

Well Name: HAYNES CANYON UNIT	Well Location: T23N / R6W / SEC 3 / SWSW /	County or Parish/State:
Well Number: 428H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM28737	Unit or CA Name: Haynes Canyon Unit	Unit or CA Number: NMNM105770949
US Well Number: 3003931443	Well Status: Approved Application for Permit to Drill	Operator: ENDURING RESOURCES LLC

Notice of Intent

Sundry ID: 2775122

Type of Submission: Notice of Intent	Type of Action: APD Change
Date Sundry Submitted: 02/14/2024	Time Sundry Submitted: 11:42
Date proposed operation will begin: 02/14/2024	

Procedure Description: Following the horizontal directional design plan approved on 2/12/2024, DJR respectfully requests approval to revise the casing & cement design for the subject well. Change Surface to a 12.25" hole. 9.625" 36# K55 STC casing. 0 to 350' MD. Change Intermediate to a 8.75" hole. 7" 26# K55 LTC casing. 0 to 5949' MD. Change Production to a 6.125" hole. 4.5" 11.6# P110 BTC casing. TOL: 5799' BOL: 13508' MD. Attachments: new calculated slurry volumes and proposed wellbore diagram with new FTP target.

NOI Attachments

Procedure Description

428H_Casing___Cement_Rev3_202402141114139.pdf

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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: FEB 14, 2024 11:41 AM

Name: ENDURING RESOURCES LLC

Title: Regulatory Specialist

Street Address: 1 ROAD 3263

City: AZTECState: 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: 02/21/2024

Signature: Kenneth Rennick

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

Note: Surface hole may be drilled, cased, and cemented with a smaller rig in advance of the drilling rig.

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	1,173	110,988	110,988
Min. S.F.					13.21	3.00	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

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

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

350 ft (MD)	to	5,949 ft (MD)	Hole Section Length:	5,599 ft
350 ft (TVD)	to	5,489 ft (TVD)	Casing Required:	5,949 ft

Fluid:	Type	MW (ppg)	FL (mL/30 min)	PV (cp)	YP (lb/100 sqft)	pH	Comments
	LSND (KCl)	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					2,398	1,464	234,883	234,883
Min. S.F.					1.80	3.40	1.77	1.56

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

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	538	1,151
Tail	Type III	14.6	1.380	6.64	20%	4,624	180	248

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.

5,949 ft (MD)	to	13,508 ft (MD)	Hole Section Length:	7,559 ft
5,489 ft (TVD)	to	5,451 ft (TVD)	Casing Required:	7,709 ft
Estimated KOP:		5,149 ft (MD)	4,925 ft (TVD)	
Estimated Liner Top:		5,799 ft (MD)	5,444 ft (TVD)	
Estimated Landing Point (FTP):		5,849 ft (MD)	5,463 ft (TVD)	
Estimated Lateral Length:		7,659 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

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					2,693	8,812	235,212	235,212
Min. S.F.					2.81	1.21	1.56	1.64

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

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%	5,799	636	993

Displacement 177 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 0.3% 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	FP24 Defoamer .3% BWOB, IntegraSeal 0.25 lb/sx

WELL NAME: Haynes Canyon Unit 428H

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

API Number: 30-039-31443

AFE Number: Not yet assigned

ER Well Number: Not yet assigned

State: New Mexico

County: San Juan

Surface Elev.: 6,703 ft ASL (GL) 6,728 ft ASL (KB)
Surface Location: 3-23-6 Sec-Twn- Rng 903 ft FSL 429 ft FWL
BH Location: 15-23-6 Sec-Twn- Rng 204 ft FNL 240 ft FEL

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

South on US Hwy 550 for 53.8 miles to MM 97.6; Left (North) on CR #379 (State Hwy 403) for 1.3 miles to fork; Right (North) remaining on CR #379 for 1.5 miles to location access on left; Haynes Canyon Unit 428H Pad. From East to West 430H, 428H, 442H, 440H).

QUICK REFERENCE	
Sur TD (MD)	350 ft
Int TD (MD)	5,949 ft
KOP (MD)	5,149 ft
KOP (TVD)	4,925 ft
Target (TVD)	5,463 ft
Curve BUR	10 °/100 ft
POE (MD)	5,849 ft
TD (MD)	13,508 ft
Lat Len (ft)	7,659 ft

WELL CONSTRUCTION SUMMARY:

	Hole (in)	TD MD (ft)	Csg (in)	Csg (lb/ft)	Csg (grade)	Csg (conn)	Csg Top (ft)	Csg Bot (ft)
Surface	12.250	350	9.625	36	K-55	STC	0	350
Intermediate	8.750	5,949	7	26.0	K-55	LTC	0	5,949
Production	6.125	13,508	4.500	11.6	P-110	BTC	5,799	13,508

CEMENT PROPERTIES SUMMARY:

	Type	Wt (ppg)	Yd (cuft/sk)	Wtr (gal/sk)	Hole Cap. (cuft/ft)	% Excess	TOC (ft MD)	Total (sx)
Surface	TYPE I-II	14.5	1.61	7.41	0.3132	50%	0	114
Inter. (Lead)	III:POZ Blend	12.5	2.14	12.05	0.1668	70%	0	538
Inter. (Tail)	Type III	14.6	1.38	6.64	0.1503	20%	4,624	180
Prod. (Lead)	0	0	0.000	0	0.1044	0%	0	0
Prod. (Tail)	G:POZ blend	13.3	1.560	7.7	0.0873	30%	5,799	636

COMPLETION / PRODUCTION SUMMARY:

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

Tops	TVD (ft KB)	MD (ft KB)
Ojo Alamo	1,403	1,403
Kirtland	1,503	1,503
Fruitland	1,728	1,732
Pictured Cliffs	1,963	1,977
Lewis	2,113	2,340
Chacra	2,408	2,463
Cliff House	3,518	3,679
Menefee	3,524	3,685
Point Lookout	4,225	4,493
Mancos	4,500	4,724
Gallup (MNCS_A)	4,840	5,064
MNCS_B	4,925	5,154
MNCS_C	5,065	5,291
MNCS_Cms	5,130	5,359
MNCS_D	5,205	5,441
MNCS_E	5,289	5,544
MNCS_F	5,334	5,605
MNCS_G	5,418	5,743
MNCS_H	5,458	5,833
MNCS_I	0	0
FTP TARGET	5,463	5,849
PROJECTED TD	5,451	13,508

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 316719

CONDITIONS

Operator: ENDURING RESOURCES, LLC 6300 S Syracuse Way, Suite 525 Centennial, CO 80111	OGRID: 372286
	Action Number: 316719
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

Created By	Condition	Condition Date
ward.rikala	All original COA's still apply. If cement is not circulated to surface during cementing operations, then a CBL is required.	3/4/2024