survey (every 100' at a minimum), GR optional

Logging: None

Casing Specs:		Wt (lb/ft)	Grade	Conn.	Collapse (psi)	Burst (psi)	Tens. Body (lbs)	Tens. Conn (lbs)
Specs	7	26.0	K-55	LTC	4,320	4,980	415,000	367,000
Loading					2,188	1,407	222,164	222,164
Min. S.F.					1.97	3.54	1.87	1.65

Assumptions: Collapse: fully evacuated casing with 8.4 ppg equivalent external pressure gradient

Burst: maximum anticipated surface pressure with 9.5 ppg fluid inside casing while drilling production hole and 8.4 ppg equivalent external pressure gradient

Tension: buoyed weight in 8.4 ppg fluid with 100,000 lbs over-pull

MU Torque (ft lbs): Minimum: 3,400 Optimum: 4,530 Maximum: 5,660

Cement:	Type	Weight (ppg)	Yield (cuft/sk)	Water (gal/sk)	% Excess	Planned TOC (ft MD)	Total Cmt (sx)	Total Cmt (cu ft)
Lead	III:POZ Blend	12.5	2.140	12.05	70%	0	463	991
Tail	Type III	14.6	1.380	6.64	20%	3,998	189	260

Annular Capacity	0.16681	cuft/ft	7" casing x 9-5/8" casing annulus	Shoe Track L	44
	0.1503	cuft/ft	9-5/8" casing x 12-1/4" hole annulus	Casing ID	6.276
	0.2148	cuft/ft	7" casing casing volume		

Calculated cement volumes assume gauge hole and the excess noted in table

PRODUCTION: Drill to TD following directional plan, run casing, cement casing to surface.

5,388 ft (MD)	to	13,103 ft (MD)	Hole Section Length:	7,715 ft
5,009 ft (TVD)	to	4,960 ft (TVD)	Casing Required:	7,865 ft
Estimated KOP:		4,528 ft (MD)	4,415 ft (TVD)	
Estimated Liner Top:		5,238 ft (MD)	4,964 ft (TVD)	
Estimated Landing Point (FTP):		4,983 ft (MD)	5,288 ft (TVD)	
Estimated Lateral Length:		8,120 ft (MD)		

Fluid:	Type	MW (ppg)	FL (mL/30')	PV (cp)	YP (lb/100 sqft)	pH	Comments	Comments
	WBM	8.7 - 9.0	NC	+20	±2	9-9.5	prod water	OBM as contingency

Hole Size: 6.125

Bit / Motor: 6-1/8" PDC bit w/mud motor

MWD / Survey: MWD with GR, inclination, and azimuth (survey every joint from KOP to Landing Point and survey every 100' minimum before KOP and after Landing Point)

Logging: GR MWD for entire section, no mud-log or cuttings sampling, no OH WL logs

Liner/Casing Specs:	Size (in)	Wt (lb/ft)	Grade	Conn.	Collapse (psi)	Burst (psi)	Tens. Body (lbs)	Tens. Conn (lbs)
Specs	4.500	11.6	P-110	BTC	7,560	10,690	367,000	385,000
Loading					2,450	8,784	231,158	231,158
Min. S.F.					3.09	1.22	1.59	1.67

Collapse: fully evacuated casing with 9.5 ppg fluid in the annulus (floating casing during running)

Assumptions:

Burst: 8,500 psi maximum surface treating pressure with 10.2 ppg equivalent mud weight sand laden fluid with 8.4 ppg equivalent external pressure gradient.

Tension: buoyed weight in 9.0 ppg fluid with 100,000 lbs over-pull. Tension calculations assume vertical hole to approximate drag in lateral.

MU Torque (ft lbs): Minimum: BTC Optimum: BTC Maximum: BTC

Cement:	Type	Weight (ppg)	Yield (cuft/sk)	Water (gal/sk)	% Excess	Planned TOC (ft MD)	Total Cmt (sx)	Total Cmt (cu ft)
Spacer	IntegraGuard Star	11		31.6		0	60 bbls	
Tail	G:POZ blend	13.3	1.560	7.70	30%	5,238	649	1,012

Displacement 174 est bbls

Annular Capacity 0.1044 cuft/ft 4-1/2" casing x 7" casing annulus
 0.09417 cuft/ft 4-1/2" casing x 6-1/8" hole annulus
 0.0873 cuft/ft 4-1/2" casing vol est shoe jt ft 100
 0.0102 bbls/ft 4" DP capacity

Calculated cement volumes assume gauge hole and the excess noted in table

Spacer	S-8 Silica Flour 163.7 lbs/bbl	Avis 616 viscosifier 11.6 lb/bbl	FP24 Defoamer .5 lb/bbl	IntegraGuard Star Plus 3K LCM 15 lb/bbl	SS201 Surfactant 1 gal/bbl			
Lead	ASTM Type I/II	BA90 Bonding Agent 5.0 lb/sx	Bentonite Viscosifier 8% BWOB	FL24 Fluid Loss .5% BWOB	IntegraGuard GW86 Viscosifier .1% BWOB	R7C Retarder .2% BWOB	FP24 Defoamer .3% BWOB, Anti-Static .01 lb/sx	
Tail	Type G 50%	Pozzolan Fly Ash Extender 50%	BA90 Bonding Agent 3.0 lb/sx	Bentonite Viscosifier 4% BWOB	FL24 Fluid Loss .4% BWOB	IntegraGuard GW86 Viscosifier .1% BWOB	R3 Retarder .5% BWOB	FP24 Defoamer .3% BWOB, IntegraSeal 0.25 lb/sx

COMPLETION AND PRODUCTION PLAN:

Est Lateral Length: 8,020

Est Frac Inform: 33 Frac Stages 129,000 bbls slick water 10,430,000 lbs proppant

Frac: 39 plug-and-perf stages with 150,000 bbls slickwater fluid and 12,100,000 lbs of proppant (estimated)

Flowback: Flow back through production tubing as pressures allow

Production: Produce through production tubing via gas-lift into permanent production and storage facilities

ESTIMATED START DATES:

Drilling: 2/16/2024

Completion: 4/16/2024

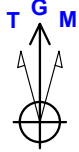
Production: 5/31/2024

Prepared by: Greg Olson 1/25/2024

Updated:



Well: **Betonnie Tsosie Wash Unit 305H**
Site: **Betonnie Tsosie Wash Unit (305, 306 & 721)**
Project: **San Juan County, New Mexico NAD83 NM W**
Design: **rev0**
Rig:



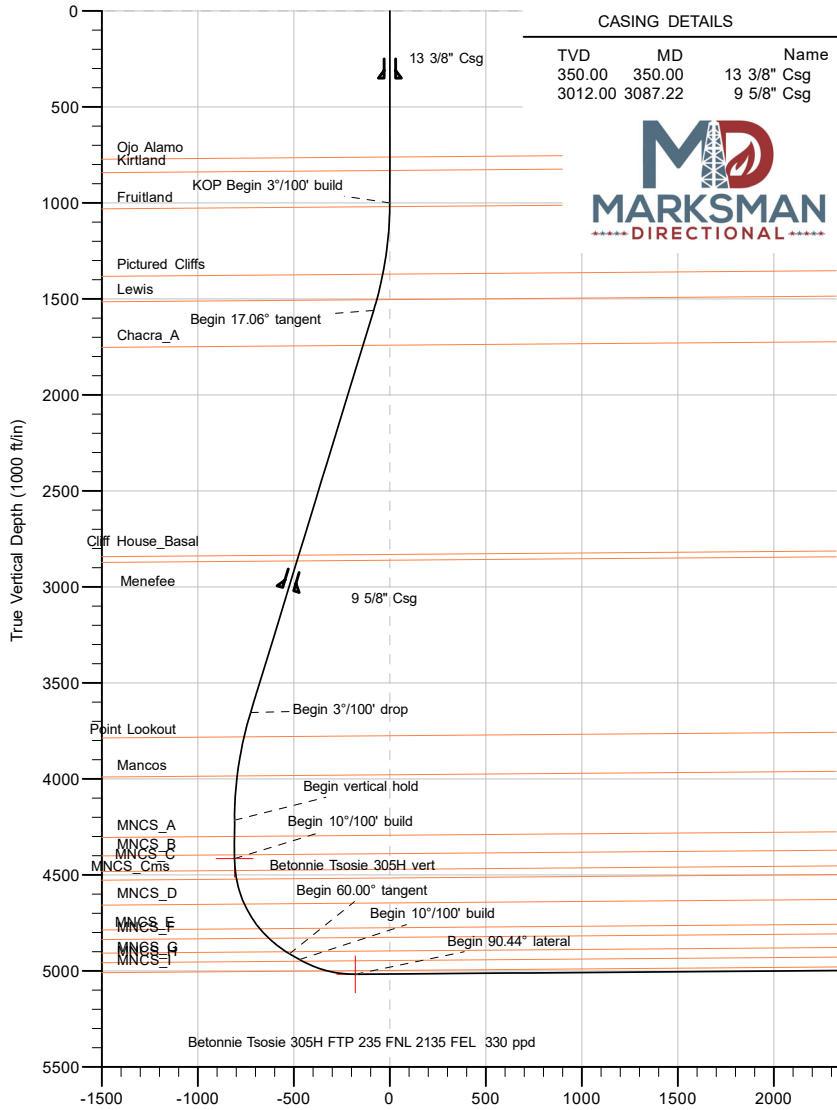
Azimuths to Grid North
True North: -0.09°
Magnetic North: 8.41°

Magnetic Field
Strength: 49045.9nT
Dip Angle: 62.69°
Date: 1/15/2024
Model: IGRF2020

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Western Zone
System Datum: Mean Sea Level
Depth Reference: RKB=6837+25 @ 6862.00ft

Surface location:
Northing: 1898955.071
Easting: 2766760.371
Latitude: 36.218747000
Longitude: -107.685288000

Total Corr (M=>G): To convert a Magnetic Direction to a Grid Direction, Add 8.41°

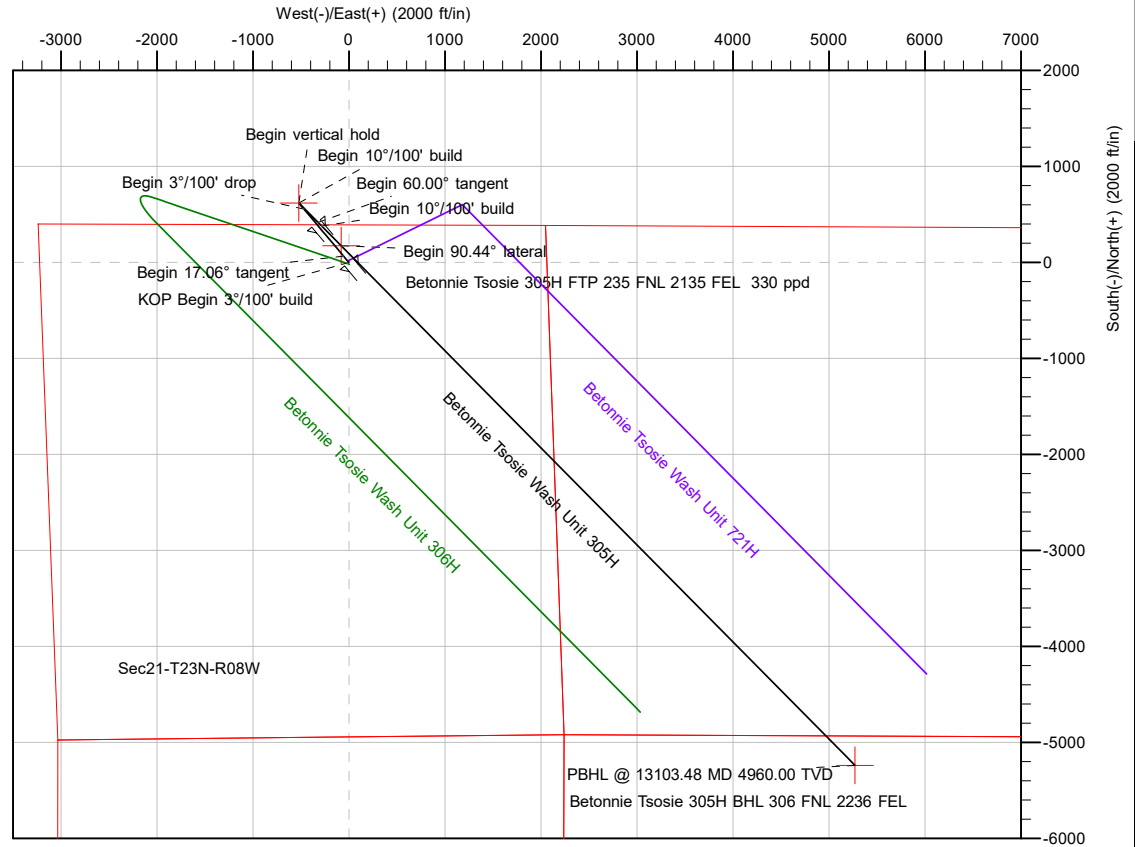


10:48, January 16 2024

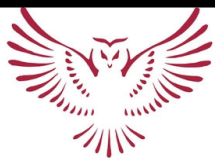
Section Details											
Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation	
1	0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	KOP Begin 3°/100' build	
2	1000.00	0.00	0.000	1000.00	0.00	0.00	0.00	0.00	0.00	Begin 17.06° tangent	
3	1568.82	17.06	319.841	1560.45	64.26	-54.23	3.00	319.84	-83.82	Begin 3°/100' drop	
4	3759.42	17.06	319.841	3654.61	555.56	-468.79	0.00	0.00	-724.65	Begin vertical hold	
5	4328.25	0.00	0.000	4215.06	619.82	-523.02	3.00	180.00	-808.47	Begin 10°/100' build	
6	4528.25	0.00	0.000	4415.06	619.82	-523.02	0.00	0.00	-808.47	Begin 60.00° tangent	
7	5128.25	60.00	135.314	4911.26	416.14	-321.56	10.00	135.31	-521.99	Begin 10°/100' build	
8	5188.25	60.00	135.314	4941.26	379.20	-285.02	0.00	0.00	-470.03	Begin 90.44° lateral	
9	5492.62	90.44	135.314	5018.00	172.42	-80.49	10.00	0.00	-179.19	PBHL @ 13103.48 MD 4960.00 TVD	
10	13103.48	90.44	135.314	4960.00	-5238.49	5271.52	0.00	0.00	7431.46		

DESIGN TARGET DETAILS

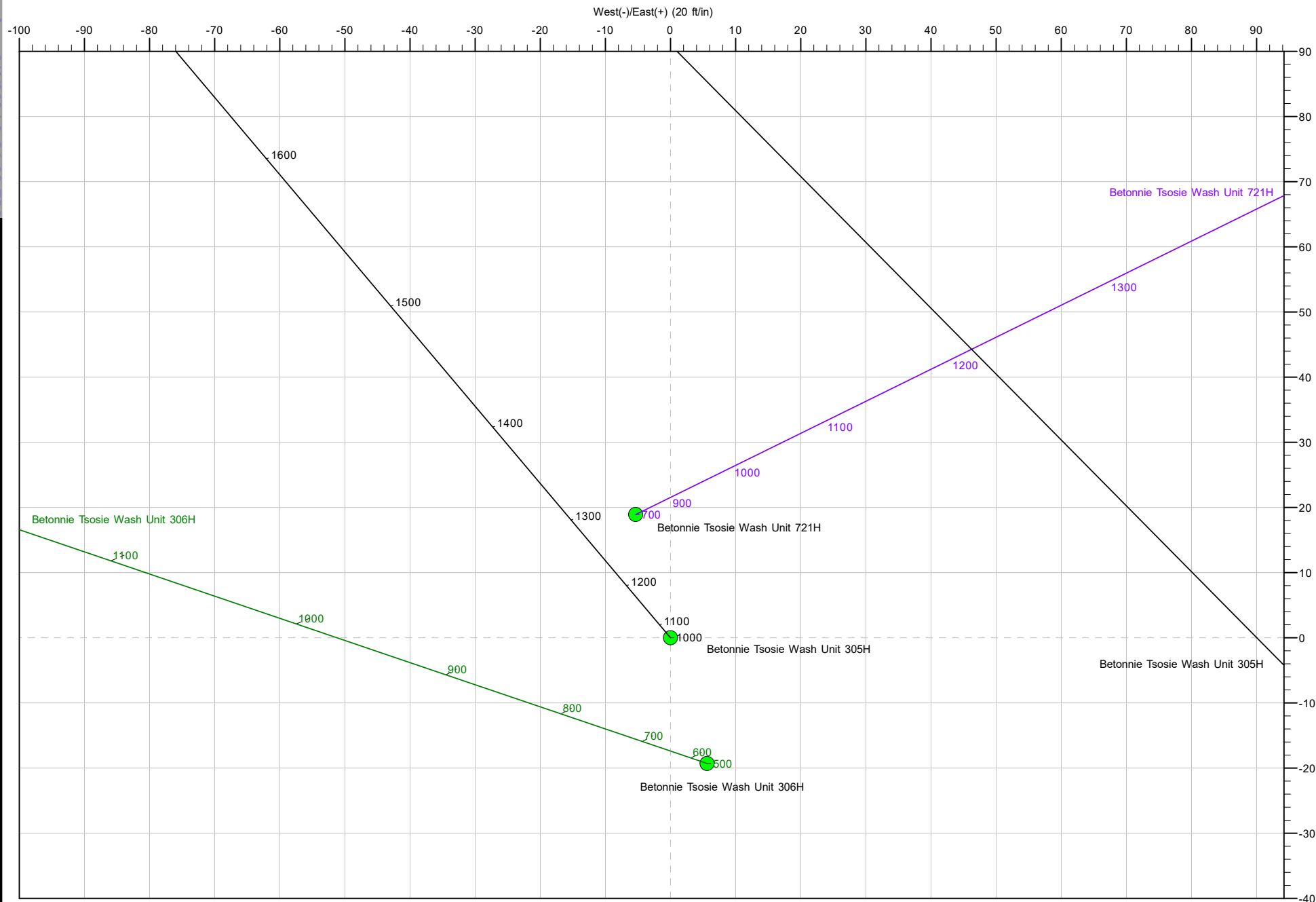
Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Betonnie Tsosie 305H BHL 306 FNL 2236 FEL	4960.00	-5238.49	5271.52	1893716.591	2772031.882	36.204333000	-107.667447000
Betonnie Tsosie 305H FTP 235 FNL 2135 FEL 330 ppd	5018.00	172.42	-80.49	1899127.495	2766679.876	36.219221000	-107.685560000
Betonnie Tsosie 305H vert	4415.06	619.82	-523.02	1899574.890	2766237.352	36.220451875	-107.687057960



Vertical Section at 135.314° (1000 ft/in)



Well: **Betonnies Tsosie Wash Unit 305H**
Site: **Betonnies Tsosie Wash Unit (305, 306 & 721)**
Project: **San Juan County, New Mexico NAD83 NM W**
Design: **rev0**
Rig:





