U.S. Department of the Interior
BUREAU OF LAND MANAGEMENT

Sundry Print Report

02/12/2024

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: 2773881

Type of Submission: Notice of Intent

Type of Action: APD Change

Date Sundry Submitted: 02/07/2024

Time Sundry Submitted: 10:52

Date proposed operation will begin: 02/07/2024

Procedure Description: Original APD approved on 12/05/2023. The subject well is located in Enduring's Haynes Canyon Unit. Original plans were to drill a 7210-ft lateral. Enduring is seeking approval to extend the lateral to 7659-ft changing the proposed depth from 5451' / 13059' to 5463' / 13508', adjusting the BHL & increasing the dedicated acres from 480 to 560. Attached please find an updated C102 Well Location and Acreage Dedication Plat and a revised Horizontal Directional Drilling Plan with new casing and cement assumptions. 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, well, and other property interests will continue to be held in their current entity names.

NOI Attachments

Procedure Description

Hz_Directional_Drilling_Plan_20240207105242.pdf

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Well Location: T23N / R6W / SEC 3 / SWSW /

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Operator: ENDURING RESOURCES LLC

Conditions of Approval

Additional

Enduring_Haynes_Canyon_Unit_428H_BHL_Change_2773881_MHK_20240212120909.pdf

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 07, 2024 10:52 AM

Name: ENDURING RESOURCES 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: MATTHEW H KADE

BLM POC Title: Petroleum Engineer

BLM POC Phone: 5055647736

BLM POC Email Address: MKADE@BLM.GOV

Disposition: Approved

Disposition Date: 02/12/2024

Signature: Matthew Kade

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

District II
811 S. First Street, Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720

District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170

District IV
1220 S. St. Francis Drive, Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462

State of New Mexico
Energy, Minerals & Natural Resources Department
OIL CONSERVATION DIVISION
1220 South St. Francis Drive
Santa Fe, NM 87505

Form C-102
Revised August 1, 2011
Submit one copy to Appropriate District Office
☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

1 API Number	2 Pool Code	3 Pool Name
30-039-31443	13379	COUNSELOR GALLUP-DAKOTA OIL POOL

4 Property Code	5 Property Name	6 Well Number
335063	HAYNES CANYON UNIT	428H

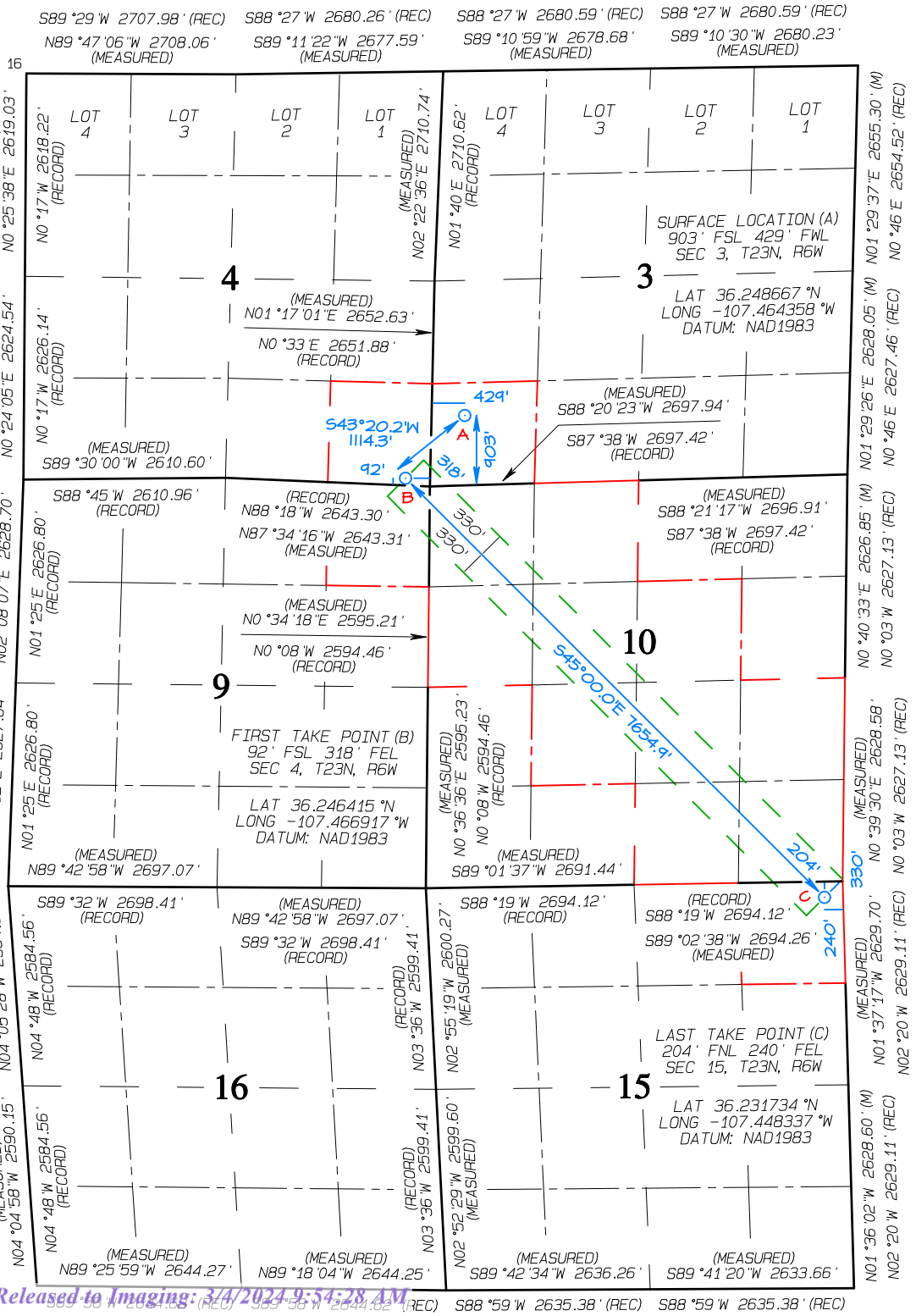
7 OGRID No.	8 Operator Name	9 Elevation
372286	ENDURING RESOURCES, LLC	6703'