Planning Report

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Site Betonnie Tsosie Wash Unit (305, 306 & 721)
Company:	Enduring Resources LLC	TVD Reference:	RKB=6837+25 @ 6862.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6837+25 @ 6862.00ft
Site:	Betonnie Tsosie Wash Unit (305, 306 & 721)	North Reference:	Grid
Well:	Betonnie Tsosie Wash Unit 305H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Project	San Juan County, New Mexico NAD83 NM W		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Western Zone		

Site	Betonnie Tsosie Wash Unit (305, 306 & 721)		
Site Position:		Northing:	1,898,955.071 usft
From:	Lat/Long	Easting:	2,766,760.370 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "
		Latitude:	36.218747000
		Longitude:	-107.685288000

Well	Betonnie Tsosie Wash Unit 305H, Surf loc: 406 FNL 2059 FEL Section 21-T23N-R08W					
Well Position	+N/-S	0.00 ft	Northing:	1,898,955.071 usft	Latitude:	36.218747000
	+E/-W	0.00 ft	Easting:	2,766,760.370 usft	Longitude:	-107.685288000
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	6,837.00 ft
Grid Convergence:		0.09 °				

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	1/15/2024	8.50	62.69	49,045.92438540

Design	rev0			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	135.314

Plan Survey Tool Program	Date	1/16/2024		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	13,103.49	rev0 (Original Hole)	MWD
				OWSG MWD - Standard



Planning Report

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Site Betonnie Tsosie Wash Unit (305, 306 & 721)
Company:	Enduring Resources LLC	TVD Reference:	RKB=6837+25 @ 6862.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6837+25 @ 6862.00ft
Site:	Betonnie Tsosie Wash Unit (305, 306 & 721)	North Reference:	Grid
Well:	Betonnie Tsosie Wash Unit 305H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,000.00	0.00	0.000	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,568.82	17.06	319.841	1,560.45	64.26	-54.23	3.00	3.00	0.00	319.84	
3,759.42	17.06	319.841	3,654.61	555.56	-468.79	0.00	0.00	0.00	0.00	
4,328.25	0.00	0.000	4,215.06	619.82	-523.02	3.00	-3.00	0.00	180.00	
4,528.25	0.00	0.000	4,415.06	619.82	-523.02	0.00	0.00	0.00	0.00	Betonnie Tsosie 305H
5,128.25	60.00	135.314	4,911.26	416.14	-321.56	10.00	10.00	0.00	135.31	
5,188.25	60.00	135.314	4,941.26	379.20	-285.02	0.00	0.00	0.00	0.00	
5,492.62	90.44	135.314	5,018.00	172.42	-80.49	10.00	10.00	0.00	0.00	
13,103.49	90.44	135.314	4,960.00	-5,238.49	5,271.52	0.00	0.00	0.00	0.00	Betonnie Tsosie 305H



Planning Report

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Site Betonnie Tsosie Wash Unit (305, 306 & 721)
Company:	Enduring Resources LLC	TVD Reference:	RKB=6837+25 @ 6862.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6837+25 @ 6862.00ft
Site:	Betonnie Tsosie Wash Unit (305, 306 & 721)	North Reference:	Grid
Well:	Betonnie Tsosie Wash Unit 305H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
100.00	0.00	0.000	100.00	0.00	0.00	0.00	0.00	0.00	0.00	
200.00	0.00	0.000	200.00	0.00	0.00	0.00	0.00	0.00	0.00	
300.00	0.00	0.000	300.00	0.00	0.00	0.00	0.00	0.00	0.00	
400.00	0.00	0.000	400.00	0.00	0.00	0.00	0.00	0.00	0.00	
500.00	0.00	0.000	500.00	0.00	0.00	0.00	0.00	0.00	0.00	
600.00	0.00	0.000	600.00	0.00	0.00	0.00	0.00	0.00	0.00	
700.00	0.00	0.000	700.00	0.00	0.00	0.00	0.00	0.00	0.00	
800.00	0.00	0.000	800.00	0.00	0.00	0.00	0.00	0.00	0.00	
900.00	0.00	0.000	900.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,000.00	0.00	0.000	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,100.00	3.00	319.841	1,099.95	2.00	-1.69	-2.61	3.00	3.00	0.00	
1,200.00	6.00	319.841	1,199.63	8.00	-6.75	-10.43	3.00	3.00	0.00	
1,300.00	9.00	319.841	1,298.77	17.97	-15.16	-23.44	3.00	3.00	0.00	
1,400.00	12.00	319.841	1,397.08	31.90	-26.92	-41.60	3.00	3.00	0.00	
1,500.00	15.00	319.841	1,494.31	49.74	-41.97	-64.87	3.00	3.00	0.00	
1,568.82	17.06	319.841	1,560.45	64.26	-54.23	-83.82	3.00	3.00	0.00	
1,600.00	17.06	319.841	1,590.26	71.25	-60.13	-92.94	0.00	0.00	0.00	
1,700.00	17.06	319.841	1,685.85	93.68	-79.05	-122.20	0.00	0.00	0.00	
1,800.00	17.06	319.841	1,781.45	116.11	-97.98	-151.45	0.00	0.00	0.00	
1,900.00	17.06	319.841	1,877.05	138.54	-116.90	-180.70	0.00	0.00	0.00	
2,000.00	17.06	319.841	1,972.64	160.96	-135.83	-209.96	0.00	0.00	0.00	
2,100.00	17.06	319.841	2,068.24	183.39	-154.75	-239.21	0.00	0.00	0.00	
2,200.00	17.06	319.841	2,163.84	205.82	-173.68	-268.46	0.00	0.00	0.00	
2,300.00	17.06	319.841	2,259.44	228.25	-192.60	-297.72	0.00	0.00	0.00	
2,400.00	17.06	319.841	2,355.03	250.67	-211.52	-326.97	0.00	0.00	0.00	
2,500.00	17.06	319.841	2,450.63	273.10	-230.45	-356.22	0.00	0.00	0.00	
2,600.00	17.06	319.841	2,546.23	295.53	-249.37	-385.48	0.00	0.00	0.00	
2,700.00	17.06	319.841	2,641.83	317.96	-268.30	-414.73	0.00	0.00	0.00	
2,800.00	17.06	319.841	2,737.42	340.38	-287.22	-443.99	0.00	0.00	0.00	
2,900.00	17.06	319.841	2,833.02	362.81	-306.15	-473.24	0.00	0.00	0.00	
3,000.00	17.06	319.841	2,928.62	385.24	-325.07	-502.49	0.00	0.00	0.00	
3,100.00	17.06	319.841	3,024.22	407.67	-344.00	-531.75	0.00	0.00	0.00	
3,200.00	17.06	319.841	3,119.81	430.09	-362.92	-561.00	0.00	0.00	0.00	
3,300.00	17.06	319.841	3,215.41	452.52	-381.85	-590.25	0.00	0.00	0.00	
3,400.00	17.06	319.841	3,311.01	474.95	-400.77	-619.51	0.00	0.00	0.00	
3,500.00	17.06	319.841	3,406.61	497.38	-419.70	-648.76	0.00	0.00	0.00	
3,600.00	17.06	319.841	3,502.20	519.80	-438.62	-678.01	0.00	0.00	0.00	
3,700.00	17.06	319.841	3,597.80	542.23	-457.55	-707.27	0.00	0.00	0.00	
3,759.42	17.06	319.841	3,654.61	555.56	-468.79	-724.65	0.00	0.00	0.00	
3,800.00	15.85	319.841	3,693.52	564.34	-476.21	-736.11	3.00	-3.00	0.00	
3,900.00	12.85	319.841	3,790.39	583.28	-492.19	-760.81	3.00	-3.00	0.00	
4,000.00	9.85	319.841	3,888.42	598.31	-504.87	-780.42	3.00	-3.00	0.00	
4,100.00	6.85	319.841	3,987.35	609.41	-514.23	-794.89	3.00	-3.00	0.00	
4,200.00	3.85	319.841	4,086.91	616.53	-520.24	-804.18	3.00	-3.00	0.00	
4,300.00	0.85	319.841	4,186.81	619.66	-522.89	-808.26	3.00	-3.00	0.00	
4,328.25	0.00	0.000	4,215.06	619.82	-523.02	-808.47	3.00	-3.00	0.00	
4,400.00	0.00	0.000	4,286.81	619.82	-523.02	-808.47	0.00	0.00	0.00	
4,500.00	0.00	0.000	4,386.81	619.82	-523.02	-808.47	0.00	0.00	0.00	
4,528.25	0.00	0.000	4,415.06	619.82	-523.02	-808.47	0.00	0.00	0.00	
4,550.00	2.18	135.314	4,436.81	619.53	-522.73	-808.06	10.00	10.00	0.00	
4,600.00	7.18	135.314	4,486.62	616.63	-519.86	-803.99	10.00	10.00	0.00	
4,650.00	12.18	135.314	4,535.90	610.66	-513.96	-795.59	10.00	10.00	0.00	



Planning Report

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Site Betonnie Tsose Wash Unit (305, 306 & 721)
Company:	Enduring Resources LLC	TVD Reference:	RKB=6837+25 @ 6862.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6837+25 @ 6862.00ft
Site:	Betonnie Tsose Wash Unit (305, 306 & 721)	North Reference:	Grid
Well:	Betonnie Tsose Wash Unit 305H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	
4,700.00	17.18	135.314	4,584.25	601.65	-505.05	-782.92	10.00	10.00	0.00	
4,750.00	22.18	135.314	4,631.32	589.69	-493.22	-766.09	10.00	10.00	0.00	
4,800.00	27.18	135.314	4,676.74	574.85	-478.54	-745.23	10.00	10.00	0.00	
4,850.00	32.18	135.314	4,720.17	557.26	-461.14	-720.48	10.00	10.00	0.00	
4,900.00	37.18	135.314	4,761.27	537.04	-441.14	-692.04	10.00	10.00	0.00	
4,950.00	42.18	135.314	4,799.74	514.35	-418.70	-660.13	10.00	10.00	0.00	
5,000.00	47.18	135.314	4,835.29	489.37	-393.99	-624.99	10.00	10.00	0.00	
5,050.00	52.18	135.314	4,867.63	462.27	-367.19	-586.88	10.00	10.00	0.00	
5,100.00	57.18	135.314	4,896.53	433.28	-338.51	-546.10	10.00	10.00	0.00	
5,128.25	60.00	135.314	4,911.26	416.14	-321.56	-521.99	10.00	10.00	0.00	
5,188.25	60.00	135.314	4,941.26	379.20	-285.02	-470.03	0.00	0.00	0.00	
5,200.00	61.18	135.314	4,947.03	371.92	-277.82	-459.80	10.00	10.00	0.00	
5,250.00	66.18	135.314	4,969.19	340.07	-246.32	-415.00	10.00	10.00	0.00	
5,300.00	71.18	135.314	4,987.37	306.96	-213.58	-368.43	10.00	10.00	0.00	
5,350.00	76.18	135.314	5,001.42	272.86	-179.84	-320.46	10.00	10.00	0.00	
5,400.00	81.18	135.314	5,011.24	238.02	-145.38	-271.45	10.00	10.00	0.00	
5,450.00	86.18	135.314	5,016.74	202.69	-110.44	-221.77	10.00	10.00	0.00	
5,492.62	90.44	135.314	5,018.00	172.42	-80.49	-179.19	10.00	10.00	0.00	
5,500.00	90.44	135.314	5,017.94	167.17	-75.30	-171.80	0.00	0.00	0.00	
5,600.00	90.44	135.314	5,017.18	96.07	-4.98	-71.81	0.00	0.00	0.00	
5,700.00	90.44	135.314	5,016.42	24.98	65.34	28.19	0.00	0.00	0.00	
5,800.00	90.44	135.314	5,015.66	-46.12	135.66	128.19	0.00	0.00	0.00	
5,900.00	90.44	135.314	5,014.90	-117.21	205.98	228.19	0.00	0.00	0.00	
6,000.00	90.44	135.314	5,014.13	-188.31	276.30	328.18	0.00	0.00	0.00	
6,100.00	90.44	135.314	5,013.37	-259.40	346.62	428.18	0.00	0.00	0.00	
6,200.00	90.44	135.314	5,012.61	-330.49	416.95	528.18	0.00	0.00	0.00	
6,300.00	90.44	135.314	5,011.85	-401.59	487.27	628.17	0.00	0.00	0.00	
6,400.00	90.44	135.314	5,011.09	-472.68	557.59	728.17	0.00	0.00	0.00	
6,500.00	90.44	135.314	5,010.32	-543.78	627.91	828.17	0.00	0.00	0.00	
6,600.00	90.44	135.314	5,009.56	-614.87	698.23	928.17	0.00	0.00	0.00	
6,700.00	90.44	135.314	5,008.80	-685.97	768.55	1,028.16	0.00	0.00	0.00	
6,800.00	90.44	135.314	5,008.04	-757.06	838.87	1,128.16	0.00	0.00	0.00	
6,900.00	90.44	135.314	5,007.28	-828.16	909.19	1,228.16	0.00	0.00	0.00	
7,000.00	90.44	135.314	5,006.51	-899.25	979.51	1,328.15	0.00	0.00	0.00	
7,100.00	90.44	135.314	5,005.75	-970.34	1,049.83	1,428.15	0.00	0.00	0.00	
7,200.00	90.44	135.314	5,004.99	-1,041.44	1,120.15	1,528.15	0.00	0.00	0.00	
7,300.00	90.44	135.314	5,004.23	-1,112.53	1,190.47	1,628.15	0.00	0.00	0.00	
7,400.00	90.44	135.314	5,003.47	-1,183.63	1,260.79	1,728.14	0.00	0.00	0.00	
7,500.00	90.44	135.314	5,002.70	-1,254.72	1,331.11	1,828.14	0.00	0.00	0.00	
7,600.00	90.44	135.314	5,001.94	-1,325.82	1,401.43	1,928.14	0.00	0.00	0.00	
7,700.00	90.44	135.314	5,001.18	-1,396.91	1,471.76	2,028.13	0.00	0.00	0.00	
7,800.00	90.44	135.314	5,000.42	-1,468.01	1,542.08	2,128.13	0.00	0.00	0.00	
7,900.00	90.44	135.314	4,999.65	-1,539.10	1,612.40	2,228.13	0.00	0.00	0.00	
8,000.00	90.44	135.314	4,998.89	-1,610.20	1,682.72	2,328.12	0.00	0.00	0.00	
8,100.00	90.44	135.314	4,998.13	-1,681.29	1,753.04	2,428.12	0.00	0.00	0.00	
8,200.00	90.44	135.314	4,997.37	-1,752.38	1,823.36	2,528.12	0.00	0.00	0.00	
8,300.00	90.44	135.314	4,996.61	-1,823.48	1,893.68	2,628.12	0.00	0.00	0.00	
8,400.00	90.44	135.314	4,995.84	-1,894.57	1,964.00	2,728.11	0.00	0.00	0.00	
8,500.00	90.44	135.314	4,995.08	-1,965.67	2,034.32	2,828.11	0.00	0.00	0.00	
8,600.00	90.44	135.314	4,994.32	-2,036.76	2,104.64	2,928.11	0.00	0.00	0.00	
8,700.00	90.44	135.314	4,993.56	-2,107.86	2,174.96	3,028.10	0.00	0.00	0.00	
8,800.00	90.44	135.314	4,992.80	-2,178.95	2,245.28	3,128.10	0.00	0.00	0.00	
8,900.00	90.44	135.314	4,992.03	-2,250.05	2,315.60	3,228.10	0.00	0.00	0.00	



Planning Report

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Site Bettonnie Tsosie Wash Unit (305, 306 & 721)
Company:	Enduring Resources LLC	TVD Reference:	RKB=6837+25 @ 6862.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6837+25 @ 6862.00ft
Site:	Bettonnie Tsosie Wash Unit (305, 306 & 721)	North Reference:	Grid
Well:	Bettonnie Tsosie Wash Unit 305H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
9,000.00	90.44	135.314	4,991.27	-2,321.14	2,385.92	3,328.10	0.00	0.00	0.00
9,100.00	90.44	135.314	4,990.51	-2,392.23	2,456.24	3,428.09	0.00	0.00	0.00
9,200.00	90.44	135.314	4,989.75	-2,463.33	2,526.57	3,528.09	0.00	0.00	0.00
9,300.00	90.44	135.314	4,988.99	-2,534.42	2,596.89	3,628.09	0.00	0.00	0.00
9,400.00	90.44	135.314	4,988.22	-2,605.52	2,667.21	3,728.08	0.00	0.00	0.00
9,500.00	90.44	135.314	4,987.46	-2,676.61	2,737.53	3,828.08	0.00	0.00	0.00
9,600.00	90.44	135.314	4,986.70	-2,747.71	2,807.85	3,928.08	0.00	0.00	0.00
9,700.00	90.44	135.314	4,985.94	-2,818.80	2,878.17	4,028.08	0.00	0.00	0.00
9,800.00	90.44	135.314	4,985.18	-2,889.90	2,948.49	4,128.07	0.00	0.00	0.00
9,900.00	90.44	135.314	4,984.41	-2,960.99	3,018.81	4,228.07	0.00	0.00	0.00
10,000.00	90.44	135.314	4,983.65	-3,032.08	3,089.13	4,328.07	0.00	0.00	0.00
10,100.00	90.44	135.314	4,982.89	-3,103.18	3,159.45	4,428.06	0.00	0.00	0.00
10,200.00	90.44	135.314	4,982.13	-3,174.27	3,229.77	4,528.06	0.00	0.00	0.00
10,300.00	90.44	135.314	4,981.36	-3,245.37	3,300.09	4,628.06	0.00	0.00	0.00
10,400.00	90.44	135.314	4,980.60	-3,316.46	3,370.41	4,728.06	0.00	0.00	0.00
10,500.00	90.44	135.314	4,979.84	-3,387.56	3,440.73	4,828.05	0.00	0.00	0.00
10,600.00	90.44	135.314	4,979.08	-3,458.65	3,511.05	4,928.05	0.00	0.00	0.00
10,700.00	90.44	135.314	4,978.32	-3,529.75	3,581.38	5,028.05	0.00	0.00	0.00
10,800.00	90.44	135.314	4,977.55	-3,600.84	3,651.70	5,128.04	0.00	0.00	0.00
10,900.00	90.44	135.314	4,976.79	-3,671.93	3,722.02	5,228.04	0.00	0.00	0.00
11,000.00	90.44	135.314	4,976.03	-3,743.03	3,792.34	5,328.04	0.00	0.00	0.00
11,100.00	90.44	135.314	4,975.27	-3,814.12	3,862.66	5,428.03	0.00	0.00	0.00
11,200.00	90.44	135.314	4,974.51	-3,885.22	3,932.98	5,528.03	0.00	0.00	0.00
11,300.00	90.44	135.314	4,973.74	-3,956.31	4,003.30	5,628.03	0.00	0.00	0.00
11,400.00	90.44	135.314	4,972.98	-4,027.41	4,073.62	5,728.03	0.00	0.00	0.00
11,500.00	90.44	135.314	4,972.22	-4,098.50	4,143.94	5,828.02	0.00	0.00	0.00
11,600.00	90.44	135.314	4,971.46	-4,169.60	4,214.26	5,928.02	0.00	0.00	0.00
11,700.00	90.44	135.314	4,970.70	-4,240.69	4,284.58	6,028.02	0.00	0.00	0.00
11,800.00	90.44	135.314	4,969.93	-4,311.79	4,354.90	6,128.01	0.00	0.00	0.00
11,900.00	90.44	135.314	4,969.17	-4,382.88	4,425.22	6,228.01	0.00	0.00	0.00
12,000.00	90.44	135.314	4,968.41	-4,453.97	4,495.54	6,328.01	0.00	0.00	0.00
12,100.00	90.44	135.314	4,967.65	-4,525.07	4,565.86	6,428.01	0.00	0.00	0.00
12,200.00	90.44	135.314	4,966.89	-4,596.16	4,636.19	6,528.00	0.00	0.00	0.00
12,300.00	90.44	135.314	4,966.12	-4,667.26	4,706.51	6,628.00	0.00	0.00	0.00
12,400.00	90.44	135.314	4,965.36	-4,738.35	4,776.83	6,728.00	0.00	0.00	0.00
12,500.00	90.44	135.314	4,964.60	-4,809.45	4,847.15	6,827.99	0.00	0.00	0.00
12,600.00	90.44	135.314	4,963.84	-4,880.54	4,917.47	6,927.99	0.00	0.00	0.00
12,700.00	90.44	135.314	4,963.08	-4,951.64	4,987.79	7,027.99	0.00	0.00	0.00
12,800.00	90.44	135.314	4,962.31	-5,022.73	5,058.11	7,127.99	0.00	0.00	0.00
12,900.00	90.44	135.314	4,961.55	-5,093.82	5,128.43	7,227.98	0.00	0.00	0.00
13,000.00	90.44	135.314	4,960.79	-5,164.92	5,198.75	7,327.98	0.00	0.00	0.00
13,103.49	90.44	135.314	4,960.00	-5,238.49	5,271.52	7,431.46	0.00	0.00	0.00



Planning Report

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Site Betonnie Tsosie Wash Unit (305, 306 & 721)
Company:	Enduring Resources LLC	TVD Reference:	RKB=6837+25 @ 6862.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6837+25 @ 6862.00ft
Site:	Betonnie Tsosie Wash Unit (305, 306 & 721)	North Reference:	Grid
Well:	Betonnie Tsosie Wash Unit 305H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Betonnie Tsosie 305H v - plan hits target center - Point	0.00	0.000	4,415.06	619.82	-523.02	1,899,574.889	2,766,237.351	36.220451876	-107.687057960
Betonnie Tsosie 305H B - plan hits target center - Point	0.00	0.000	4,960.00	-5,238.49	5,271.52	1,893,716.591	2,772,031.882	36.204333000	-107.667447000
Betonnie Tsosie 305H F - plan hits target center - Point	0.00	0.000	5,018.00	172.42	-80.49	1,899,127.494	2,766,679.876	36.219221000	-107.685560000

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
350.00	350.00	13 3/8" Csg	13-3/8	17-1/2	
3,087.22	3,012.00	9 5/8" Csg	9-5/8	12-1/4	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
762.00	762.00	Ojo Alamo		-0.44	135.314	
832.00	832.00	Kirtland		-0.44	135.314	
1,020.00	1,020.00	Fruitland		-0.44	135.314	
1,374.68	1,372.28	Pictured Cliffs		-0.44	135.314	
1,510.58	1,504.52	Lewis		-0.44	135.314	
1,759.86	1,743.07	Chacra_A		-0.44	135.314	
2,902.74	2,835.64	Cliff House_Basal		-0.44	135.314	
2,934.20	2,865.71	Menefee		-0.44	135.314	
3,891.21	3,781.83	Point Lookout		-0.44	135.314	
4,097.73	3,985.10	Mancos		-0.44	135.314	
4,413.40	4,300.21	MNCS_A		-0.44	135.314	
4,509.40	4,396.21	MNCS_B		-0.44	135.314	
4,591.50	4,478.18	MNCS_C		-0.44	135.314	
4,636.97	4,523.13	MNCS_Cms		-0.44	135.314	
4,773.41	4,652.81	MNCS_D		-0.44	135.314	
4,925.44	4,781.19	MNCS_E		-0.44	135.314	
4,993.49	4,830.84	MNCS_F		-0.44	135.314	
5,108.59	4,901.14	MNCS_G		-0.44	135.314	
5,207.25	4,950.48	MNCS_H		-0.44	135.314	
5,346.16	5,000.49	MNCS_I		-0.44	135.314	



Planning Report

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Site Betonnie Tsosie Wash Unit (305, 306 & 721)
Company:	Enduring Resources LLC	TVD Reference:	RKB=6837+25 @ 6862.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6837+25 @ 6862.00ft
Site:	Betonnie Tsosie Wash Unit (305, 306 & 721)	North Reference:	Grid
Well:	Betonnie Tsosie Wash Unit 305H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,000.00	1,000.00	0.00	0.00	KOP Begin 3°/100' build	
1,568.82	1,560.45	64.26	-54.23	Begin 17.06° tangent	
3,759.42	3,654.61	555.56	-468.79	Begin 3°/100' drop	
4,328.25	4,215.06	619.82	-523.02	Begin vertical hold	
4,528.25	4,415.06	619.82	-523.02	Begin 10°/100' build	
5,128.25	4,911.26	416.14	-321.56	Begin 60.00° tangent	
5,188.25	4,941.26	379.20	-285.02	Begin 10°/100' build	
5,492.62	5,018.00	172.42	-80.49	Begin 90.44° lateral	
13,103.49	4,960.00	-5,238.49	5,271.52	PBHL @ 13103.48 MD 4960.00 TVD	



Planning Report - Geographic

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Site Betonnie Tsosie Wash Unit (305, 306 & 721)
Company:	Enduring Resources LLC	TVD Reference:	RKB=6837+25 @ 6862.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6837+25 @ 6862.00ft
Site:	Betonnie Tsosie Wash Unit (305, 306 & 721)	North Reference:	Grid
Well:	Betonnie Tsosie Wash Unit 305H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Project	San Juan County, New Mexico NAD83 NM W		
Map System:	US State Plane 1983	System Datum:	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Western Zone		

Site	Betonnie Tsosie Wash Unit (305, 306 & 721)		
Site Position:		Northing:	1,898,955.071 usft
From:	Lat/Long	Easting:	2,766,760.370 usft
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "
		Latitude:	36.218747000
		Longitude:	-107.685288000

Well	Betonnie Tsosie Wash Unit 305H, Surf loc: 406 FNL 2059 FEL Section 21-T23N-R08W					
Well Position	+N/-S	0.00 ft	Northing:	1,898,955.071 usft	Latitude:	36.218747000
	+E/-W	0.00 ft	Easting:	2,766,760.370 usft	Longitude:	-107.685288000
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	6,837.00 ft
Grid Convergence:		0.09 °				

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	1/15/2024	8.50	62.69	49,045.92438540

Design	rev0			
Audit Notes:				
Version:	Phase:	PLAN	Tie On Depth:	0.00
Vertical Section:	Depth From (TVD) (ft)	+N/-S (ft)	+E/-W (ft)	Direction (°)
	0.00	0.00	0.00	135.314

Plan Survey Tool Program	Date	1/16/2024		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	13,103.49 rev0 (Original Hole)	MWD	
			OWSG MWD - Standard	



Planning Report - Geographic

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Site Betonnie Tsosie Wash Unit (305, 306 & 721)
Company:	Enduring Resources LLC	TVD Reference:	RKB=6837+25 @ 6862.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6837+25 @ 6862.00ft
Site:	Betonnie Tsosie Wash Unit (305, 306 & 721)	North Reference:	Grid
Well:	Betonnie Tsosie Wash Unit 305H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,000.00	0.00	0.000	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,568.82	17.06	319.841	1,560.45	64.26	-54.23	3.00	3.00	0.00	319.84	
3,759.42	17.06	319.841	3,654.61	555.56	-468.79	0.00	0.00	0.00	0.00	
4,328.25	0.00	0.000	4,215.06	619.82	-523.02	3.00	-3.00	0.00	180.00	
4,528.25	0.00	0.000	4,415.06	619.82	-523.02	0.00	0.00	0.00	0.00	Betonnie Tsosie 305H
5,128.25	60.00	135.314	4,911.26	416.14	-321.56	10.00	10.00	0.00	135.31	
5,188.25	60.00	135.314	4,941.26	379.20	-285.02	0.00	0.00	0.00	0.00	
5,492.62	90.44	135.314	5,018.00	172.42	-80.49	10.00	10.00	0.00	0.00	
13,103.49	90.44	135.314	4,960.00	-5,238.49	5,271.52	0.00	0.00	0.00	0.00	Betonnie Tsosie 305H



Planning Report - Geographic

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Site Bettonnie Tsoisie Wash Unit (305, 306 & 721)
Company:	Enduring Resources LLC	TVD Reference:	RKB=6837+25 @ 6862.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6837+25 @ 6862.00ft
Site:	Bettonnie Tsoisie Wash Unit (305, 306 & 721)	North Reference:	Grid
Well:	Bettonnie Tsoisie Wash Unit 305H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
0.00	0.00	0.000	0.00	0.00	0.00	1,898,955.071	2,766,760.370	36.218747000	-107.685288000	
100.00	0.00	0.000	100.00	0.00	0.00	1,898,955.071	2,766,760.370	36.218747000	-107.685288000	
200.00	0.00	0.000	200.00	0.00	0.00	1,898,955.071	2,766,760.370	36.218747000	-107.685288000	
300.00	0.00	0.000	300.00	0.00	0.00	1,898,955.071	2,766,760.370	36.218747000	-107.685288000	
400.00	0.00	0.000	400.00	0.00	0.00	1,898,955.071	2,766,760.370	36.218747000	-107.685288000	
500.00	0.00	0.000	500.00	0.00	0.00	1,898,955.071	2,766,760.370	36.218747000	-107.685288000	
600.00	0.00	0.000	600.00	0.00	0.00	1,898,955.071	2,766,760.370	36.218747000	-107.685288000	
700.00	0.00	0.000	700.00	0.00	0.00	1,898,955.071	2,766,760.370	36.218747000	-107.685288000	
800.00	0.00	0.000	800.00	0.00	0.00	1,898,955.071	2,766,760.370	36.218747000	-107.685288000	
900.00	0.00	0.000	900.00	0.00	0.00	1,898,955.071	2,766,760.370	36.218747000	-107.685288000	
1,000.00	0.00	0.000	1,000.00	0.00	0.00	1,898,955.071	2,766,760.370	36.218747000	-107.685288000	
1,100.00	3.00	319.841	1,099.95	2.00	-1.69	1,898,957.071	2,766,758.682	36.218752503	-107.685293712	
1,200.00	6.00	319.841	1,199.63	8.00	-6.75	1,898,963.067	2,766,753.623	36.218768994	-107.685310833	
1,300.00	9.00	319.841	1,298.77	17.97	-15.16	1,898,973.041	2,766,745.206	36.218796430	-107.685339315	
1,400.00	12.00	319.841	1,397.08	31.90	-26.92	1,898,986.967	2,766,733.455	36.218834735	-107.685379081	
1,500.00	15.00	319.841	1,494.31	49.74	-41.97	1,899,004.806	2,766,718.402	36.218883805	-107.685430023	
1,568.82	17.06	319.841	1,560.45	64.26	-54.23	1,899,019.333	2,766,706.144	36.218923761	-107.685471503	
1,600.00	17.06	319.841	1,590.26	71.25	-60.13	1,899,026.325	2,766,700.244	36.218942993	-107.685491469	
1,700.00	17.06	319.841	1,685.85	93.68	-79.05	1,899,048.752	2,766,681.320	36.219004682	-107.685555512	
1,800.00	17.06	319.841	1,781.45	116.11	-97.98	1,899,071.179	2,766,662.395	36.219066371	-107.685619555	
1,900.00	17.06	319.841	1,877.05	138.54	-116.90	1,899,093.607	2,766,643.470	36.219128060	-107.685683598	
2,000.00	17.06	319.841	1,972.64	160.96	-135.83	1,899,116.034	2,766,624.545	36.219189750	-107.685747641	
2,100.00	17.06	319.841	2,068.24	183.39	-154.75	1,899,138.462	2,766,605.620	36.219251439	-107.685811684	
2,200.00	17.06	319.841	2,163.84	205.82	-173.68	1,899,160.889	2,766,586.695	36.219313128	-107.685875728	
2,300.00	17.06	319.841	2,259.44	228.25	-192.60	1,899,183.316	2,766,567.771	36.219374817	-107.685939771	
2,400.00	17.06	319.841	2,355.03	250.67	-211.52	1,899,205.744	2,766,548.846	36.219436506	-107.686003815	
2,500.00	17.06	319.841	2,450.63	273.10	-230.45	1,899,228.171	2,766,529.921	36.219498195	-107.686067859	
2,600.00	17.06	319.841	2,546.23	295.53	-249.37	1,899,250.599	2,766,510.996	36.219559884	-107.686131902	
2,700.00	17.06	319.841	2,641.83	317.96	-268.30	1,899,273.026	2,766,492.071	36.219621573	-107.686195946	
2,800.00	17.06	319.841	2,737.42	340.38	-287.22	1,899,295.453	2,766,473.147	36.219683261	-107.686259990	
2,900.00	17.06	319.841	2,833.02	362.81	-306.15	1,899,317.881	2,766,454.222	36.219744950	-107.686324034	
3,000.00	17.06	319.841	2,928.62	385.24	-325.07	1,899,340.308	2,766,435.297	36.219806639	-107.686388078	
3,100.00	17.06	319.841	3,024.22	407.67	-344.00	1,899,362.736	2,766,416.372	36.219868328	-107.686452123	
3,200.00	17.06	319.841	3,119.81	430.09	-362.92	1,899,385.163	2,766,397.447	36.219930017	-107.686516167	
3,300.00	17.06	319.841	3,215.41	452.52	-381.85	1,899,407.590	2,766,378.522	36.219991705	-107.686580212	
3,400.00	17.06	319.841	3,311.01	474.95	-400.77	1,899,430.018	2,766,359.598	36.220053394	-107.686644256	
3,500.00	17.06	319.841	3,406.61	497.38	-419.70	1,899,452.445	2,766,340.673	36.220115083	-107.686708301	
3,600.00	17.06	319.841	3,502.20	519.80	-438.62	1,899,474.873	2,766,321.748	36.220176771	-107.686772346	
3,700.00	17.06	319.841	3,597.80	542.23	-457.55	1,899,497.300	2,766,302.823	36.220238460	-107.686836391	
3,759.42	17.06	319.841	3,654.61	555.56	-468.79	1,899,510.627	2,766,291.577	36.220275118	-107.686874449	
3,800.00	15.85	319.841	3,693.52	564.34	-476.21	1,899,519.412	2,766,284.165	36.220299280	-107.686899534	
3,900.00	12.85	319.841	3,790.39	583.28	-492.19	1,899,538.348	2,766,268.186	36.220351366	-107.686953610	
4,000.00	9.85	319.841	3,888.42	598.31	-504.87	1,899,553.384	2,766,255.498	36.220392723	-107.686996547	
4,100.00	6.85	319.841	3,987.35	609.41	-514.23	1,899,564.478	2,766,246.137	36.220423238	-107.687028228	
4,200.00	3.85	319.841	4,086.91	616.53	-520.24	1,899,571.600	2,766,240.127	36.220442827	-107.687048565	
4,300.00	0.85	319.841	4,186.81	619.66	-522.89	1,899,574.730	2,766,237.486	36.220451437	-107.687057504	
4,328.25	0.00	0.000	4,215.06	619.82	-523.02	1,899,574.889	2,766,237.351	36.220451876	-107.687057960	
4,400.00	0.00	0.000	4,286.81	619.82	-523.02	1,899,574.889	2,766,237.351	36.220451876	-107.687057960	
4,500.00	0.00	0.000	4,386.81	619.82	-523.02	1,899,574.889	2,766,237.351	36.220451876	-107.687057960	
4,528.25	0.00	0.000	4,415.06	619.82	-523.02	1,899,574.889	2,766,237.351	36.220451876	-107.687057960	
4,550.00	2.18	135.314	4,436.81	619.53	-522.73	1,899,574.596	2,766,237.642	36.220451068	-107.687056977	
4,600.00	7.18	135.314	4,486.62	616.63	-519.86	1,899,571.699	2,766,240.507	36.220443099	-107.687047279	
4,650.00	12.18	135.314	4,535.90	610.66	-513.96	1,899,565.727	2,766,246.414	36.220426668	-107.687027282	
4,700.00	17.18	135.314	4,584.25	601.65	-505.05	1,899,556.724	2,766,255.319	36.220401899	-107.686997139	