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
M	3	23N	6W		903	SOUTH	429	WEST	RIO ARRIBA

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
A	15	23N	6W		204	NORTH	240	EAST	RIO ARRIBA



12 Dedicated Acres: 560.0 Acres
SW/4 SW/4 - Section 3
SE/4 SE/4 - Section 4
NE/4 NE/4 - Section 9
NE/4 SW/4, SW/4 NE/4
NW/4, SE/4 - Section 10
NE/4 NE/4 - Section 15

13 Joint or Infill | 14 Consolidation Code

15 Order No.

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

17 OPERATOR CERTIFICATION

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 02/07/24
Signature Date

Shaw-Marie Ford
Printed Name

sford@djrllc.com
E-mail Address

18 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.

Date Revised: OCTOBER 24, 2023
Survey Date: JANUARY 12, 2023

Signature and Seal of Professional Surveyor

JASON C. EDWARDS
NEW MEXICO
15269
REGISTERED PROFESSIONAL SURVEYOR

JASON C. EDWARDS
Certificate Number 15269

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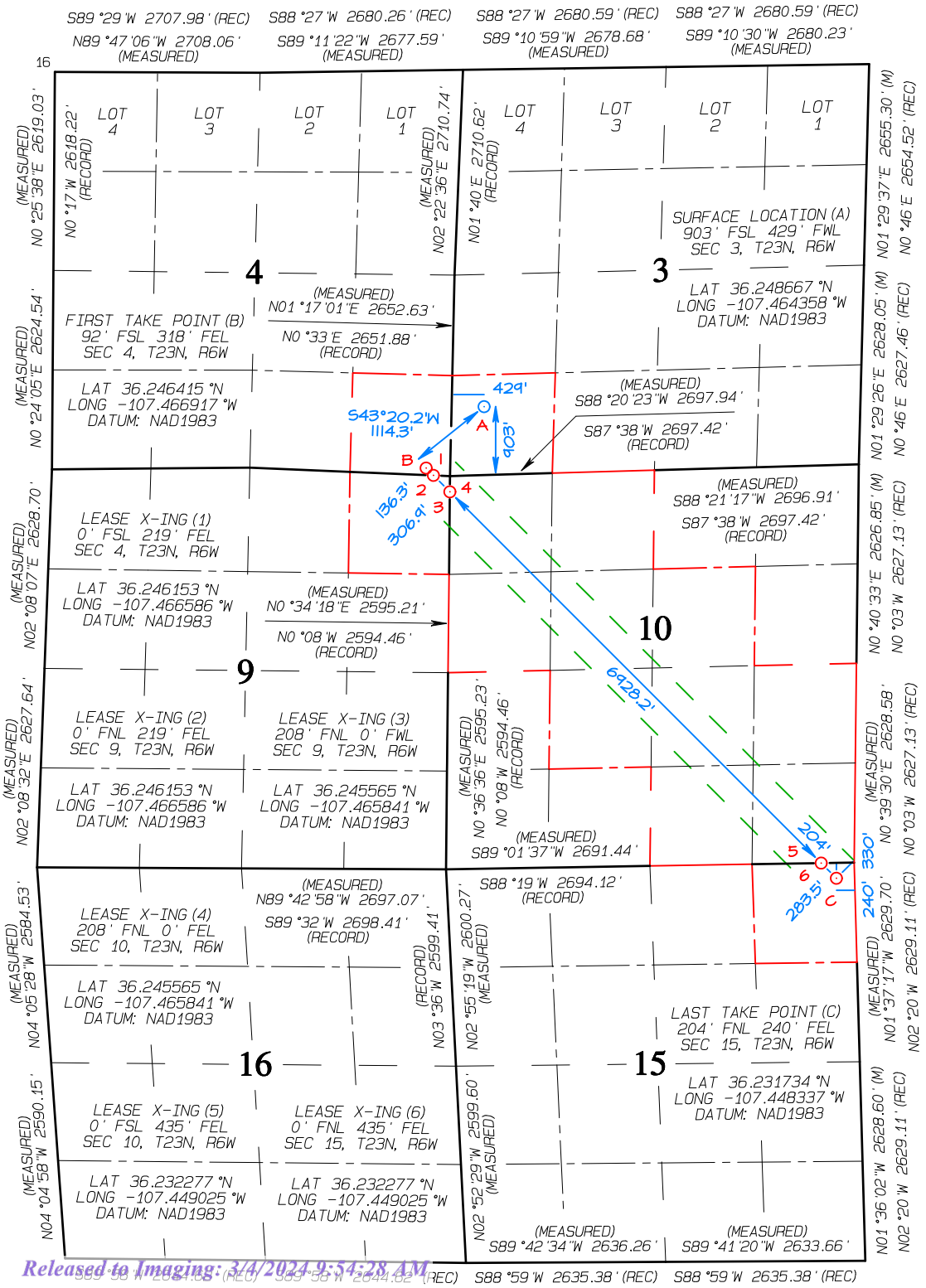