Planning Report - Geographic

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Site Bettonnie Tsosie Wash Unit (305, 306 & 721)
Company:	Enduring Resources LLC	TVD Reference:	RKB=6837+25 @ 6862.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6837+25 @ 6862.00ft
Site:	Bettonnie Tsosie Wash Unit (305, 306 & 721)	North Reference:	Grid
Well:	Bettonnie Tsosie Wash Unit 305H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
4,750.00	22.18	135.314	4,631.32	589.69	-493.22	1,899,544.759	2,766,267.153	36.220368982	-107.686957078
4,800.00	27.18	135.314	4,676.74	574.85	-478.54	1,899,529.923	2,766,281.827	36.220328166	-107.686907405
4,850.00	32.18	135.314	4,720.17	557.26	-461.14	1,899,512.330	2,766,299.229	36.220279762	-107.686848498
4,900.00	37.18	135.314	4,761.27	537.04	-441.14	1,899,492.112	2,766,319.227	36.220224138	-107.686780805
4,950.00	42.18	135.314	4,799.74	514.35	-418.70	1,899,469.423	2,766,341.668	36.220161719	-107.686704841
5,000.00	47.18	135.314	4,835.29	489.37	-393.99	1,899,444.438	2,766,366.381	36.220092978	-107.686621185
5,050.00	52.18	135.314	4,867.63	462.27	-367.19	1,899,417.345	2,766,393.179	36.220018440	-107.686530473
5,100.00	57.18	135.314	4,896.53	433.28	-338.51	1,899,388.350	2,766,421.857	36.219938671	-107.686433396
5,128.25	60.00	135.314	4,911.26	416.14	-321.56	1,899,371.212	2,766,438.809	36.219891519	-107.686376013
5,188.25	60.00	135.314	4,941.26	379.20	-285.02	1,899,334.268	2,766,475.349	36.219789881	-107.686252323
5,200.00	61.18	135.314	4,947.03	371.92	-277.82	1,899,326.991	2,766,482.548	36.219769858	-107.686227956
5,250.00	66.18	135.314	4,969.19	340.07	-246.32	1,899,295.139	2,766,514.052	36.219682227	-107.686121312
5,300.00	71.18	135.314	4,987.37	306.96	-213.58	1,899,262.035	2,766,546.796	36.219591151	-107.686010476
5,350.00	76.18	135.314	5,001.42	272.86	-179.84	1,899,227.931	2,766,580.528	36.219497323	-107.685896290
5,400.00	81.18	135.314	5,011.24	238.02	-145.38	1,899,193.086	2,766,614.994	36.219401456	-107.685779624
5,450.00	86.18	135.314	5,016.74	202.69	-110.44	1,899,157.765	2,766,649.930	36.219304281	-107.685661365
5,492.62	90.44	135.314	5,018.00	172.42	-80.49	1,899,127.487	2,766,679.878	36.219220980	-107.685559991
5,500.00	90.44	135.314	5,017.94	167.17	-75.30	1,899,122.237	2,766,685.071	36.219206536	-107.685542413
5,600.00	90.44	135.314	5,017.18	96.07	-4.98	1,899,051.143	2,766,755.392	36.219010939	-107.685304380
5,700.00	90.44	135.314	5,016.42	24.98	65.34	1,898,980.048	2,766,825.712	36.218815342	-107.685066348
5,800.00	90.44	135.314	5,015.66	-46.12	135.66	1,898,908.954	2,766,896.033	36.218619744	-107.684828318
5,900.00	90.44	135.314	5,014.90	-117.21	205.98	1,898,837.860	2,766,966.353	36.218424146	-107.684590289
6,000.00	90.44	135.314	5,014.13	-188.31	276.30	1,898,766.765	2,767,036.674	36.218228547	-107.684352260
6,100.00	90.44	135.314	5,013.37	-259.40	346.62	1,898,695.671	2,767,106.994	36.218032948	-107.684114234
6,200.00	90.44	135.314	5,012.61	-330.49	416.95	1,898,624.577	2,767,177.315	36.217837348	-107.683876208
6,300.00	90.44	135.314	5,011.85	-401.59	487.27	1,898,553.482	2,767,247.635	36.217641748	-107.683638183
6,400.00	90.44	135.314	5,011.09	-472.68	557.59	1,898,482.388	2,767,317.956	36.217446147	-107.683400161
6,500.00	90.44	135.314	5,010.32	-543.78	627.91	1,898,411.294	2,767,388.276	36.217250546	-107.683162139
6,600.00	90.44	135.314	5,009.56	-614.87	698.23	1,898,340.199	2,767,458.597	36.217054945	-107.682924118
6,700.00	90.44	135.314	5,008.80	-685.97	768.55	1,898,269.105	2,767,528.918	36.216859343	-107.682686098
6,800.00	90.44	135.314	5,008.04	-757.06	838.87	1,898,198.011	2,767,599.238	36.216663740	-107.682448079
6,900.00	90.44	135.314	5,007.28	-828.16	909.19	1,898,126.916	2,767,669.559	36.216468137	-107.682210062
7,000.00	90.44	135.314	5,006.51	-899.25	979.51	1,898,055.822	2,767,739.879	36.216272533	-107.681972045
7,100.00	90.44	135.314	5,005.75	-970.34	1,049.83	1,897,984.728	2,767,810.200	36.216076929	-107.681734030
7,200.00	90.44	135.314	5,004.99	-1,041.44	1,120.15	1,897,913.634	2,767,880.520	36.215881325	-107.681496016
7,300.00	90.44	135.314	5,004.23	-1,112.53	1,190.47	1,897,842.539	2,767,950.841	36.215685720	-107.681258003
7,400.00	90.44	135.314	5,003.47	-1,183.63	1,260.79	1,897,771.445	2,768,021.161	36.215490115	-107.681019992
7,500.00	90.44	135.314	5,002.70	-1,254.72	1,331.11	1,897,700.351	2,768,091.482	36.215294509	-107.680781982
7,600.00	90.44	135.314	5,001.94	-1,325.82	1,401.43	1,897,629.256	2,768,161.802	36.215098902	-107.680543972
7,700.00	90.44	135.314	5,001.18	-1,396.91	1,471.76	1,897,558.162	2,768,232.123	36.214903295	-107.680305964
7,800.00	90.44	135.314	5,000.42	-1,468.01	1,542.08	1,897,487.068	2,768,302.443	36.214707688	-107.680067958
7,900.00	90.44	135.314	4,999.65	-1,539.10	1,612.40	1,897,415.973	2,768,372.764	36.214512080	-107.679829952
8,000.00	90.44	135.314	4,998.89	-1,610.20	1,682.72	1,897,344.879	2,768,443.084	36.214316472	-107.679591948
8,100.00	90.44	135.314	4,998.13	-1,681.29	1,753.04	1,897,273.785	2,768,513.405	36.214120863	-107.679353944
8,200.00	90.44	135.314	4,997.37	-1,752.38	1,823.36	1,897,202.690	2,768,583.726	36.213925254	-107.679115942
8,300.00	90.44	135.314	4,996.61	-1,823.48	1,893.68	1,897,131.596	2,768,654.047	36.213729644	-107.678877941
8,400.00	90.44	135.314	4,995.84	-1,894.57	1,964.00	1,897,060.502	2,768,724.367	36.213534034	-107.678639942
8,500.00	90.44	135.314	4,995.08	-1,965.67	2,034.32	1,896,989.407	2,768,794.688	36.213338423	-107.678401943
8,600.00	90.44	135.314	4,994.32	-2,036.76	2,104.64	1,896,918.313	2,768,865.008	36.213142812	-107.678163946
8,700.00	90.44	135.314	4,993.56	-2,107.86	2,174.96	1,896,847.219	2,768,935.329	36.212947201	-107.677925950
8,800.00	90.44	135.314	4,992.80	-2,178.95	2,245.28	1,896,776.124	2,769,005.649	36.212751589	-107.677687955
8,900.00	90.44	135.314	4,992.03	-2,250.05	2,315.60	1,896,705.030	2,769,075.970	36.212555976	-107.677449961
9,000.00	90.44	135.314	4,991.27	-2,321.14	2,385.92	1,896,633.936	2,769,146.290	36.212360363	-107.677211968
9,100.00	90.44	135.314	4,990.51	-2,392.23	2,456.24	1,896,562.841	2,769,216.611	36.212164749	-107.676973977



Planning Report - Geographic

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Site Betonnie Tsosie Wash Unit (305, 306 & 721)
Company:	Enduring Resources LLC	TVD Reference:	RKB=6837+25 @ 6862.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6837+25 @ 6862.00ft
Site:	Betonnie Tsosie Wash Unit (305, 306 & 721)	North Reference:	Grid
Well:	Betonnie Tsosie Wash Unit 305H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
9,200.00	90.44	135.314	4,989.75	-2,463.33	2,526.57	1,896,491.747	2,769,286.931	36.211969135	-107.676735987
9,300.00	90.44	135.314	4,988.99	-2,534.42	2,596.89	1,896,420.653	2,769,357.252	36.211773521	-107.676497998
9,400.00	90.44	135.314	4,988.22	-2,605.52	2,667.21	1,896,349.558	2,769,427.573	36.211577906	-107.676260010
9,500.00	90.44	135.314	4,987.46	-2,676.61	2,737.53	1,896,278.464	2,769,497.893	36.211382290	-107.676022023
9,600.00	90.44	135.314	4,986.70	-2,747.71	2,807.85	1,896,207.370	2,769,568.214	36.211186675	-107.675784038
9,700.00	90.44	135.314	4,985.94	-2,818.80	2,878.17	1,896,136.275	2,769,638.534	36.210991058	-107.675546053
9,800.00	90.44	135.314	4,985.18	-2,889.90	2,948.49	1,896,065.181	2,769,708.855	36.210795441	-107.675308070
9,900.00	90.44	135.314	4,984.41	-2,960.99	3,018.81	1,895,994.087	2,769,779.175	36.210599824	-107.675070088
10,000.00	90.44	135.314	4,983.65	-3,032.08	3,089.13	1,895,922.992	2,769,849.496	36.210404206	-107.674832107
10,100.00	90.44	135.314	4,982.89	-3,103.18	3,159.45	1,895,851.898	2,769,919.816	36.210208588	-107.674594128
10,200.00	90.44	135.314	4,982.13	-3,174.27	3,229.77	1,895,780.804	2,769,990.137	36.210012969	-107.674356150
10,300.00	90.44	135.314	4,981.36	-3,245.37	3,300.09	1,895,709.709	2,770,060.457	36.209817350	-107.674118172
10,400.00	90.44	135.314	4,980.60	-3,316.46	3,370.41	1,895,638.615	2,770,130.778	36.209621730	-107.673880196
10,500.00	90.44	135.314	4,979.84	-3,387.56	3,440.73	1,895,567.521	2,770,201.098	36.209426110	-107.673642221
10,600.00	90.44	135.314	4,979.08	-3,458.65	3,511.05	1,895,496.426	2,770,271.419	36.209230489	-107.673404248
10,700.00	90.44	135.314	4,978.32	-3,529.75	3,581.38	1,895,425.332	2,770,341.739	36.209034868	-107.673166275
10,800.00	90.44	135.314	4,977.55	-3,600.84	3,651.70	1,895,354.238	2,770,412.060	36.208839246	-107.672928304
10,900.00	90.44	135.314	4,976.79	-3,671.93	3,722.02	1,895,283.144	2,770,482.380	36.208643624	-107.672690334
11,000.00	90.44	135.314	4,976.03	-3,743.03	3,792.34	1,895,212.049	2,770,552.701	36.208448002	-107.672452365
11,100.00	90.44	135.314	4,975.27	-3,814.12	3,862.66	1,895,140.955	2,770,623.021	36.208252379	-107.672214397
11,200.00	90.44	135.314	4,974.51	-3,885.22	3,932.98	1,895,069.861	2,770,693.342	36.208056755	-107.671976431
11,300.00	90.44	135.314	4,973.74	-3,956.31	4,003.30	1,894,998.766	2,770,763.662	36.207861131	-107.671738466
11,400.00	90.44	135.314	4,972.98	-4,027.41	4,073.62	1,894,927.672	2,770,833.983	36.207665507	-107.671500501
11,500.00	90.44	135.314	4,972.22	-4,098.50	4,143.94	1,894,856.578	2,770,904.303	36.207469882	-107.671262538
11,600.00	90.44	135.314	4,971.46	-4,169.60	4,214.26	1,894,785.483	2,770,974.624	36.207274256	-107.671024577
11,700.00	90.44	135.314	4,970.70	-4,240.69	4,284.58	1,894,714.389	2,771,044.944	36.207078630	-107.670786616
11,800.00	90.44	135.314	4,969.93	-4,311.79	4,354.90	1,894,643.295	2,771,115.265	36.206883004	-107.670548657
11,900.00	90.44	135.314	4,969.17	-4,382.88	4,425.22	1,894,572.200	2,771,185.585	36.206687377	-107.670310698
12,000.00	90.44	135.314	4,968.41	-4,453.97	4,495.54	1,894,501.106	2,771,255.906	36.206491750	-107.670072741
12,100.00	90.44	135.314	4,967.65	-4,525.07	4,565.86	1,894,430.012	2,771,326.227	36.206296122	-107.669834785
12,200.00	90.44	135.314	4,966.89	-4,596.16	4,636.19	1,894,358.917	2,771,396.547	36.206100493	-107.669596831
12,300.00	90.44	135.314	4,966.12	-4,667.26	4,706.51	1,894,287.823	2,771,466.868	36.205904865	-107.669358877
12,400.00	90.44	135.314	4,965.36	-4,738.35	4,776.83	1,894,216.729	2,771,537.188	36.205709235	-107.669120925
12,500.00	90.44	135.314	4,964.60	-4,809.45	4,847.15	1,894,145.634	2,771,607.509	36.205513606	-107.668882974
12,600.00	90.44	135.314	4,963.84	-4,880.54	4,917.47	1,894,074.540	2,771,677.829	36.205317975	-107.668645024
12,700.00	90.44	135.314	4,963.08	-4,951.64	4,987.79	1,894,003.446	2,771,748.150	36.205122345	-107.668407075
12,800.00	90.44	135.314	4,962.31	-5,022.73	5,058.11	1,893,932.351	2,771,818.470	36.204926714	-107.668169127
12,900.00	90.44	135.314	4,961.55	-5,093.82	5,128.43	1,893,861.257	2,771,888.791	36.204731082	-107.667931181
13,000.00	90.44	135.314	4,960.79	-5,164.92	5,198.75	1,893,790.163	2,771,959.111	36.204535450	-107.667693236
13,103.49	90.44	135.314	4,960.00	-5,238.49	5,271.52	1,893,716.591	2,772,031.882	36.204333000	-107.667447000



Planning Report - Geographic

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Site Betonnie Tsosie Wash Unit (305, 306 & 721)
Company:	Enduring Resources LLC	TVD Reference:	RKB=6837+25 @ 6862.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6837+25 @ 6862.00ft
Site:	Betonnie Tsosie Wash Unit (305, 306 & 721)	North Reference:	Grid
Well:	Betonnie Tsosie Wash Unit 305H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Design Targets									
Target Name - hit/miss target - Shape	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
Betonnie Tsosie 305H v - plan hits target center - Point	0.00	0.000	4,415.06	619.82	-523.02	1,899,574.889	2,766,237.351	36.220451876	-107.687057960
Betonnie Tsosie 305H B - plan hits target center - Point	0.00	0.000	4,960.00	-5,238.49	5,271.52	1,893,716.591	2,772,031.882	36.204333000	-107.667447000
Betonnie Tsosie 305H F - plan hits target center - Point	0.00	0.000	5,018.00	172.42	-80.49	1,899,127.494	2,766,679.876	36.219221000	-107.685560000

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
350.00	350.00	13 3/8" Csg	13-3/8	17-1/2	
3,087.22	3,012.00	9 5/8" Csg	9-5/8	12-1/4	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
762.00	762.00	Ojo Alamo		-0.44	135.314	
832.00	832.00	Kirtland		-0.44	135.314	
1,020.00	1,020.00	Fruitland		-0.44	135.314	
1,374.68	1,372.28	Pictured Cliffs		-0.44	135.314	
1,510.58	1,504.52	Lewis		-0.44	135.314	
1,759.86	1,743.07	Chacra_A		-0.44	135.314	
2,902.74	2,835.64	Cliff House_Basal		-0.44	135.314	
2,934.20	2,865.71	Menefee		-0.44	135.314	
3,891.21	3,781.83	Point Lookout		-0.44	135.314	
4,097.73	3,985.10	Mancos		-0.44	135.314	
4,413.40	4,300.21	MNCS_A		-0.44	135.314	
4,509.40	4,396.21	MNCS_B		-0.44	135.314	
4,591.50	4,478.18	MNCS_C		-0.44	135.314	
4,636.97	4,523.13	MNCS_Cms		-0.44	135.314	
4,773.41	4,652.81	MNCS_D		-0.44	135.314	
4,925.44	4,781.19	MNCS_E		-0.44	135.314	
4,993.49	4,830.84	MNCS_F		-0.44	135.314	
5,108.59	4,901.14	MNCS_G		-0.44	135.314	
5,207.25	4,950.48	MNCS_H		-0.44	135.314	
5,346.16	5,000.49	MNCS_I		-0.44	135.314	



Planning Report - Geographic

Database:	DT_Aug2923v16	Local Co-ordinate Reference:	Site Betonnie Tsosie Wash Unit (305, 306 & 721)
Company:	Enduring Resources LLC	TVD Reference:	RKB=6837+25 @ 6862.00ft
Project:	San Juan County, New Mexico NAD83 NM W	MD Reference:	RKB=6837+25 @ 6862.00ft
Site:	Betonnie Tsosie Wash Unit (305, 306 & 721)	North Reference:	Grid
Well:	Betonnie Tsosie Wash Unit 305H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev0		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,000.00	1,000.00	0.00	0.00	KOP Begin 3°/100' build	
1,568.82	1,560.45	64.26	-54.23	Begin 17.06° tangent	
3,759.42	3,654.61	555.56	-468.79	Begin 3°/100' drop	
4,328.25	4,215.06	619.82	-523.02	Begin vertical hold	
4,528.25	4,415.06	619.82	-523.02	Begin 10°/100' build	
5,128.25	4,911.26	416.14	-321.56	Begin 60.00° tangent	
5,188.25	4,941.26	379.20	-285.02	Begin 10°/100' build	
5,492.62	5,018.00	172.42	-80.49	Begin 90.44° lateral	
13,103.49	4,960.00	-5,238.49	5,271.52	PBHL @ 13103.48 MD 4960.00 TVD	



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Site Bettonnie Tsosie Wash Unit (305, 306 & 721)
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6837+25 @ 6862.00ft
Reference Site:	Bettonnie Tsosie Wash Unit (305, 306 & 721)	MD Reference:	RKB=6837+25 @ 6862.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Bettonnie Tsosie Wash Unit 305H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Aug2923v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Reference	rev0		
Filter type:	GLOBAL FILTER APPLIED: All wellpaths within 200'+ 100/1000 of reference		
Interpolation Method:	MD Interval 100.00ft	Error Model:	ISCWSA
Depth Range:	Unlimited	Scan Method:	Closest Approach 3D
Results Limited by:	Maximum centre distance of 1,510.35ft	Error Surface:	Ellipsoid Separation
Warning Levels Evaluated at:	2.00 Sigma	Casing Method:	Not applied

Survey Tool Program		Date	1/16/2024		
From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description	
0.00	13,103.49	rev0 (Original Hole)	MWD	OWSG MWD - Standard	

Summary						
Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance		Separation Factor	Warning
			Between Centres (ft)	Between Ellipses (ft)		
Betonnies Tsosie Wash Unit (305, 306 & 721)						
Betonnies Tsosie Wash Unit 306H - Original Hole - rev0	709.59	710.02	16.45	11.81	3.548	CC, ES, SF
Betonnies Tsosie Wash Unit 721H - Original Hole - rev0	707.95	707.95	19.66	15.03	4.248	CC
Betonnies Tsosie Wash Unit 721H - Original Hole - rev0	800.00	799.90	19.79	14.50	3.744	ES
Betonnies Tsosie Wash Unit 721H - Original Hole - rev0	13,000.00	11,879.77	1,201.16	856.97	3.490	SF

Offset Design:	Bettonnie Tsosie Wash Unit (305, 306 & 721) - Bettonnie Tsosie Wash Unit 306H - Original Hole - rev0												Offset Site Error:	0.00 ft
Survey Program:	0-MWD												Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis	Highside	Offset Wellbore Centre	Rule Assigned:	Distance	Minimum	Separation	Warning					
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Separation (ft)	Factor		
0.00	0.00	0.00	0.00	0.00	0.00	163.71	-19.28	5.63	20.09					
100.00	100.00	100.00	100.00	0.13	0.13	163.71	-19.28	5.63	20.09	19.82	0.27	74.727		
200.00	200.00	200.00	200.00	0.49	0.49	163.71	-19.28	5.63	20.09	19.10	0.99	20.380		
300.00	300.00	300.00	300.00	0.85	0.85	163.71	-19.28	5.63	20.09	18.39	1.70	11.799		
400.00	400.00	400.00	400.00	1.21	1.21	163.71	-19.28	5.63	20.09	17.67	2.42	8.303		
500.00	500.00	500.00	500.00	1.57	1.57	163.71	-19.28	5.63	20.09	16.95	3.14	6.405		
600.00	600.00	600.51	600.47	1.93	1.92	170.36	-18.43	3.13	18.70	14.85	3.85	4.857		
700.00	700.00	700.48	700.11	2.29	2.28	-164.80	-15.90	-4.32	16.48	11.92	4.57	3.610		
709.59	709.59	710.02	709.59	2.32	2.32	-161.24	-15.58	-5.29	16.45	11.81	4.64	3.548	CC, ES, SF	
800.00	800.00	799.35	798.12	2.64	2.65	-125.42	-11.76	-16.53	20.38	15.10	5.27	3.863		
900.00	900.00	896.63	893.78	3.00	3.04	-100.39	-6.09	-33.22	34.34	28.40	5.94	5.778		
1,000.00	1,000.00	991.87	986.45	3.36	3.47	-88.97	0.97	-54.01	55.69	49.10	6.59	8.448		
1,100.00	1,099.95	1,085.28	1,076.16	3.72	3.93	-43.80	9.32	-78.62	80.86	73.64	7.22	11.201		
1,200.00	1,199.63	1,177.32	1,163.21	4.08	4.44	-42.31	18.93	-106.91	107.13	99.31	7.83	13.684		
1,300.00	1,298.77	1,267.98	1,247.45	4.44	5.01	-42.26	29.70	-138.62	134.21	125.77	8.43	15.912		
1,400.00	1,397.08	1,357.23	1,328.74	4.82	5.64	-42.89	41.54	-173.50	162.02	152.96	9.05	17.893		
1,500.00	1,494.31	1,445.08	1,406.98	5.23	6.33	-43.87	54.38	-211.30	190.58	180.88	9.70	19.650		
1,600.00	1,590.26	1,531.48	1,482.06	5.68	7.08	-45.17	68.12	-251.77	220.10	209.72	10.38	21.203		
1,700.00	1,685.85	1,615.82	1,553.42	6.16	7.89	-46.41	82.57	-294.33	253.00	241.90	11.10	22.799		
1,800.00	1,781.45	1,699.91	1,622.52	6.66	8.77	-47.12	97.98	-339.70	289.86	278.00	11.86	24.446		
1,900.00	1,877.05	1,789.51	1,695.00	7.17	9.77	-47.59	114.91	-389.56	328.70	315.93	12.77	25.742		
2,000.00	1,972.64	1,881.62	1,769.53	7.70	10.82	-47.98	132.32	-440.83	367.57	353.81	13.76	26.721		

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



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Site Bettonnie Tsosie Wash Unit (305, 306 & 721)
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6837+25 @ 6862.00ft
Reference Site:	Bettonnie Tsosie Wash Unit (305, 306 & 721)	MD Reference:	RKB=6837+25 @ 6862.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Bettonnie Tsosie Wash Unit 305H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Aug2923v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Bettonnie Tsosie Wash Unit (305, 306 & 721) - Bettonnie Tsosie Wash Unit 306H - Original Hole - rev0												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
2,100.00	2,068.24	1,973.73	1,844.05	8.24	11.88	-48.29	149.72	-492.09	406.44	391.68	14.76	27.534	
2,200.00	2,163.84	2,065.85	1,918.57	8.79	12.96	-48.54	167.13	-543.36	445.33	429.54	15.78	28.215	
2,300.00	2,259.44	2,157.96	1,993.10	9.34	14.05	-48.76	184.54	-594.62	484.22	467.40	16.82	28.793	
2,400.00	2,355.03	2,250.07	2,067.62	9.90	15.14	-48.94	201.95	-645.89	523.12	505.25	17.86	29.285	
2,500.00	2,450.63	2,342.19	2,142.14	10.47	16.24	-49.10	219.35	-697.15	562.02	543.10	18.92	29.709	
2,600.00	2,546.23	2,434.30	2,216.67	11.04	17.35	-49.24	236.76	-748.41	600.92	580.94	19.98	30.077	
2,700.00	2,641.83	2,526.41	2,291.19	11.61	18.46	-49.36	254.17	-799.68	639.83	618.78	21.05	30.399	
2,800.00	2,737.42	2,618.53	2,365.71	12.19	19.57	-49.47	271.57	-850.94	678.74	656.61	22.12	30.683	
2,900.00	2,833.02	2,710.64	2,440.24	12.76	20.69	-49.56	288.98	-902.21	717.65	694.45	23.20	30.933	
3,000.00	2,928.62	2,802.75	2,514.76	13.35	21.80	-49.65	306.39	-953.47	756.56	732.28	24.28	31.156	
3,100.00	3,024.22	2,894.87	2,589.28	13.93	22.92	-49.72	323.80	-1,004.74	795.47	770.10	25.37	31.355	
3,200.00	3,119.81	2,986.98	2,663.81	14.52	24.05	-49.79	341.20	-1,056.00	834.39	807.93	26.46	31.533	
3,300.00	3,215.41	3,079.09	2,738.33	15.10	25.17	-49.86	358.61	-1,107.27	873.30	845.75	27.55	31.694	
3,400.00	3,311.01	3,171.20	2,812.86	15.69	26.29	-49.92	376.02	-1,158.53	912.22	883.57	28.65	31.840	
3,500.00	3,406.61	3,263.32	2,887.38	16.28	27.42	-49.97	393.43	-1,209.80	951.13	921.39	29.75	31.973	
3,600.00	3,502.20	3,355.43	2,961.90	16.87	28.55	-50.02	410.83	-1,261.06	990.05	959.20	30.85	32.094	
3,700.00	3,597.80	3,447.54	3,036.43	17.46	29.67	-50.07	428.24	-1,312.33	1,028.97	997.02	31.95	32.206	
3,800.00	3,693.52	3,539.55	3,110.86	18.05	30.80	-50.49	445.63	-1,363.53	1,068.14	1,035.10	33.04	32.324	
3,900.00	3,790.39	3,630.39	3,184.36	18.59	31.91	-51.39	462.80	-1,414.09	1,109.82	1,075.77	34.05	32.596	
4,000.00	3,888.42	3,719.61	3,256.54	19.07	33.01	-52.19	479.66	-1,463.74	1,154.46	1,119.53	34.94	33.043	
4,100.00	3,987.35	3,806.95	3,327.20	19.49	34.08	-52.91	496.16	-1,512.35	1,202.02	1,166.31	35.72	33.656	
4,200.00	4,086.91	3,892.19	3,396.16	19.84	35.13	-53.58	512.27	-1,559.79	1,252.46	1,216.07	36.38	34.423	
4,300.00	4,186.81	3,975.08	3,463.22	20.15	36.15	-54.23	527.93	-1,605.92	1,305.74	1,268.79	36.95	35.335	
4,400.00	4,286.81	4,056.08	3,528.76	20.41	37.14	-93.88	543.24	-1,651.00	1,361.19	1,323.74	37.46	36.341	
4,500.00	4,386.81	4,142.23	3,592.85	20.68	38.14	-134.90	558.59	-1,696.16	1,417.66	1,379.25	37.97	37.347	
4,600.00	4,486.82	4,238.28	3,658.82	20.90	39.14	-92.84	573.90	-1,741.23	1,474.13	1,435.72	38.48	38.353	
4,700.00	4,584.25	4,333.73	3,724.79	21.00	40.14	95.60	589.21	-1,785.80	1,531.60	1,492.19	38.99	39.359	
4,800.00	4,676.74	4,424.22	3,790.76	21.02	41.14	96.75	604.52	-1,830.37	1,589.07	1,549.66	39.50	40.365	
4,900.00	4,761.27	4,509.71	3,856.73	21.00	42.14	96.56	619.83	-1,879.94	1,646.54	1,607.13	40.01	41.371	
5,000.00	4,835.29	4,594.70	3,922.70	20.98	43.14	95.42	635.14	-1,929.81	1,703.81	1,664.60	40.52	42.377	
5,100.00	4,896.53	4,679.69	3,988.66	21.04	44.14	93.76	650.45	-1,979.68	1,761.28	1,722.07	41.03	43.383	
5,200.00	4,947.03	4,764.68	4,054.63	21.22	45.14	91.80	665.76	-2,029.55	1,818.75	1,779.54	41.54	44.389	
5,300.00	4,987.37	4,849.67	4,120.60	21.56	46.14	90.10	681.07	-2,079.42	1,876.22	1,837.01	42.05	45.395	
5,307.13	4,989.63	4,851.93	4,122.86	21.60	46.18	90.00	683.33	-2,083.88	1,880.68	1,841.47	42.09	45.433	
5,400.00	5,011.24	4,883.18	4,144.91	22.08	46.78	88.95	696.64	-2,133.75	1,938.15	1,898.94	42.60	46.439	
5,500.00	5,017.94	4,890.88	4,151.61	22.77	47.38	88.58	709.90	-2,183.62	1,995.62	1,956.42	43.11	47.445	
5,600.00	5,017.18	4,890.12	4,151.85	23.64	47.98	88.58	723.16	-2,233.49	2,053.09	2,013.89	43.62	48.451	
5,700.00	5,016.42	4,889.36	4,152.09	24.69	48.58	88.58	736.42	-2,283.36	2,110.56	2,071.36	44.13	49.457	
5,800.00	5,015.66	4,888.60	4,152.33	25.90	49.18	88.59	749.68	-2,333.23	2,168.03	2,128.83	44.64	50.463	
5,900.00	5,014.90	4,887.84	4,152.57	27.25	49.78	88.59	762.94	-2,383.10	2,225.50	2,186.30	45.15	51.469	
6,000.00	5,014.13	4,887.08	4,152.81	28.72	50.38	88.59	776.20	-2,432.97	2,282.97	2,245.77	45.66	52.475	
6,100.00	5,013.37	4,886.32	4,153.05	30.29	50.98	88.59	789.46	-2,482.84	2,342.44	2,305.24	46.17	53.481	
6,200.00	5,012.61	4,885.56	4,153.29	31.95	51.58	88.59	802.72	-2,532.71	2,401.91	2,364.71	46.68	54.487	
6,300.00	5,011.85	4,884.80	4,153.53	33.68	52.18	88.59	815.98	-2,582.58	2,461.38	2,424.18	47.19	55.493	
6,400.00	5,011.09	4,884.04	4,153.77	35.48	52.78	88.59	829.24	-2,632.45	2,520.85	2,483.65	47.70	56.499	
6,500.00	5,010.32	4,883.28	4,154.01	37.33	53.38	88.60	842.50	-2,682.32	2,580.32	2,543.12	48.21	57.505	
6,600.00	5,009.56	4,882.52	4,154.25	39.22	53.98	88.60	855.76	-2,732.19	2,639.79	2,602.59	48.72	58.511	
6,700.00	5,008.80	4,881.76	4,154.49	41.16	54.58	88.60	869.02	-2,782.06	2,699.26	2,662.06	49.23	59.517	
6,800.00	5,008.04	4,881.00	4,154.73	43.13	55.18	88.60	882.28	-2,831.93	2,758.73	2,721.53	49.74	60.523	
6,900.00	5,007.28	4,880.24	4,154.97	45.13	55.78	88.60	895.54	-2,881.80	2,818.20	2,781.00	50.25	61.529	
7,000.00	5,006.51	4,879.48	4,155.21	47.16	56.38	88.60	908.80	-2,931.67	2,877.67	2,840.47	50.76	62.535	

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



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Site Bettonnie Tsosie Wash Unit (305, 306 & 721)
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6837+25 @ 6862.00ft
Reference Site:	Bettonnie Tsosie Wash Unit (305, 306 & 721)	MD Reference:	RKB=6837+25 @ 6862.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Bettonnie Tsosie Wash Unit 305H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Aug2923v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design:		Bettonnie Tsosie Wash Unit (305, 306 & 721) - Bettonnie Tsosie Wash Unit 306H - Original Hole - rev0											Offset Site Error:		0.00 ft	
Survey Program:		0-MWD						Rule Assigned:						Offset Well Error:		0.00 ft
Reference		Offset		Semi Major Axis		Offset Wellbore Centre			Distance							
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning			
7,100.00	5,005.75	8,856.26	4,976.52	49.21	84.93	88.60	-1,814.16	196.43	1,200.48	1,066.61	133.87	8.967				
7,200.00	5,004.99	8,956.26	4,975.79	51.28	86.88	88.61	-1,885.25	266.75	1,200.48	1,062.57	137.92	8.704				
7,300.00	5,004.23	9,056.26	4,975.06	53.37	88.84	88.61	-1,956.34	337.07	1,200.48	1,058.49	141.99	8.455				
7,400.00	5,003.47	9,156.26	4,974.33	55.47	90.82	88.61	-2,027.44	407.39	1,200.48	1,054.39	146.10	8.217				
7,500.00	5,002.70	9,256.26	4,973.60	57.59	92.81	88.61	-2,098.53	477.71	1,200.48	1,050.25	150.23	7.991				
7,600.00	5,001.94	9,356.26	4,972.87	59.72	94.82	88.61	-2,169.63	548.04	1,200.48	1,046.10	154.38	7.776				
7,700.00	5,001.18	9,456.26	4,972.14	61.86	96.85	88.61	-2,240.72	618.36	1,200.48	1,041.92	158.56	7.571				
7,800.00	5,000.42	9,556.26	4,971.40	64.01	98.88	88.62	-2,311.82	688.68	1,200.48	1,037.71	162.76	7.376				
7,900.00	4,999.65	9,656.26	4,970.67	66.18	100.93	88.62	-2,382.91	759.00	1,200.48	1,033.49	166.99	7.189				
8,000.00	4,998.89	9,756.26	4,969.94	68.35	102.99	88.62	-2,454.01	829.32	1,200.48	1,029.25	171.22	7.011				
8,100.00	4,998.13	9,856.26	4,969.21	70.52	105.05	88.62	-2,525.10	899.64	1,200.48	1,025.00	175.48	6.841				
8,200.00	4,997.37	9,956.26	4,968.48	72.71	107.13	88.62	-2,596.20	969.96	1,200.48	1,020.73	179.75	6.679				
8,300.00	4,996.61	10,056.26	4,967.75	74.90	109.22	88.62	-2,667.29	1,040.28	1,200.48	1,016.44	184.03	6.523				
8,400.00	4,995.84	10,156.26	4,967.02	77.09	111.31	88.62	-2,738.39	1,110.60	1,200.47	1,012.14	188.33	6.374				
8,500.00	4,995.08	10,256.26	4,966.28	79.29	113.42	88.63	-2,809.48	1,180.92	1,200.47	1,007.83	192.64	6.232				
8,600.00	4,994.32	10,356.26	4,965.55	81.50	115.53	88.63	-2,880.57	1,251.24	1,200.47	1,003.51	196.96	6.095				
8,700.00	4,993.56	10,456.26	4,964.82	83.71	117.64	88.63	-2,951.67	1,321.56	1,200.47	999.18	201.30	5.964				
8,800.00	4,992.80	10,556.26	4,964.09	85.93	119.77	88.63	-3,022.76	1,391.89	1,200.47	994.83	205.64	5.838				
8,900.00	4,992.03	10,656.26	4,963.36	88.14	121.90	88.63	-3,093.86	1,462.21	1,200.47	990.48	209.99	5.717				
9,000.00	4,991.27	10,756.26	4,962.63	90.37	124.03	88.63	-3,164.95	1,532.53	1,200.47	986.12	214.35	5.600				
9,100.00	4,990.51	10,856.26	4,961.90	92.59	126.18	88.63	-3,236.05	1,602.85	1,200.47	981.75	218.72	5.489				
9,200.00	4,989.75	10,956.26	4,961.17	94.82	128.32	88.64	-3,307.14	1,673.17	1,200.47	977.37	223.10	5.381				
9,300.00	4,988.99	11,056.26	4,960.43	97.05	130.48	88.64	-3,378.24	1,743.49	1,200.47	972.98	227.49	5.277				
9,400.00	4,988.22	11,156.26	4,959.70	99.29	132.63	88.64	-3,449.33	1,813.81	1,200.47	968.59	231.88	5.177				
9,500.00	4,987.46	11,256.26	4,958.97	101.52	134.79	88.64	-3,520.43	1,884.13	1,200.47	964.19	236.28	5.081				
9,600.00	4,986.70	11,356.26	4,958.24	103.76	136.96	88.64	-3,591.52	1,954.45	1,200.47	959.78	240.69	4.988				
9,700.00	4,985.94	11,456.26	4,957.51	106.00	139.13	88.64	-3,662.62	2,024.77	1,200.47	955.37	245.10	4.898				
9,800.00	4,985.18	11,556.26	4,956.78	108.24	141.30	88.64	-3,733.71	2,095.09	1,200.46	950.95	249.51	4.811				
9,900.00	4,984.41	11,656.26	4,956.05	110.49	143.48	88.65	-3,804.81	2,165.41	1,200.46	946.53	253.94	4.727				
10,000.00	4,983.65	11,756.26	4,955.31	112.74	145.66	88.65	-3,875.90	2,235.73	1,200.46	942.10	258.37	4.646				
10,100.00	4,982.89	11,856.26	4,954.58	114.98	147.85	88.65	-3,946.99	2,306.06	1,200.46	937.66	262.80	4.568				
10,200.00	4,982.13	11,956.26	4,953.85	117.23	150.04	88.65	-4,018.09	2,376.38	1,200.46	933.23	267.24	4.492				
10,300.00	4,981.36	12,056.26	4,953.12	119.48	152.23	88.65	-4,089.18	2,446.70	1,200.46	928.78	271.68	4.419				
10,400.00	4,980.60	12,156.26	4,952.39	121.74	154.42	88.65	-4,160.28	2,517.02	1,200.46	924.34	276.12	4.348				
10,500.00	4,979.84	12,256.26	4,951.66	123.99	156.62	88.65	-4,231.37	2,587.34	1,200.46	919.88	280.57	4.279				
10,600.00	4,979.08	12,356.26	4,950.93	126.25	158.82	88.66	-4,302.47	2,657.66	1,200.46	915.43	285.03	4.212				
10,700.00	4,978.32	12,456.26	4,950.20	128.50	161.02	88.66	-4,373.56	2,727.98	1,200.46	910.97	289.49	4.147				
10,800.00	4,977.55	12,556.26	4,949.46	130.76	163.22	88.66	-4,444.66	2,798.30	1,200.46	906.51	293.95	4.084				
10,900.00	4,976.79	12,656.26	4,948.73	133.02	165.43	88.66	-4,515.75	2,868.62	1,200.46	902.05	298.41	4.023				
11,000.00	4,976.03	12,756.26	4,948.00	135.28	167.64	88.66	-4,586.85	2,938.94	1,200.46	897.58	302.88	3.963				
11,100.00	4,975.27	12,856.26	4,947.27	137.54	169.85	88.66	-4,657.94	3,009.26	1,200.46	893.11	307.35	3.906				
11,134.77	4,975.00	12,891.04	4,947.02	138.33	170.62	88.66	-4,682.66	3,033.72	1,200.46	891.55	308.91	3.886				
11,200.00	4,974.51	12,893.17	4,947.00	139.80	170.66	88.66	-4,684.18	3,035.22	1,202.11	892.36	309.75	3.881				
11,300.00	4,973.74	12,893.17	4,947.00	142.06	170.66	88.66	-4,684.18	3,035.22	1,211.48	902.81	308.68	3.925				
11,400.00	4,972.98	12,893.17	4,947.00	144.33	170.66	88.66	-4,684.18	3,035.22	1,228.94	923.93	305.02	4.029				
11,500.00	4,972.22	12,893.17	4,947.00	146.59	170.66	88.66	-4,684.18	3,035.22	1,254.16	955.02	299.14	4.193				
11,600.00	4,971.46	12,893.17	4,947.00	148.86	170.66	88.66	-4,684.18	3,035.22	1,286.68	995.15	291.52	4.414				
11,700.00	4,970.70	12,893.17	4,947.00	151.12	170.66	88.66	-4,684.18	3,035.22	1,325.95	1,043.28	282.68	4.691				
11,800.00	4,969.93	12,893.17	4,947.00	153.39	170.66	88.66	-4,684.18	3,035.22	1,371.41	1,098.35	273.06	5.022				
11,900.00	4,969.17	12,893.17	4,947.00	155.66	170.66	88.66	-4,684.18	3,035.22	1,422.46	1,159.38	263.08	5.407				
12,000.00	4,968.41	12,893.17	4,947.00	157.92	170.66	88.66	-4,684.18	3,035.22	1,478.51	1,225.47	253.04	5.843				