12 Dedicated Acres	560.0 Acres
	SW/4 SW/4 - Section 3 SE/4 SE/4 - Section 4 NE/4 NE/4 - Section 9 NE/4 SW/4, SW/4 NE/4 NW/4, SE/4 - Section 10 NE/4 NE/4 - Section 15

13 Joint or Infill	14 Consolidation Code

15 Order No.

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Shaw-Marie Ford — Signature
02/07/24 — Date
Shaw-Marie Ford — Printed Name
sford@djrllc.com — E-mail Address

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Date Revised: OCTOBER 24, 2023
Survey Date: JANUARY 12, 2023

Signature and Seal of Professional Surveyor

JASON C. EDWARDS
NEW MEXICO
15269
REGISTERED PROFESSIONAL SURVEYOR

JASON C. EDWARDS
Certificate Number 15269

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

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

WELL INFORMATION:

Name: **Haynes Canyon Unit 428H**
API Number: 30-039-31443
State: New Mexico
County: Rio Arriba
Surface Elevation: 6,703 ft ASL (GL) 6,728 ft ASL (KB)
Surface Location: 3-23-6 Sec-Twn-Rng 903 ft FSL 429 ft FWL
36.248667 ° N latitude 107.464358 ° W longitude (NAD 83)
BH Location: 15-23-6 Sec-Twn-Rng 204 ft FNL 240 ft FEL
36.231734 ° N latitude 107.448337 ° 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 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).

GEOLOGIC AND RESERVOIR INFORMATION:

Prognosis:

Formation Tops	TVD (ft ASL)	TVD (ft KB)	MD (ft KB)	O / G / W	Pressure
Ojo Alamo	5,325	1,403	1,403	W	normal
Kirtland	5,225	1,503	1,503	W	normal
Fruitland	5,000	1,728	1,732	G, W	sub
Pictured Cliffs	4,765	1,963	1,977	G, W	sub
Lewis	4,615	2,113	2,340	G, W	normal
Chacra	4,320	2,408	2,463	G, W	normal
Cliff House	3,210	3,518	3,679	G, W	sub
Menefee	3,204	3,524	3,685	G, W	normal
Point Lookout	2,503	4,225	4,493	G, W	normal
Mancos	2,228	4,500	4,724	O,G	sub (~0.38)
Gallup (MNCS_A)	1,888	4,840	5,064	O,G	sub (~0.38)
MNCS_B	1,803	4,925	5,154	O,G	sub (~0.38)
MNCS_C	1,663	5,065	5,291	O,G	sub (~0.38)
MNCS_Cms	1,598	5,130	5,359	O,G	sub (~0.38)
MNCS_D	1,523	5,205	5,441	O,G	sub (~0.38)
MNCS_E	1,439	5,289	5,544	O,G	sub (~0.38)
MNCS_F	1,394	5,334	5,605	O,G	sub (~0.38)
MNCS_G	1,310	5,418	5,743	O,G	sub (~0.38)
MNCS_H	1,270	5,458	5,833	O,G	sub (~0.38)
MNCS_I	0	0	0	O,G	sub (~0.38)
FTP TARGET	**1,265**	**5,463**	**5,849**	**O,G**	**sub (~0.38)**
PROJECTED LTP	**1,277**	**5,451**	**13,508**	**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: **2,350 psi**
Maximum anticipated surface pressure, assuming partially evacuated hole: **1,150 psi**
Temperature: **Maximum anticipated BHT is 125° F or less**

H_2S INFORMATION:

H_2S 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 9-5/8" casing to TD; gas detection from drillout of 13-3/8" casing to TD.

MWD / LWD: Gamma Ray from drillout of 13-3/8" casing to TD

Open Hole Logs: None planned

Testing: None planned

Coring: None planned

Cased Hole Logs: CBL on 5-1/2" 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 (13-5/8", 3,000 psi)

BOPE 2: Cameron annular (13-5/8", 5,000 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:

See attached diagram for details regarding BOPE specifications and configuration.

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 intalled 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 the 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 minimimize 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 for additional details. Sufficient barite will be on location to weight up mud system to balance maximum anticipated pressure gradient.