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



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Site Betonnie Tsosie Wash Unit (305, 306 & 721)
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6837+25 @ 6862.00ft
Reference Site:	Betonnie Tsosie Wash Unit (305, 306 & 721)	MD Reference:	RKB=6837+25 @ 6862.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Betonnie Tsosie Wash Unit 305H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Aug2923v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Site Bettonnie Tsosie Wash Unit (305, 306 & 721)
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6837+25 @ 6862.00ft
Reference Site:	Bettonnie Tsosie Wash Unit (305, 306 & 721)	MD Reference:	RKB=6837+25 @ 6862.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Bettonnie Tsosie Wash Unit 305H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Aug2923v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Bettonnie Tsosie Wash Unit (305, 306 & 721) - Bettonnie Tsosie Wash Unit 721H - Original Hole - rev0												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Reference	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-15.76	18.92	-5.34	19.66				
100.00	100.00	100.00	100.00	0.13	0.13	-15.76	18.92	-5.34	19.66	19.39	0.27	73.124	
200.00	200.00	200.00	200.00	0.49	0.49	-15.76	18.92	-5.34	19.66	18.67	0.99	19.943	
300.00	300.00	300.00	300.00	0.85	0.85	-15.76	18.92	-5.34	19.66	17.96	1.70	11.546	
400.00	400.00	400.00	400.00	1.21	1.21	-15.76	18.92	-5.34	19.66	17.24	2.42	8.125	
500.00	500.00	500.00	500.00	1.57	1.57	-15.76	18.92	-5.34	19.66	16.52	3.14	6.268	
600.00	600.00	600.00	600.00	1.93	1.93	-15.76	18.92	-5.34	19.66	15.81	3.85	5.102	
700.00	700.00	700.00	700.00	2.29	2.29	-15.76	18.92	-5.34	19.66	15.09	4.57	4.301	
707.95	707.95	707.95	707.95	2.31	2.31	-15.76	18.92	-5.34	19.66	15.03	4.63	4.248 CC	
800.00	800.00	799.90	799.89	2.64	2.64	-13.90	19.21	-4.75	19.79	14.50	5.28	3.744 ES	
900.00	900.00	899.42	899.26	3.00	2.99	-0.26	21.50	-0.10	21.51	15.52	5.99	3.590	
1,000.00	1,000.00	998.13	997.43	3.36	3.35	19.29	26.02	9.11	27.69	21.00	6.69	4.140	
1,100.00	1,099.95	1,095.37	1,093.49	3.72	3.71	78.08	32.66	22.61	39.65	32.31	7.35	5.398	
1,200.00	1,199.63	1,190.24	1,186.35	4.08	4.10	93.35	41.21	39.99	58.86	50.89	7.97	7.387	
1,300.00	1,298.77	1,281.93	1,275.08	4.44	4.50	103.70	51.40	60.71	86.23	77.64	8.58	10.048	
1,400.00	1,397.08	1,369.78	1,358.96	4.82	4.93	110.37	62.91	84.12	121.42	112.23	9.19	13.211	
1,500.00	1,494.31	1,453.26	1,437.48	5.23	5.37	114.64	75.41	109.55	163.85	154.04	9.81	16.707	
1,600.00	1,590.26	1,532.08	1,510.40	5.68	5.84	117.79	88.59	136.36	212.80	202.37	10.43	20.402	
1,700.00	1,685.85	1,607.26	1,578.76	6.16	6.32	120.37	102.40	164.43	266.14	255.10	11.03	24.119	
1,800.00	1,781.45	1,685.26	1,648.57	6.66	6.87	121.99	117.75	195.66	322.31	310.58	11.73	27.484	
1,900.00	1,877.05	1,767.49	1,722.03	7.17	7.48	123.19	134.05	228.81	378.90	366.39	12.51	30.277	
2,000.00	1,972.64	1,849.71	1,795.49	7.70	8.11	124.08	150.35	261.96	435.58	422.26	13.32	32.703	
2,100.00	2,068.24	1,931.93	1,868.95	8.24	8.75	124.76	166.65	295.11	492.31	478.17	14.14	34.819	
2,200.00	2,163.84	2,014.15	1,942.40	8.79	9.40	125.30	182.95	328.26	549.08	534.11	14.97	36.674	
2,300.00	2,259.44	2,096.38	2,015.86	9.34	10.06	125.74	199.25	361.41	605.88	590.07	15.82	38.309	
2,400.00	2,355.03	2,178.60	2,089.32	9.90	10.73	126.11	215.55	394.56	662.70	646.03	16.67	39.755	
2,500.00	2,450.63	2,260.82	2,162.78	10.47	11.41	126.42	231.84	427.71	719.54	702.00	17.53	41.042	
2,600.00	2,546.23	2,343.04	2,236.23	11.04	12.09	126.68	248.14	460.86	776.38	757.98	18.40	42.193	
2,700.00	2,641.83	2,425.27	2,309.69	11.61	12.78	126.91	264.44	494.01	833.24	813.96	19.28	43.227	
2,800.00	2,737.42	2,507.49	2,383.15	12.19	13.47	127.10	280.74	527.15	890.10	869.95	20.16	44.160	
2,900.00	2,833.02	2,589.71	2,456.61	12.76	14.16	127.28	297.04	560.30	946.97	925.93	21.04	45.004	
3,000.00	2,928.62	2,671.93	2,530.06	13.35	14.86	127.43	313.34	593.45	1,003.85	981.92	21.93	45.771	
3,100.00	3,024.22	2,754.16	2,603.52	13.93	15.56	127.57	329.64	626.60	1,060.73	1,037.90	22.83	46.470	
3,200.00	3,119.81	2,836.38	2,676.98	14.52	16.26	127.69	345.94	659.75	1,117.61	1,093.89	23.72	47.110	
3,300.00	3,215.41	2,918.60	2,750.43	15.10	16.96	127.81	362.24	692.90	1,174.50	1,149.87	24.62	47.698	
3,400.00	3,311.01	3,000.82	2,823.89	15.69	17.66	127.91	378.54	726.05	1,231.39	1,205.86	25.53	48.240	
3,500.00	3,406.61	3,083.05	2,897.35	16.28	18.37	128.00	394.84	759.20	1,288.28	1,261.85	26.43	48.739	
3,600.00	3,502.20	3,165.27	2,970.81	16.87	19.08	128.09	411.14	792.35	1,345.17	1,317.83	27.34	49.201	
3,700.00	3,597.80	3,247.49	3,044.26	17.46	19.78	128.16	427.44	825.50	1,402.07	1,373.82	28.25	49.630	
3,800.00	3,693.52	3,329.87	3,117.86	18.05	20.49	128.87	443.77	858.71	1,458.74	1,429.58	29.16	50.028	
5,300.00	4,987.37	4,900.00	4,612.73	21.56	28.89	-62.74	569.62	1,214.38	1,499.46	1,460.19	39.27	38.184	
5,400.00	5,011.24	4,933.80	4,643.38	22.08	29.02	-68.35	559.50	1,224.39	1,454.28	1,414.59	39.68	36.646	
5,500.00	5,017.94	4,950.00	4,657.77	22.77	29.08	-73.51	554.20	1,229.63	1,407.97	1,367.67	40.30	34.941	
5,600.00	5,017.18	4,978.23	4,682.30	23.64	29.20	-74.59	544.28	1,239.44	1,364.41	1,323.14	41.27	33.061	
5,700.00	5,016.42	5,000.00	4,700.74	24.69	29.29	-75.42	536.04	1,247.59	1,326.10	1,283.57	42.53	31.177	
5,800.00	5,015.66	5,033.59	4,728.29	25.90	29.45	-76.67	522.38	1,261.10	1,293.21	1,249.04	44.17	29.279	
5,900.00	5,014.90	5,068.23	4,755.46	27.25	29.62	-77.91	507.12	1,276.20	1,265.88	1,219.78	46.10	27.461	
6,000.00	5,014.13	5,100.00	4,779.21	28.72	29.78	-79.00	492.12	1,291.04	1,244.13	1,195.85	48.28	25.771	
6,100.00	5,013.37	5,150.00	4,814.11	30.29	30.07	-80.63	466.68	1,316.20	1,227.59	1,176.87	50.72	24.201	
6,200.00	5,012.61	5,212.18	4,852.94	31.95	30.47	-82.46	432.18	1,350.32	1,215.88	1,162.51	53.38	22.780	
6,300.00	5,011.85	5,279.45	4,888.87	33.68	30.95	-84.17	391.78	1,390.29	1,208.31	1,152.14	56.17	21.512	

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



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Site Bettonnie Tsosie Wash Unit (305, 306 & 721)
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6837+25 @ 6862.00ft
Reference Site:	Bettonnie Tsosie Wash Unit (305, 306 & 721)	MD Reference:	RKB=6837+25 @ 6862.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Bettonnie Tsosie Wash Unit 305H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Aug2923v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Bettonnie Tsosie Wash Unit (305, 306 & 721) - Bettonnie Tsosie Wash Unit 721H - Original Hole - rev0													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Semi Major Axis (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
6,400.00	5,011.09	5,360.43	4,928.55	35.48	31.59	-86.08		341.60	1,439.92	1,203.49	1,144.37	59.12	20.356	
6,500.00	5,010.32	5,442.12	4,959.99	37.33	32.32	-87.60		288.05	1,492.89	1,201.11	1,138.92	62.19	19.313	
6,600.00	5,009.56	5,532.64	4,981.94	39.22	33.24	-88.68		225.69	1,554.58	1,200.27	1,134.84	65.43	18.345	
6,700.00	5,008.80	5,628.42	4,989.83	41.16	34.31	-89.09		157.90	1,621.63	1,200.09	1,131.28	68.82	17.438	
6,703.59	5,008.77	5,631.90	4,989.81	41.23	34.35	-89.09		155.43	1,624.08	1,200.09	1,131.15	68.94	17.407	
6,800.00	5,008.04	5,728.31	4,989.15	43.13	35.53	-89.10		86.89	1,691.88	1,200.10	1,127.79	72.31	16.597	
6,900.00	5,007.28	5,828.31	4,988.47	45.13	36.85	-89.10		15.79	1,762.20	1,200.10	1,124.07	76.03	15.784	
7,000.00	5,006.51	5,928.31	4,987.78	47.16	38.27	-89.11		-55.30	1,832.52	1,200.10	1,120.28	79.82	15.036	
7,100.00	5,005.75	6,028.31	4,987.10	49.21	39.77	-89.11		-126.39	1,902.85	1,200.10	1,116.42	83.68	14.341	
7,200.00	5,004.99	6,128.31	4,986.41	51.28	41.35	-89.11		-197.49	1,973.17	1,200.10	1,112.48	87.62	13.697	
7,300.00	5,004.23	6,228.31	4,985.73	53.37	42.99	-89.12		-268.58	2,043.49	1,200.10	1,108.48	91.62	13.099	
7,400.00	5,003.47	6,328.31	4,985.04	55.47	44.70	-89.12		-339.67	2,113.82	1,200.10	1,104.43	95.68	12.544	
7,500.00	5,002.70	6,428.31	4,984.36	57.59	46.46	-89.12		-410.77	2,184.14	1,200.10	1,100.33	99.78	12.028	
7,600.00	5,001.94	6,528.31	4,983.67	59.72	48.27	-89.13		-481.86	2,254.46	1,200.11	1,096.18	103.92	11.548	
7,700.00	5,001.18	6,628.31	4,982.99	61.86	50.12	-89.13		-552.95	2,324.78	1,200.11	1,092.00	108.11	11.101	
7,800.00	5,000.42	6,728.31	4,982.30	64.01	52.01	-89.14		-624.04	2,395.11	1,200.11	1,087.79	112.32	10.685	
7,900.00	4,999.65	6,828.31	4,981.62	66.18	53.93	-89.14		-695.14	2,465.43	1,200.11	1,083.54	116.57	10.296	
8,000.00	4,998.89	6,928.31	4,980.93	68.35	55.88	-89.14		-766.23	2,535.75	1,200.11	1,079.28	120.83	9.932	
8,100.00	4,998.13	7,028.31	4,980.24	70.52	57.86	-89.15		-837.32	2,606.07	1,200.11	1,074.99	125.13	9.591	
8,200.00	4,997.37	7,128.31	4,979.56	72.71	59.86	-89.15		-908.42	2,676.40	1,200.11	1,070.68	129.44	9.272	
8,300.00	4,996.61	7,228.31	4,978.87	74.90	61.88	-89.15		-979.51	2,746.72	1,200.12	1,066.35	133.77	8.972	
8,400.00	4,995.84	7,328.31	4,978.19	77.09	63.92	-89.16		-1,050.60	2,817.04	1,200.12	1,062.00	138.11	8.689	
8,500.00	4,995.08	7,428.31	4,977.50	79.29	65.98	-89.16		-1,121.70	2,887.37	1,200.12	1,057.64	142.48	8.423	
8,600.00	4,994.32	7,528.31	4,976.82	81.50	68.05	-89.16		-1,192.79	2,957.69	1,200.12	1,053.27	146.85	8.172	
8,700.00	4,993.56	7,628.31	4,976.13	83.71	70.14	-89.17		-1,263.88	3,028.01	1,200.12	1,048.88	151.24	7.935	
8,800.00	4,992.80	7,728.31	4,975.45	85.93	72.24	-89.17		-1,334.98	3,098.33	1,200.12	1,044.48	155.64	7.711	
8,900.00	4,992.03	7,828.31	4,974.76	88.14	74.36	-89.18		-1,406.07	3,168.66	1,200.12	1,040.08	160.05	7.499	
9,000.00	4,991.27	7,928.31	4,974.08	90.37	76.48	-89.18		-1,477.16	3,238.98	1,200.12	1,035.66	164.47	7.297	
9,100.00	4,990.51	8,028.31	4,973.39	92.59	78.61	-89.18		-1,548.26	3,309.30	1,200.13	1,031.23	168.89	7.106	
9,200.00	4,989.75	8,128.31	4,972.71	94.82	80.75	-89.19		-1,619.35	3,379.63	1,200.13	1,026.80	173.33	6.924	
9,300.00	4,988.99	8,228.31	4,972.02	97.05	82.90	-89.19		-1,690.44	3,449.95	1,200.13	1,022.36	177.77	6.751	
9,400.00	4,988.22	8,328.31	4,971.34	99.29	85.06	-89.19		-1,761.53	3,520.27	1,200.13	1,017.91	182.22	6.586	
9,500.00	4,987.46	8,428.31	4,970.65	101.52	87.23	-89.20		-1,832.63	3,590.59	1,200.13	1,013.46	186.68	6.429	
9,600.00	4,986.70	8,528.31	4,969.97	103.76	89.40	-89.20		-1,903.72	3,660.92	1,200.13	1,009.00	191.14	6.279	
9,700.00	4,985.94	8,628.31	4,969.28	106.00	91.58	-89.20		-1,974.81	3,731.24	1,200.13	1,004.53	195.60	6.136	
9,800.00	4,985.18	8,728.31	4,968.60	108.24	93.76	-89.21		-2,045.91	3,801.56	1,200.14	1,000.06	200.08	5.998	
9,900.00	4,984.41	8,828.31	4,967.91	110.49	95.95	-89.21		-2,117.00	3,871.88	1,200.14	995.58	204.55	5.867	
10,000.00	4,983.65	8,928.31	4,967.22	112.74	98.14	-89.22		-2,188.09	3,942.21	1,200.14	991.10	209.03	5.741	
10,100.00	4,982.89	9,028.31	4,966.54	114.98	100.34	-89.22		-2,259.19	4,012.53	1,200.14	986.62	213.52	5.621	
10,200.00	4,982.13	9,128.31	4,965.85	117.23	102.54	-89.22		-2,330.28	4,082.85	1,200.14	982.13	218.01	5.505	
10,300.00	4,981.36	9,228.31	4,965.17	119.48	104.74	-89.23		-2,401.37	4,153.18	1,200.14	977.64	222.50	5.394	
10,400.00	4,980.60	9,328.31	4,964.48	121.74	106.95	-89.23		-2,472.47	4,223.50	1,200.14	973.15	227.00	5.287	
10,500.00	4,979.84	9,428.31	4,963.80	123.99	109.16	-89.23		-2,543.56	4,293.82	1,200.14	968.65	231.50	5.184	
10,600.00	4,979.08	9,528.31	4,963.11	126.25	111.38	-89.24		-2,614.65	4,364.14	1,200.15	964.15	236.00	5.085	
10,700.00	4,978.32	9,628.31	4,962.43	128.50	113.60	-89.24		-2,685.75	4,434.47	1,200.15	959.64	240.50	4.990	
10,800.00	4,977.55	9,728.31	4,961.74	130.76	115.82	-89.25		-2,756.84	4,504.79	1,200.15	955.14	245.01	4.898	
10,900.00	4,976.79	9,828.31	4,961.06	133.02	118.04	-89.25		-2,827.93	4,575.11	1,200.15	950.63	249.52	4.810	
11,000.00	4,976.03	9,928.31	4,960.37	135.28	120.27	-89.25		-2,899.02	4,645.44	1,200.15	946.12	254.04	4.724	
11,100.00	4,975.27	10,028.31	4,959.69	137.54	122.50	-89.26		-2,970.12	4,715.76	1,200.15	941.60	258.55	4.642	
11,200.00	4,974.51	10,128.31	4,959.00	139.80	124.73	-89.26		-3,041.21	4,786.08	1,200.15	937.09	263.07	4.562	
11,300.00	4,973.74	10,228.31	4,958.32	142.06	126.96	-89.26		-3,112.30	4,856.40	1,200.16	932.57	267.59	4.485	

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



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Site Bettonnie Tsosie Wash Unit (305, 306 & 721)
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6837+25 @ 6862.00ft
Reference Site:	Bettonnie Tsosie Wash Unit (305, 306 & 721)	MD Reference:	RKB=6837+25 @ 6862.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Bettonnie Tsosie Wash Unit 305H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Aug2923v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Offset Design: Bettonnie Tsosie Wash Unit (305, 306 & 721) - Bettonnie Tsosie Wash Unit 721H - Original Hole - rev0													Offset Site Error:	0.00 ft
Survey Program: 0-MWD													Offset Well Error:	0.00 ft
Reference	Offset	Semi Major Axis		Offset Wellbore Centre		Distance		Rule Assigned:		Warning				
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
11,400.00	4,972.98	10,328.31	4,957.63	144.33	129.20	-89.27	-3,183.40	4,926.73	1,200.16	928.05	272.11	4.411		
11,500.00	4,972.22	10,428.31	4,956.95	146.59	131.44	-89.27	-3,254.49	4,997.05	1,200.16	923.53	276.63	4.338		
11,600.00	4,971.46	10,528.31	4,956.26	148.86	133.68	-89.27	-3,325.58	5,067.37	1,200.16	919.00	281.16	4.269		
11,700.00	4,970.70	10,628.31	4,955.58	151.12	135.92	-89.28	-3,396.68	5,137.69	1,200.16	914.48	285.68	4.201		
11,800.00	4,969.93	10,728.31	4,954.89	153.39	138.16	-89.28	-3,467.77	5,208.02	1,200.16	909.95	290.21	4.135		
11,900.00	4,969.17	10,828.31	4,954.21	155.66	140.40	-89.29	-3,538.86	5,278.34	1,200.17	905.42	294.74	4.072		
12,000.00	4,968.41	10,928.31	4,953.52	157.92	142.65	-89.29	-3,609.96	5,348.66	1,200.17	900.89	299.27	4.010		
12,100.00	4,967.65	11,028.31	4,952.83	160.19	144.89	-89.29	-3,681.05	5,418.99	1,200.17	896.36	303.81	3.950		
12,200.00	4,966.89	11,128.31	4,952.15	162.46	147.14	-89.30	-3,752.14	5,489.31	1,200.17	891.83	308.34	3.892		
12,300.00	4,966.12	11,228.31	4,951.46	164.73	149.39	-89.30	-3,823.24	5,559.63	1,200.17	887.29	312.88	3.836		
12,400.00	4,965.36	11,328.31	4,950.78	167.00	151.64	-89.30	-3,894.33	5,629.95	1,200.17	882.76	317.41	3.781		
12,500.00	4,964.60	11,428.31	4,950.09	169.27	153.89	-89.31	-3,965.42	5,700.28	1,200.17	878.22	321.95	3.728		
12,600.00	4,963.84	11,528.31	4,949.41	171.54	156.15	-89.31	-4,036.51	5,770.60	1,200.18	873.69	326.49	3.676		
12,700.00	4,963.08	11,628.31	4,948.72	173.81	158.40	-89.31	-4,107.61	5,840.92	1,200.18	869.15	331.03	3.626		
12,800.00	4,962.31	11,728.31	4,948.04	176.08	160.66	-89.32	-4,178.70	5,911.25	1,200.18	864.61	335.57	3.577		
12,900.00	4,961.55	11,828.31	4,947.35	178.36	162.91	-89.32	-4,249.79	5,981.57	1,200.18	860.07	340.11	3.529		
12,900.01	4,961.55	11,828.31	4,947.35	178.36	162.91	-89.32	-4,249.80	5,981.57	1,200.18	860.07	340.11	3.529		
13,000.00	4,960.79	11,879.77	4,947.00	180.63	164.07	-89.32	-4,286.38	6,017.76	1,201.16	856.97	344.19	3.490 SF		
13,100.00	4,960.03	11,879.77	4,947.00	182.90	164.07	-89.32	-4,286.38	6,017.76	1,209.34	863.99	345.35	3.502		
13,103.49	4,960.00	11,879.77	4,947.00	182.98	164.07	-89.32	-4,286.38	6,017.76	1,209.77	864.44	345.34	3.503		

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

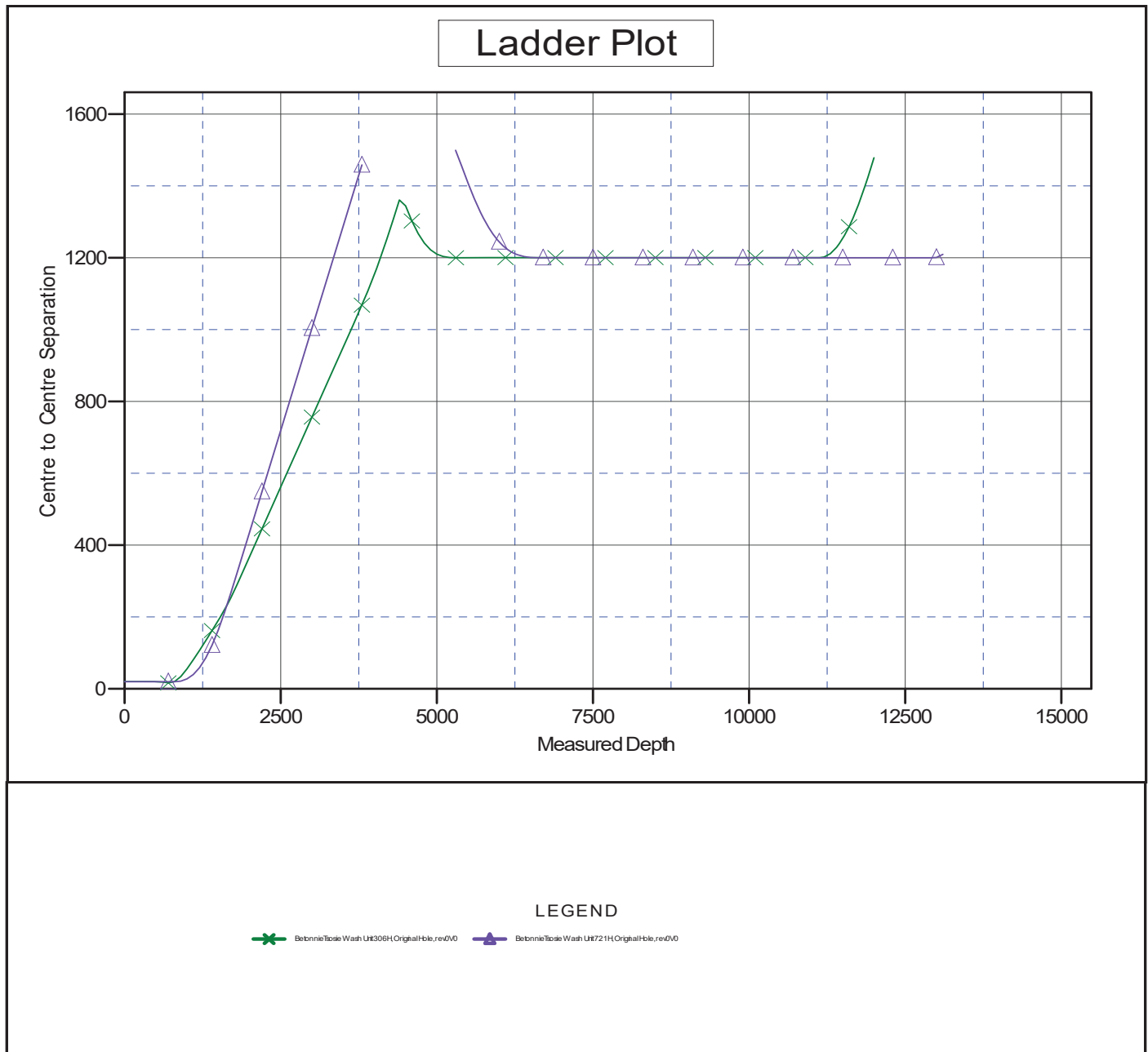


Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Site Betonnie Tsosie Wash Unit (305, 306 & 721)
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6837+25 @ 6862.00ft
Reference Site:	Betonnie Tsosie Wash Unit (305, 306 & 721)	MD Reference:	RKB=6837+25 @ 6862.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Betonnie Tsosie Wash Unit 305H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Aug2923v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB=6837+25 @ 6862.00ft
 Offset Depths are relative to Offset Datum
 Central Meridian is -107.833333333

Coordinates are relative to: Betonnie Tsosie Wash Unit (305, 306 & 721)
 Coordinate System is US State Plane 1983, New Mexico Western Zone
 Grid Convergence at Surface is: 0.09°



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



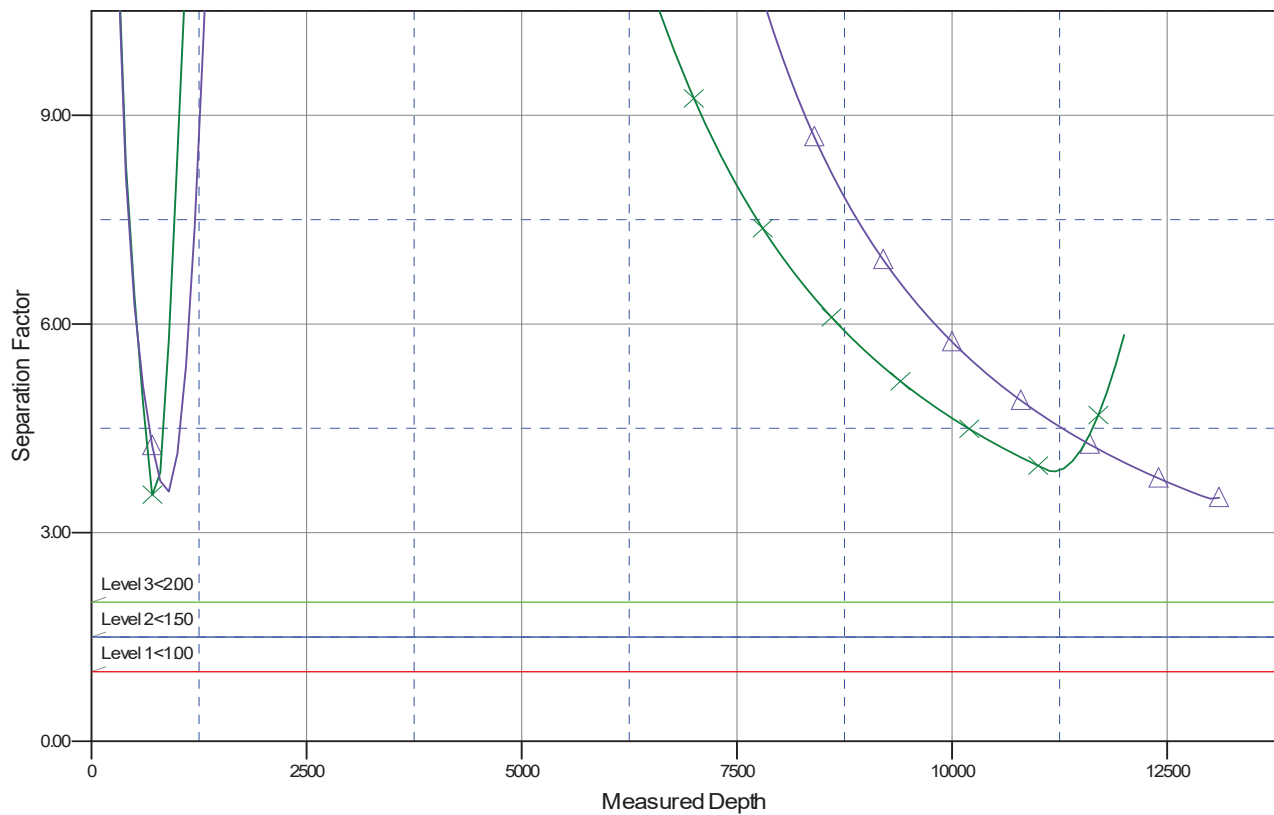
Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Site Betonnie Tsosie Wash Unit (305, 306 & 721)
Project:	San Juan County, New Mexico NAD83 NM W	TVD Reference:	RKB=6837+25 @ 6862.00ft
Reference Site:	Betonnie Tsosie Wash Unit (305, 306 & 721)	MD Reference:	RKB=6837+25 @ 6862.00ft
Site Error:	0.00 ft	North Reference:	Grid
Reference Well:	Betonnie Tsosie Wash Unit 305H	Survey Calculation Method:	Minimum Curvature
Well Error:	0.00 ft	Output errors are at	2.00 sigma
Reference Wellbore	Original Hole	Database:	DT_Aug2923v16
Reference Design:	rev0	Offset TVD Reference:	Offset Datum

Reference Depths are relative to RKB=6837+25 @ 6862.00ft
 Offset Depths are relative to Offset Datum
 Central Meridian is -107.833333333

Coordinates are relative to: Betonnie Tsosie Wash Unit (305, 306 & 721)
 Coordinate System is US State Plane 1983, New Mexico Western Zone
 Grid Convergence at Surface is: 0.09°

Separation Factor Plot



LEGEND

Betonnie Tsosie Wash Unit 306H Original Hole, rev00
 Betonnie Tsosie Wash Unit 721H Original Hole, rev00

State of New Mexico
Energy, Minerals and Natural Resources Department

Submit Electronically
Via E-permitting

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

NATURAL GAS MANAGEMENT PLAN

This Natural Gas Management Plan must be submitted with each Application for Permit to Drill (APD) for a new or recompleted well.

Section 1 – Plan Description

Effective May 25, 2021

I. Operator: DJR Operating, LLC **OGRID:** 371838 **Date:** 1 / 31 / 2024

II. Type: ☒ Original ☐ Amendment due to ☐ 19.15.27.9.D(6)(a) NMAC ☐ 19.15.27.9.D(6)(b) NMAC ☐ Other.

If Other, please describe: _____

III. Well(s): Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	ULSTR	Footages	Anticipated Oil BBL/D	Anticipated Gas MCF/D	Anticipated Produced Water BBL/D
Betonne Tsoie Wash Unit 305H	30-045-38327	B-21-23N-08W	406 FNL x 2059 FEL	532	677	189
Betonne Tsoie Wash Unit 306H	30-045-38328	B-21-23N-08W	425 FNL x 2054 FEL	305	388	108
Betonne Tsoie Wash Unit 721H	30-045-38329	B-21-23N-08W	387 FNL x 2064 FEL	487	620	173

IV. Central Delivery Point Name: Chaco Processing Plant [See 19.15.27.9(D)(1) NMAC]

V. Anticipated Schedule: Provide the following information for each new or recompleted well or set of wells proposed to be drilled or proposed to be recompleted from a single well pad or connected to a central delivery point.

Well Name	API	Spud Date	TD Reached Date	Completion Commencement Date	Initial Flow Back Date	First Production Date
Betonne Tsoie Wash Unit 305H	30-045-38327	02/16/2024	02/26/2024	04/16/2024	04/26/2024	05/31/2024
Betonne Tsoie Wash Unit 306H	30-045-38328	02/17/2024	02/27/2024	04/16/2024	04/26/2024	05/31/2024
Betonne Tsoie Wash Unit 721H	30-045-38329	02/18/2024	02/28/2024	04/16/2024	04/26/2024	05/31/2024

VI. Separation Equipment: ☒ Attach a complete description of how Operator will size separation equipment to optimize gas capture.

VII. Operational Practices: ☒ Attach a complete description of the actions Operator will take to comply with the requirements of Subsection A through F of 19.15.27.8 NMAC.

VIII. Best Management Practices: ☒ Attach a complete description of Operator's best management practices to minimize venting during active and planned maintenance.

Section 2 – Enhanced Plan

EFFECTIVE APRIL 1, 2022

Beginning April 1, 2022, an operator that is not in compliance with its statewide natural gas capture requirement for the applicable reporting area must complete this section.

☒ Operator certifies that it is not required to complete this section because Operator is in compliance with its statewide natural gas capture requirement for the applicable reporting area.

IX. Anticipated Natural Gas Production:

Well	API	Anticipated Average Natural Gas Rate MCF/D	Anticipated Volume of Natural Gas for the First Year MCF

X. Natural Gas Gathering System (NGGS):

Operator	System	ULSTR of Tie-in	Anticipated Gathering Start Date	Available Maximum Daily Capacity of System Segment Tie-in

XI. Map. ☐ Attach an accurate and legible map depicting the location of the well(s), the anticipated pipeline route(s) connecting the production operations to the existing or planned interconnect of the natural gas gathering system(s), and the maximum daily capacity of the segment or portion of the natural gas gathering system(s) to which the well(s) will be connected.

XII. Line Capacity. The natural gas gathering system ☐ will ☐ will not have capacity to gather 100% of the anticipated natural gas production volume from the well prior to the date of first production.

XIII. Line Pressure. Operator ☐ does ☐ does not anticipate that its existing well(s) connected to the same segment, or portion, of the natural gas gathering system(s) described above will continue to meet anticipated increases in line pressure caused by the new well(s).

☐ Attach Operator's plan to manage production in response to the increased line pressure.

XIV. Confidentiality: ☐ Operator asserts confidentiality pursuant to Section 71-2-8 NMSA 1978 for the information provided in Section 2 as provided in Paragraph (2) of Subsection D of 19.15.27.9 NMAC and attaches a full description of the specific information for which confidentiality is asserted and the basis for such assertion.

Section 3 - Certifications

Effective May 25, 2021

Operator certifies that, after reasonable inquiry and based on the available information at the time of submittal:

☒ Operator will be able to connect the well(s) to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system; or

☐ Operator will not be able to connect to a natural gas gathering system in the general area with sufficient capacity to transport one hundred percent of the anticipated volume of natural gas produced from the well(s) commencing on the date of first production, taking into account the current and anticipated volumes of produced natural gas from other wells connected to the pipeline gathering system.

If Operator checks this box, Operator will select one of the following:

Well Shut-In. ☐ Operator will shut-in and not produce the well until it submits the certification required by Paragraph (4) of Subsection D of 19.15.27.9 NMAC; or

Venting and Flaring Plan. ☐ Operator has attached a venting and flaring plan that evaluates and selects one or more of the potential alternative beneficial uses for the natural gas until a natural gas gathering system is available, including:

- (a) power generation on lease;
- (b) power generation for grid;
- (c) compression on lease;
- (d) liquids removal on lease;
- (e) reinjection for underground storage;
- (f) reinjection for temporary storage;
- (g) reinjection for enhanced oil recovery;
- (h) fuel cell production; and
- (i) other alternative beneficial uses approved by the division.

Section 4 - Notices

1. If, at any time after Operator submits this Natural Gas Management Plan and before the well is spud:

(a) Operator becomes aware that the natural gas gathering system it planned to connect the well(s) to has become unavailable or will not have capacity to transport one hundred percent of the production from the well(s), no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised venting and flaring plan containing the information specified in Paragraph (5) of Subsection D of 19.15.27.9 NMAC; or

(b) Operator becomes aware that it has, cumulatively for the year, become out of compliance with its baseline natural gas capture rate or natural gas capture requirement, no later than 20 days after becoming aware of such information, Operator shall submit for OCD's approval a new or revised Natural Gas Management Plan for each well it plans to spud during the next 90 days containing the information specified in Paragraph (2) of Subsection D of 19.15.27.9 NMAC, and shall file an update for each Natural Gas Management Plan until Operator is back in compliance with its baseline natural gas capture rate or natural gas capture requirement.

2. OCD may deny or conditionally approve an APD if Operator does not make a certification, fails to submit an adequate venting and flaring plan which includes alternative beneficial uses for the anticipated volume of natural gas produced, or if OCD determines that Operator will not have adequate natural gas takeaway capacity at the time a well will be spud.

I certify that, after reasonable inquiry, the statements in and attached to this Natural Gas Management Plan are true and correct to the best of my knowledge and acknowledge that a false statement may be subject to civil and criminal penalties under the Oil and Gas Act.