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: 17-1/2"

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	13.375	54.5	J-55	BTC	1,130	2,730	853,000	909,000
Loading					153	792	116,634	116,634
Min. S.F.					**7.39**	**3.45**	**7.31**	**7.79**

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)
	TYPE III	14.6	1.39	6.686	0.6946	100%	0	364

Annular Capacity	0.6946	cuft/ft	13-3/8" casing x 17-1/2" hole annulus			Csg capacity	0.8680	ft3/ft
Drake Energy Services:	Calculated cement volumes assume gauge hole and the excess noted in table							Cu Ft Slurry
Tail	ASTM Type III Blend	Calcium Chloride 2% BWOC Accelerator	D-CD2 .3% BWOC Dispersant/Friction reducer	.25 lbs/sx Cello Flake - seepage				505.3

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

350 ft (MD)	to	3,848 ft (MD)	Hole Section Length:	3,498 ft
350 ft (TVD)	to	3,674 ft (TVD)	Casing Required:	3,848 ft

Fluid:	Type	MW (ppg)	FL (mL/30 min)	PV (cp)	YP (lb/100 sqft)	pH	Comments
	LSND (5% KCl)	8.8 - 9.5	20	8 - 14	8 - 14	9.0 - 9.5	No OBM

Hole Size: 12-1/4"

Bit / Motor: 12-1/4" PDC bit w/mud motor

Logging: None

Casing Specs:		Wt (lb/ft)	Grade	Conn.	Collapse (psi)	Burst (psi)	Tens. Body (lbs)	Tens. Conn (lbs)
Specs	9.625	36.0	J-55	LTC	2,020	3,520	564,000	453,000
Loading					1,605	1,360	215,341	215,341
Min. S.F.					**1.26**	**2.59**	**2.62**	**2.10**

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)
Stage 1	Spacer	D-Mud Breaker	8.5				0	10 bbls	
	Lead	90:10 Type III:POZ	12.5	2.140	12.05	70%	0	805	1,723
	Tail	Type III	14.6	1.380	6.64	20%	3,348	150	207
	Displacement	294	est bbls						

Annular Capacity	0.3627	cuft/ft	9-5/8" casing x 13-3/8" casing annulus		
	0.3132	cuft/ft	9-5/8" casing x 12-1/4" hole annulus	9-5/8" 36# ID	8.921
	0.4341	cuft/ft	9-5/8" casing vol	est shoe jt ft	44

Calculated cement volumes assume gauge hole and the excess (open hole only) noted in table

Spacer	D-Mud Breaker	SAPP						
Lead	ASTM Type III 90/10 Poz	D-CSE 1 5.0% BWOC Strength Enhancer	D-MPA-1 .4% BWOC Fluid Loss & Gas Migration Control	D-SA 1 1.4% BWOC Na Metasilicate	D-CD 2 .4% BWOC Dispersant	Cello Flace LCM .25 lb/sx	D-FP1 0.5% BWOC Defoamer	D-R1 .5% Retarder
Tail	ASTM Type III Blend		D-MPA-1 .4% BWOC Fluid Loss & Gas Migration Control		D-CD 2 .5% BWOC Dispersant	Cello Flace LCM .25 lb/sx		D-R1 .2% Retarder

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

3,848	ft (MD)	to	13,508	ft (MD)	Hole Section Length: 9,660 ft
3,674	ft (TVD)	to	5,451	ft (TVD)	Casing Required: 13,508 ft

Estimated KOP:	5,149	ft (MD)	4,925	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)	WPS ppm	HTHP	YP (lb/100 sqft)	ES	OWR	Comment
	OBM	8.0 - 9.0	120,000 CaCl	NC	±6	+300	80:20	WBM as contingency

Hole Size: 8-1/2"

Bit / Motor: 8-1/2" PDC bit w/mud motor

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

Casing Specs:	Size (in)	Wt (lb/ft)	Grade	Conn.	Collapse (psi)	Burst (psi)	Tens. Body (lbs)	Tens. Conn (lbs)
Specs	5.500	17.0	P-110	LTC	7,460	10,640	546,000	445,000
Loading					2,693	9,010	298,155	298,155
Min. S.F.					**2.77**	**1.18**	**1.83**	**1.49**

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

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	
Lead	ASTM type I/II	12.4	2.370	13.40	50%	0	564	1,337
Tail	G:POZ blend	13.3	1.570	7.70	10%	4,724	1,410	2,214

Displacement	119	est bbls			
Annular Capacity	0.2691	cuft/ft	5-1/2" casing x 9-5/8" casing annulus		
	0.2291	cuft/ft	5-1/2" casing x 8-1/2" hole annulus		
	0.1245	cuft/ft	5-1/2" casing vol	est shoe jt ft	100

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	R3 Retarder .5% BWOB	FP24 Defoamer .3% BWOB, IntegraSeal 0.25 lb/sx

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

COMPLETION AND PRODUCTION PLAN:

Est Lateral Length: 7,559

Est Frac Inform: 31 Frac Stages 121,000 bbls slick water 9,830,000 lbs proppant

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: 11/1/2023

Completion: 12/31/2023

Production: 2/14/2024

Prepared by:	Alec Bridge	12/20/2021
Updated:	Greg Olson	2/20/2023
	Greg Olson	3/27/2023
	G Olson	7/1/2023
	G Olson	2/6/2024

WELL NAME: Haynes Canyon Unit 428H

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

API Number: *30-039-31443*

AFE Number: *Not yet assigned*

ER Well Number: *Not yet assigned*

State: New Mexico

County: Rio Arriba

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)	3,848	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	17.500	350	13.375	54.5	J-55	BTC	0	350
Intermediate	12.250	3,848	9.625	36.0	J-55	LTC	0	3,848
Production	8.500	13,508	5.500	17.0	P-110	LTC	0	13,508

CEMENT PROPERTIES SUMMARY:

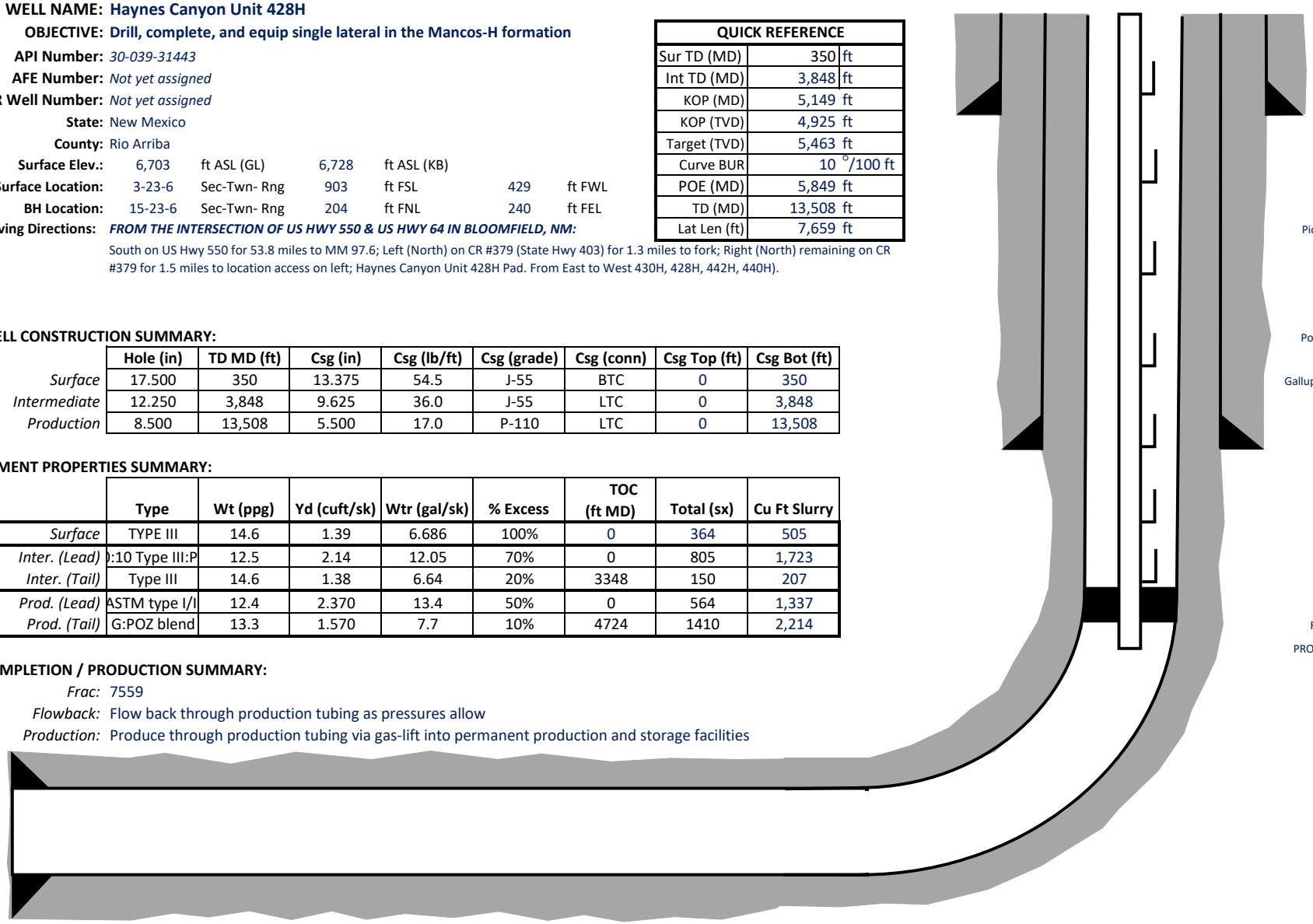
	Type	Wt (ppg)	Yd (cuft/sk)	Wtr (gal/sk)	% Excess	TOC (ft MD)	Total (sx)	Cu Ft Slurry
Surface	TYPE III	14.6	1.39	6.686	100%	0	364	505
Inter. (Lead)	):10 Type III:P	12.5	2.14	12.05	70%	0	805	1,723
Inter. (Tail)	Type III	14.6	1.38	6.64	20%	3348	150	207
Prod. (Lead)	ASTM type I/I	12.4	2.370	13.4	50%	0	564	1,337
Prod. (Tail)	G:POZ blend	13.3	1.570	7.7	10%	4724	1410	2,214

COMPLETION / PRODUCTION SUMMARY:

Frac: 7559

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 LTP	5,451	13,508

Well: Haynes Canyon Unit 428H
Site: Haynes Canyon Unit (428,430,440 & 442)
Project: Rio Arriba County, New Mexico NAD83 NM C
Design: rev1
Rig:

DESIGN TARGET DETAILS

Name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
Haynes 428 FTP 92 FSL 318 FEL r1	5498.00	-810.36	-764.87	1911214.93	1281588.88	36.24641500	-107.46691700
Haynes 428 LTP 204 FNL 240 FEL r1	5451.00	-6223.13	4647.91	1905802.16	1287001.65	36.23173400	-107.44833700

Section Details

Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSect	Annotation
1	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
2	1300.00	0.00	0.00	1300.00	0.00	0.00	0.00	0.00	0.00	KOP Begin 3°/100' build
3	2099.91	24.00	242.20	2076.73	-76.99	-146.03	3.00	242.20	-48.83	Begin 24.00° tangent
4	4155.15	24.00	242.20	3954.32	-466.79	-885.42	0.00	0.00	-296.05	Begin 3°/100' drop
5	4955.06	0.00	360.00	4731.05	-543.78	-1031.45	3.00	180.00	-344.87	Begin vertical hold
6	5149.06	0.00	360.00	4925.05	-543.78	-1031.45	0.00	0.00	-344.87	Begin 10°/100' build
7	5849.06	70.00	135.00	5463.45	-810.36	-764.87	10.00	135.00	32.12	FTP @ 70° inc @ 5849.06 MD 5463.45 TVD
8	6052.67	90.36	135.00	5498.00	-951.48	-623.75	10.00	0.00	231.70	Begin 90.36° lateral
9	13508.07	90.36	135.00	5451.00	-6223.13	4647.91	0.00	0.00	7686.95	PBHL @ 13508.07 MD 5451.00 TVD

Geodetic System: US State Plane 1983
Datum: North American Datum 1983
Ellipsoid: GRS 1980
Zone: New Mexico Central Zone
System Datum: Mean Sea Level
Depth Reference: RKB=6703+25 @ 6728.00ft
Surface location:

Northing	Easting	Latittude	Longitude
1912025.28	1282353.75	36.24866700	-107.46435800

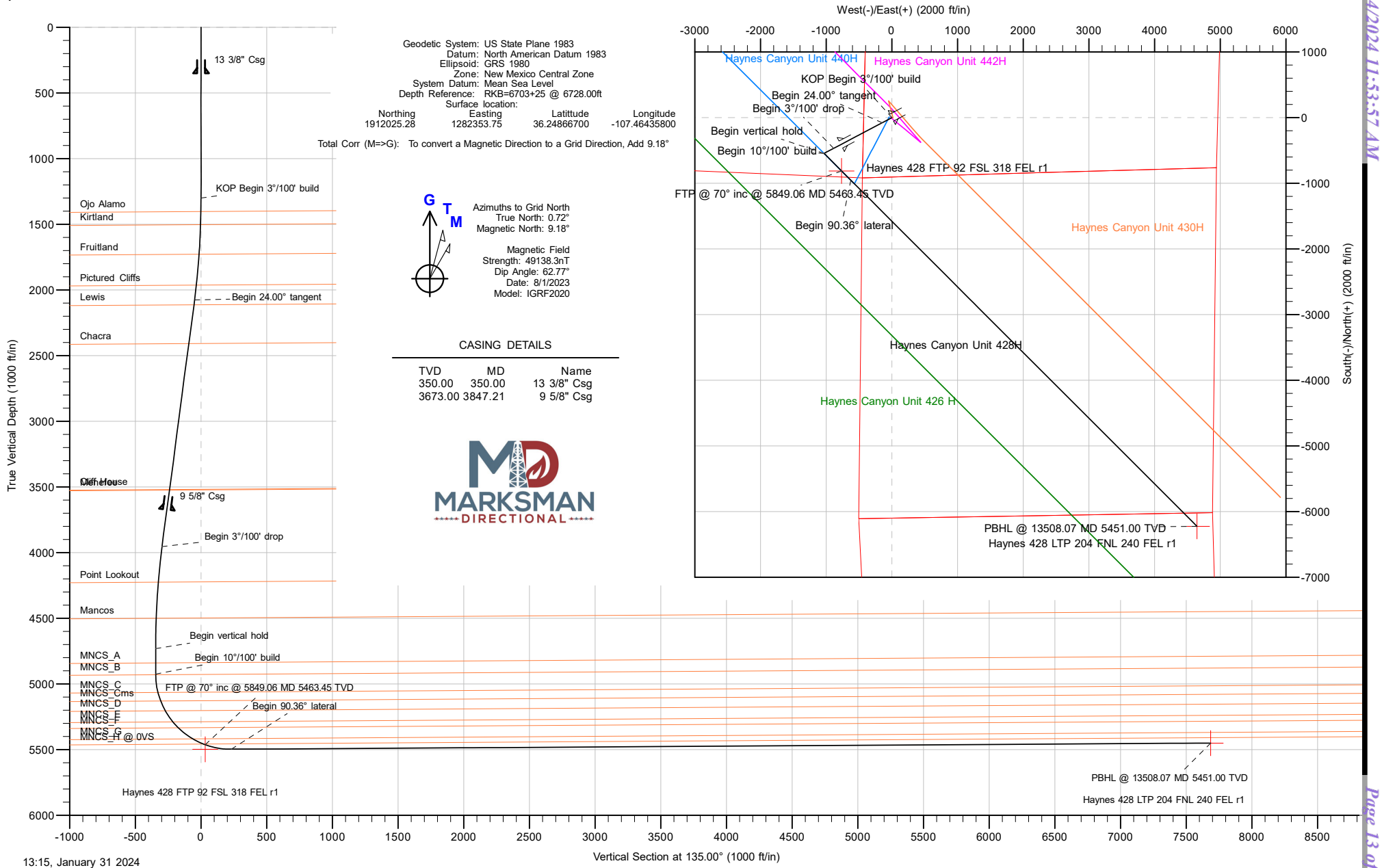
Total Corr (M=>G): To convert a Magnetic Direction to a Grid Direction, Add 9.18°