Signature:
Printed Name: Shaw-Marie Ford
Title: Regulatory Specialist
E-mail Address: sford@djrlc.com
Date: 01/31/2024
Phone: 505-716-3297
OIL CONSERVATION DIVISION (Only applicable when submitted as a standalone form)
Approved By:
Title:
Approval Date:
Conditions of Approval:



DJR OPERATING, LLC.
OGRID NO: 371838
NATURAL GAS MANAGEMENT PLAN
Bettonie Tsosie Wash Unit 305H, 306H, 721H
NWNE B-21-23N-08W

SEPARATION EQUIPMENT

DJR Operating, LLC (DJR) has pulled representative pressurized samples from wells in the same producing formation. DJR has utilized these samples in process simulations to determine the amount of gas anticipated in each stage of the process and utilized this information with a safety factor to size the equipment listed below:

Separation equipment will be set as follows:

- Individual 3-phase separator will be set for the individual well.
- The separator will be sized based on the anticipated volume of the well and the pressure of the lines utilized for oil, gas, and water takeaway.
- The 3-phase production separator will be equipped with a 0.75 MMBtu/hr indirect fired heater.

Heater treaters will be set as follows:

- Individual heater treaters will be set for the individual well.
- The heater treaters are sized based on the anticipated combined volume of oil and produced water predicted to come from the initial 3-phase separator.
- Oil will be separated from the produced water and the oil/produced water will be sent to its respective tanks.
- The combined oil and natural gas stream is routed to the Vapor Recovery Tower.

Vapor Recovery Equipment will be set as follows:

- The Vapor Recovery Tower has been sized, based on the anticipated volume of gas from the heater treater and oil and water tanks.
- The Vapor Recovery Unit has been sized, based on the anticipated volume of gas from the heater treater and oil and water tanks. The Vapor Recovery Unit is utilized to push the recovered gas into the sales pipeline.

Production storage tanks will be set as follows:

- The oil and produced water tanks utilize a closed vent capture system to ensure all breathing, working, and flashing losses are routed to the Vapor Recovery Tower and Vapor Recovery Unit.
- Each of the production storage tanks will be equipped with a 0.5 MMBtu/hr indirect heater.



DJR OPERATING, LLC.
OGRID NO: 371838
NATURAL GAS MANAGEMENT PLAN
Bettonie Tsosie Wash Unit 305H, 306H, 721H
NWNE B-21-23N-08W

VENTING and FLARING

DJR Operating, LLC (DJR) has a natural gas system available prior to startup of completion operations. DJR utilizes a Vapor Recovery Unit System and sells all natural gas except during periods of startup, shutdown, maintenance, or malfunction for the gas capturing equipment, including the vapor recovery tower, vapor recovery unit, storage tanks, and pipelines.

Currently, DJR utilizes the following from list A-I of Section 3 for its operations to minimize flaring:

- a) DJR utilizes natural gas-powered generators to power its leases where grid power isn't available.
- b) When electrical grid power is unavailable, natural gas generators will be used for major equipment onsite.
- c) DJR's in service compression will be natural gas powered.
- d) Should liquids removal, such as dehydration be required, units will be powered by natural gas.

DJR will only flare gas during the following times:

- o Scheduled maintenance for gas capturing equipment including:
 - o Vapor Recovery Tower
 - o Vapor Recovery Unit
 - o Storage tanks
 - o Pipelines
 - o Emergency flaring



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OPERATIONAL PRACTICES

19.15.27.8 A. Venting and Flaring of Natural Gas

DJR Operating, LLC (DJR) understands the requirements of NMAC 19.15.27.8 which states that the venting and flaring of natural gas during drilling, completion or production that constitutes waste as defined in 19.15.2 are prohibited.

19.15.27.8 B. Venting and flaring during drilling operations

- DJR shall capture or combust natural gas if technically feasible during drilling operations using best industry practices.
- A flare stack with a 100% capacity for expected volumes will be set on location of the facility at least 100 feet from the nearest surface hole location, well heads, and storage tanks.
- In the event of an emergency, DJR will vent natural gas in order to avoid substantial impact. DJR shall report the vented or flared gas to the NMOCD.

19.15.27.8 E. Venting and flaring during completion or recompletion operations

During Completion Operations, DJR utilizes the following:

- DJR facilities are built and ready from day 1 of Flowback.
- Individual well test separators will be set to properly separate gas and liquids. Temporary test separator will be utilized initially to process volumes. In addition, separators will be tied into flowback tanks which will be tied into the gas processing equipment for sales down a pipeline. See Separation Equipment for details.
- Should the facility not yet be capable of processing gas, or the gas does not meet quality standards, then storage tanks will be set that are tied into gas busters or temporary flare to manage natural gas. This flare would meet the following requirements:
 - 1) An appropriately sized flare stack with an automatic igniter.
 - 2) DJR analyzes the natural gas samples twice per week.
 - 3) DJR routes the natural gas into a gathering pipeline as soon as the pipeline specifications are met.
 - 4) DJR provides the NMOCD with pipeline specifications and natural gas data.



19.15.27.8 D. Venting and flaring during production operations

During Production Operations DJR will not vent or flare natural gas except under the following circumstances:

1. During an emergency or malfunction
2. To unload or clean-up liquid holdup in a well to atmospheric pressure, provided:
 - a. DJR does not vent after the well achieves a stabilized rate and pressure.
 - b. DJR will remain present on-site during liquids unloading by manual purging and take all reasonable actions to achieve a stabilized rate and pressure at the earliest practical time.
 - c. DJR will optimize the system to minimize natural gas venting on any well equipped with a plunger lift or auto control system.
 - d. Best Management Practices will be used during downhole well maintenance.
3. During the first year of production from an exploratory well provided:
 - a. DJR receives approval from the NMOCD.
 - b. DJR remains in compliance with the NM gas capture requirements.
 - c. DJR submits an updated C-129 form to the NMOCD.
4. During the following activities unless prohibited:
 - a. Gauging or sampling a storage tank or low-pressure production vessel.
 - b. Loading out liquids from a storage tank.
 - c. Repair and maintenance.
 - d. Normal operation of gas activated pneumatic controller or pump.
 - e. Normal operation of a storage tank but not including venting from a thief hatch.
 - f. Normal operation of dehydration units.
 - g. Normal operations of compressors, compressor engines, turbines, valves, flanges, and connectors.
 - h. During a bradenhead, packer leakage test, or production test lasting less than 24-hours.
 - i. When natural gas does not meet the gathering pipeline specifications.
 - j. Commissioning of pipelines, equipment, or facilities only for as long as necessary to purge introduced impurities.

19.15.27.8 E. Performance standards

1. DJR has utilized process simulations with a safety factor to design all separation and storage equipment. The equipment is routed to a Vapor Recovery System and utilizes a flare as back up for periods of startup, shutdown, maintenance, or malfunction of the VRU System.
2. DJR will install a flare that designed to handle the full volume of vapors from the facility in case of the VRU failure and it is designed with an auto ignition system.
3. Flare stacks will appropriately sized and designed to ensure proper combustion efficiency.



- a. Flare stacks installed or replaced will be equipped with an automatic ignitor or continuous pilot.
 - b. Previously installed flare stacks will be retrofitted with an automatic ignitor, continuous pilot, or technology that alerts DJR of flare malfunction within 18 months after May 25, 2021.
 - c. Flare stacks replaced after May 25, 2021, will be equipped with an automatic ignitor or continuous pilot if located at a well or facility with average daily production of 60,000 cubic feet of natural gas or less.
 - d. Flare stacks will be located at least 100 feet from the well and storage tanks and securely anchored.
4. DJR will conduct an AVO inspection on all components for leaks and defects on a weekly basis.
 5. DJR will make and keep records of AVO inspections which will be available to the NMOCD for at least 5 years.
 6. DJR may use a remote or automated monitoring technology to detect leaks and releases in lieu of AVO inspections with prior NMOCD approval.
 7. Facilities will be designed to minimize waste.
 8. DJR will resolve emergencies as promptly as possible.

19.15.27.8 F. Measurement or estimation of vented and flared natural gas

1. DJR will have meters on both the low- and high-pressure sides of the flares and the volumes will be recorded in DJR's SCADA system.
2. DJR will install equipment to measure the volume of flared natural gas that has an average daily production of 60,000 cubic feet or greater of natural gas.
3. DJR's measuring equipment will conform to the industry standards.
4. The measurement system is designed such that it cannot be bypassed except for inspections and servicing meters.
5. DJR will estimate the volume of vented or flared natural gas using a methodology that can be independently verified if metering is not practicable due to low flow rate or pressure.
6. DJR will estimate the volume of flared and vented natural gas based on the results of an annual GOR test for wells that do not require measuring equipment reported on Form C-116.
7. DJR will install measuring equipment whenever the NMOCD determines that metering is necessary.



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NATURAL GAS MANAGEMENT PLAN
Bettonie Tsosie Wash Unit 305H, 306H, 721H
NWNE B-21-23N-08W

BEST MANAGEMENT PRACTICES

DJR Operating, LLC (DJR) utilizes the following Best Management Practices to minimize venting during active and planned maintenance.

DJR has a closed vent capture system to route emissions from the heater treater, tanks, and vapor recovery to the vapor recovery unit with an enclosed combustion device (ECD) for backup. The system is designed such that if the vapor recovery unit is taken out of service for any reason, the vapors will be routed to the ECD for combustion.

DJR will isolate and attempt to route all vapors to the vapor recovery unit or ECD prior to opening any lines for maintenance to minimize venting from the equipment.

DJR shall notify the NMOCD of venting or flaring that exceeds 50 MCF but less than 500 MCF in volume that either resulted from an emergency or malfunction, or an event lasting over eight hours or more cumulatively within any 24-hour period from a single event by filing a form C-129 no later than 15 days following the discovery or commencement of venting or flaring.

DJR shall notify the NMOCD verbally or by e-mail within 24-hours following discovery or commencement of venting or flaring that exceeds 500 MCF in volume or otherwise qualifies as a major release as defined in 19.15.29.7 NMAC from a single event and provide the information required in form C-129 to the NMOCD no later than 15 days that verifies, updates, or corrects the verbal or e-mail notification.

DJR will install measuring equipment to conform to industry standards such as American Petroleum Institute (API) Manual of Petroleum Measurement Standards (MPMS) Chapter 14.10 Measurement of Flow to Flares.

DJR's measuring equipment shall not be designed or equipped with a manifold that allows the diversion of natural gas around the metering element except for the sole purpose of inspecting and servicing the measurement equipment.

DJR shall report the volume of vented and flared natural gas for each well or facility at which venting or flaring occurred on a monthly basis.



United States Department of the Interior

BUREAU OF LAND MANAGEMENT
Farmington District Office
6251 College Blvd, Suite A
Farmington, New Mexico 87402



In Reply Refer To:
3162.3-1(NMF0110)

DJR Operating, LLC
#305H Betonnie Tsosie Wash Unit
Lease: NMNM76842 Unit:NMNM135219A
SH: NW $\frac{1}{4}$ NE $\frac{1}{4}$ Section 21, T.23 N., R.8 W.
BH: SE $\frac{1}{4}$ NE $\frac{1}{4}$ Section 27, T.23 N., R.8 W.
San Juan County, New Mexico

***Above Data Required on Well Sign**

GENERAL REQUIREMENTS FOR OIL AND GAS OPERATIONS ON FEDERAL AND INDIAN LEASES

The following special requirements apply and are effective when **checked**:

- A. ☒ Note all surface/drilling conditions of approval attached.
- B. ☒ The required wait on cement (WOC) time will be a minimum of 500 psi compressive strength at 60 degrees. Blowout preventor (BOP) nipple-up operations may then be initiated
- C. ☐ Test the surface casing to a minimum of _____ psi for 30 minutes.
- D. ☒ Test all casing strings below the surface casing to .22 psi/ft. of casing string length or 1500 psi, whichever is greater, but not to exceed 70% of the minimum internal yield burst) for a minimum of 30 minutes.
- E. ☐ Communitization Agreement covering the acreage dedicated to this well must be filed for approval with the Bureau of Land Management, Farmington District Office, Branch of Reservoir Management, 6251 College Blvd. Suite A, Farmington, New Mexico 87402. The effective date of the agreement must be **prior** to any sales.

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COLORADO, NEW MEXICO, UTAH, WYOMING

- F. ☒ The use of co-flex hose is authorized contingent upon the following:
1. From the BOP to the choke manifold: the co-flex hose must be hobbled on both ends and saddle to prevent whip.
 2. From the choke manifold to the discharge tank: the co-flex hoses must be as straight as practical, hobbled on both ends and anchored to prevent whip.
 3. The co-flex hose pressure rating must be at least commensurate with approved BOPE.

I. GENERAL

- A. Full compliance with all applicable laws, regulations, and Onshore Orders, with the approved Permit to drill, and with the approved Surface Use and Operations Plan is required. Lessees and/or operators are fully accountable for the actions of their contractors and subcontractors. Failure to comply with these requirements and the filing of required reports will result in strict enforcement pursuant to 43 CFR 3163.1 or 3163.2.
- B. Each well shall have a well sign in legible condition from spud date to final abandonment. The sign should show the operator's name, lease serial number, or unit name, well number, location of the well, and whether lease is Tribal or Allotted, (See 43 CFR 3162.6(b)).
- C. A complete copy of the approved Application for Permit to Drill, along with any conditions of approval, shall be available to authorized personnel at the drill site whenever active drilling operations are under way.
- E. As soon as practical, notice is required of all blowouts, fires and accidents involving life-threatening injuries or loss of life. (See NTL-3A).
- F. Prior approval by the BLM-Authorized Office (Drilling and Production Section) is required for variance from the approved drilling program and before commencing plugging operations, plug back work casing repair work, corrective cementing operations, or suspending drilling operations indefinitely. Emergency approval may be obtained orally, but such approval is contingent upon filing of a notice of intent (on a Sundry Notice, Form 3160-5) within three business days (original and three copies of Federal leases and an original and four copies on Indian leases). **Any changes to the approved plan or any questions regarding drilling operations should be directed to BLM during regular business hours at 505-564-7600. Emergency program changes after hours should be directed to at Virgil Lucero at 505-793-1836.**
- G. **The Inspection and Enforcement Section (I&E), phone number (505-564-7750) is to be notified at least 24 hours in advance of BOP test, spudding, cementing, or plugging operations so that a BLM representative may witness the operations.**
- H. Unless drilling operations are commenced within two years, approval of the Application for Permit to Drill will expire. A written request for a two years extension may be granted if submitted prior to expiration.
- I. From the time drilling operations are initiated and until drilling operations are completed, a member of the drilling crew or the tool pusher shall maintain rig surveillance at all time, unless the well is secured with blowout preventers or cement plugs.

- J. If for any reason, drilling operations are suspended for more than 90 days, a written notice must be provided to this office outlining your plans for this well.

II. REPORTING REQUIREMENTS

- A. For reporting purposes, all well Sundry notices, well completion and other well actions shall be referenced by the appropriate lease, communitization agreement and/or unit agreement numbers.
- B. The following reports shall be filed with the BLM-Authorized Officer within 30 days after the work is completed.
1. Original and three copies on Federal and an Original and five copies on Indian leases of Sundry Notice (Form 3150-5), giving complete information concerning.
 - a. Setting of each string of casing. Show size and depth of hole, grade and weight of casing, depth set, depth of any and all cementing tools that are used, amount (in cubic feet) and types of cement used, whether cement circulated to surface and all cement tops in the casing annulus, casing test method and results, and the date work was done. Show spud date on first report submitted.
 - b. Intervals tested, perforated (include; size, number and location of perforations), acidized, or fractured; and results obtained. Provide date work was done on well completion report and completion sundry notice.
 - c. Subsequent Report of Abandonment, show the manner in which the well was plugged, including depths where casing was cut and pulled, intervals (by depths) where cement plugs were replaced, and dates of the operations.
 2. Well Completion Report (Form 3160-4) will be submitted with 30 days after well has been completed.
 - a. Initial Bottom Hole Pressure (BHP) for the producing formations. Show the BHP on the completion report. The pressure may be: 1) measured with a bottom hole bomb, or; 2) calculated based on shut in surface pressures (minimum seven day buildup) and fluid level shot.
 3. Submit a cement evaluation log, if cement is not circulated to surface.

III. DRILLER'S LOG

The following shall be entered in the daily driller's log: 1) Blowout preventer pressures tests, including test pressures and results. 2) Blowout preventer tests for proper functioning, 3) Blowout prevention drills conducted, 4) Casing run, including size, grade, weight, and depth set, 5) How pipe was cemented, including amount of cement, type, whether cement circulated to surface, location of cementing tools, etc., 6) Waiting on cement time for each casing string, 7) Casing pressure tests after cementing, including test pressure and results and 8) Estimated amounts of oil and gas recovered and/or produced during drill stem test.

IV. GAS FLARING

Gas produced from this well may not be vented or flared beyond an initial, authorized test period of *** Days or 50 MMCF** following its (completion)(recompletion), whichever first occurs, without the prior, written approval of the authorized officer. Should gas be vented or flared without approval beyond the test period authorized above, you may be directed to shut-in the well until the gas can be captured or approval to continue venting or flaring as uneconomic is granted. You shall be required to compensate the lessor for the portion of the gas vented or flared without approval which is determined to have been avoidably lost.

***30 days**, unless a longer test period is specifically approved by the authorized officer. The 30-day period will commence upon the first gas to surface.

V. SAFETY

- A. All rig heating stoves are to be of the explosion-proof type.
- B. Rig safety lines are to be installed.
- C. Hard hats and other Personal Protective Equipment (PPE) must be utilized.

VI. CHANGE OF PLANS OR ABANDONMENT

- A. Any changes of plans required in order to mitigate unanticipated conditions encountered during drilling operations, will require approval as set forth in Section 1.F.
- B. If the well is dry, it is to be plugged in accordance with 43 CFR 3162.3-4, approval of the proposed plugging program is required as set forth in Section 1.F. The report should show the total depth reached, the reason for plugging, and the proposed intervals, by depths, where cement plugs are to be placed, type of plugging mud, etc. A Subsequent Report of Abandonment is required as set forth in Section II.B.1c.
- C. Unless a well has been properly cased and cemented, or properly plugged, the drilling rig must not be moved from the drill site without prior approval from the BLM-Authorized Officer.

VII. PHONE NUMBERS

- A. **For BOPE tests, cementing, and plugging operations the phone number is 505-564-7750 and must be called 24 hours in advance in order that a BLM representative may witness the operations.**
- B. Emergency program changes after hours contact:

Virgil Lucero (505) 793-1836
BLM 24 Hour Number (505) 564-7750

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone:(575) 748-1283 Fax:(575) 748-9720
District III
1000 Rio Brazos Rd., Aztec, NM 87410
Phone:(505) 334-6178 Fax:(505) 334-6170
District IV
1220 S. St Francis Dr., Santa Fe, NM 87505
Phone:(505) 476-3470 Fax:(505) 476-3462

State of New Mexico
Energy, Minerals and Natural Resources
Oil Conservation Division
1220 S. St Francis Dr.
Santa Fe, NM 87505

CONDITIONS

Action 309867

CONDITIONS

Operator: DJR OPERATING, LLC 1 Road 3263 Aztec, NM 87410	OGRID: 371838
	Action Number: 309867
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	All original COA's still apply. Additionally, if cement is not circulated to surface during cementing, then a CBL is required.	2/6/2024