Azimuths to Grid North
True North: 0.72°
Magnetic North: 9.18°

Magnetic Field
Strength: 49138.3nT
Dip Angle: 62.77°
Date: 8/1/2023
Model: IGRF2020

CASING DETAILS

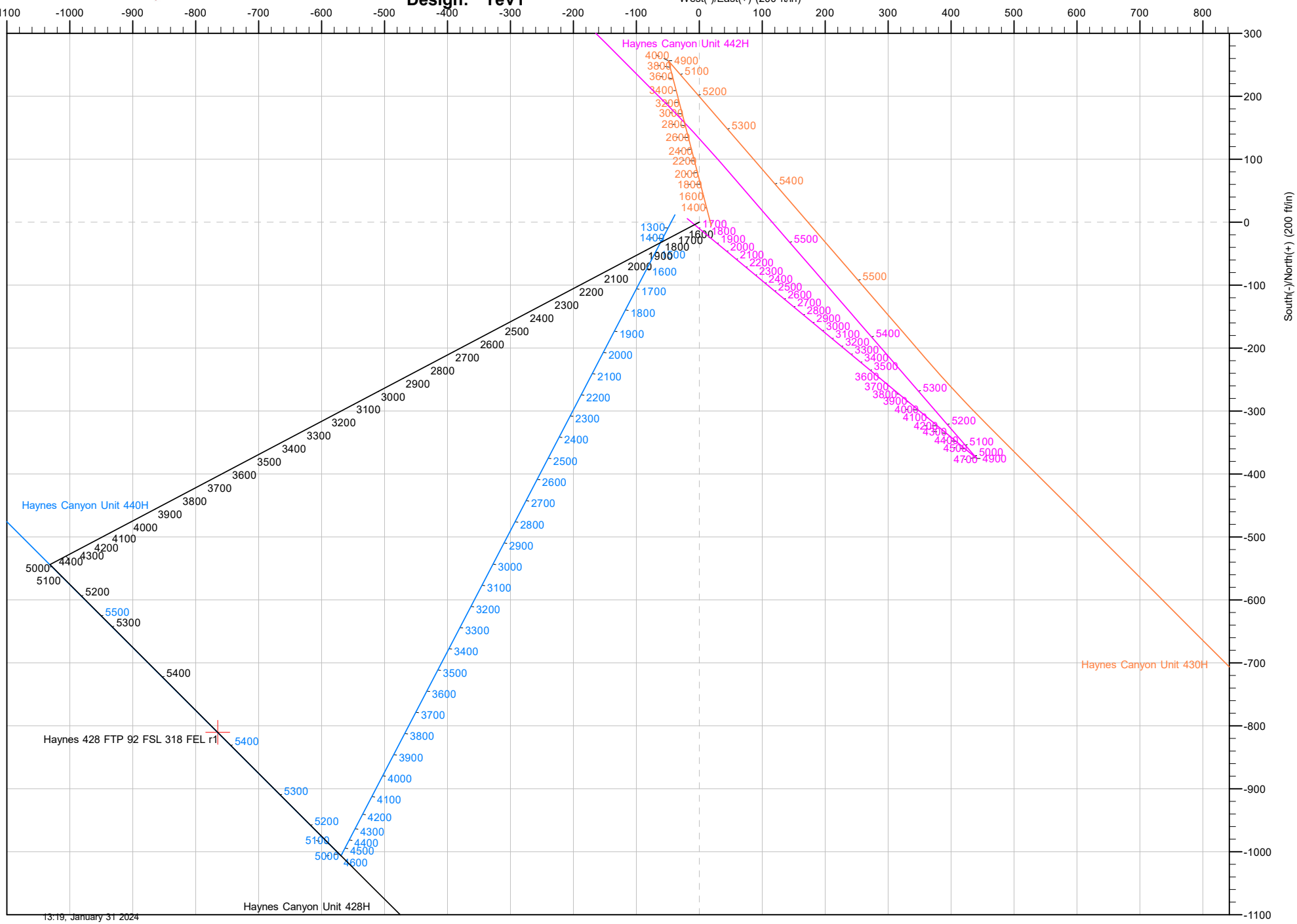
TVD	MD	Name
350.00	350.00	13 3/8" Csg
3673.00	3847.21	9 5/8" Csg



13:15, January 31 2024

Well: Haynes Canyon Unit 428H
Site: Haynes Canyon Unit (428,430,440 & 442)
Project: Rio Arriba County, New Mexico NAD83 NM C
Design: rev1

MARKSMAN DIRECTIONAL



Planning Report

Database:	DT_Jan1924v17	**Local Co-ordinate Reference:**	Well Haynes Canyon Unit 428H
Company:	Enduring Resources LLC	**TVD Reference:**	RKB=6703+25 @ 6728.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM C	**MD Reference:**	RKB=6703+25 @ 6728.00ft
Site:	Haynes Canyon Unit (428,430,440 & 442)	**North Reference:**	Grid
Well:	Haynes Canyon Unit 428H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Project Rio Arriba County, New Mexico NAD83 NM C

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Central Zone		

Site Haynes Canyon Unit (428,430,440 & 442)

Site Position:		**Northing:**	1,912,025.28 usft	**Latitude:**	36.24866700
From:	Lat/Long	**Easting:**	1,282,353.75 usft	**Longitude:**	-107.46435800
Position Uncertainty:	0.00 ft	**Slot Radius:**	13-3/16 "		

Well Haynes Canyon Unit 428H, Surf loc: 903 FSL 429 FWL Section 03-T23N-R06W

Well Position	**+N/-S**	0.00 ft	**Northing:**	1,912,025.28 usft	**Latitude:**	36.24866700
	+E/-W	0.00 ft	**Easting:**	1,282,353.75 usft	**Longitude:**	-107.46435800
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	6,703.00 ft
Grid Convergence:		-0.72 °				

Wellbore Original Hole

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	8/1/2023	8.46	62.77	49,138.30694754

Design rev1

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	135.00

Plan Survey Tool Program **Date** 1/31/2024

	Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	13,508.02	rev1 (Original Hole)	MWD	
				OWSG MWD - Standard	

Planning Report

Database:	DT_Jan1924v17	**Local Co-ordinate Reference:**	Well Haynes Canyon Unit 428H
Company:	Enduring Resources LLC	**TVD Reference:**	RKB=6703+25 @ 6728.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM C	**MD Reference:**	RKB=6703+25 @ 6728.00ft
Site:	Haynes Canyon Unit (428,430,440 & 442)	**North Reference:**	Grid
Well:	Haynes Canyon Unit 428H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,099.91	24.00	242.20	2,076.73	-76.99	-146.03	3.00	3.00	0.00	242.20	
4,155.15	24.00	242.20	3,954.32	-466.79	-885.42	0.00	0.00	0.00	0.00	
4,955.06	0.00	360.00	4,731.05	-543.78	-1,031.45	3.00	-3.00	0.00	180.00	
5,149.06	0.00	360.00	4,925.05	-543.78	-1,031.45	0.00	0.00	0.00	0.00	
5,849.06	70.00	135.00	5,463.45	-810.36	-764.87	10.00	10.00	0.00	135.00	
6,052.67	90.36	135.00	5,498.00	-951.48	-623.75	10.00	10.00	0.00	0.00	
13,508.07	90.36	135.00	5,451.00	-6,223.13	4,647.91	0.00	0.00	0.00	0.00	Haynes 428 LTP 204

Planning Report

Database:	DT_Jan1924v17	**Local Co-ordinate Reference:**	Well Haynes Canyon Unit 428H
Company:	Enduring Resources LLC	**TVD Reference:**	RKB=6703+25 @ 6728.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM C	**MD Reference:**	RKB=6703+25 @ 6728.00ft
Site:	Haynes Canyon Unit (428,430,440 & 442)	**North Reference:**	Grid
Well:	Haynes Canyon Unit 428H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.00	100.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.00	200.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.00	300.00	0.00	0.00	0.00	0.00	0.00	0.00
350.00	0.00	0.00	350.00	0.00	0.00	0.00	0.00	0.00	0.00
13 3/8" Csg									
400.00	0.00	0.00	400.00	0.00	0.00	0.00	0.00	0.00	0.00
500.00	0.00	0.00	500.00	0.00	0.00	0.00	0.00	0.00	0.00
600.00	0.00	0.00	600.00	0.00	0.00	0.00	0.00	0.00	0.00
700.00	0.00	0.00	700.00	0.00	0.00	0.00	0.00	0.00	0.00
800.00	0.00	0.00	800.00	0.00	0.00	0.00	0.00	0.00	0.00
900.00	0.00	0.00	900.00	0.00	0.00	0.00	0.00	0.00	0.00
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00
1,100.00	0.00	0.00	1,100.00	0.00	0.00	0.00	0.00	0.00	0.00
1,200.00	0.00	0.00	1,200.00	0.00	0.00	0.00	0.00	0.00	0.00
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00
KOP Begin 3°/100' build									
1,400.00	3.00	242.20	1,399.95	-1.22	-2.32	-0.77	3.00	3.00	0.00
1,403.06	3.09	242.20	1,403.01	-1.30	-2.46	-0.82	3.00	3.00	0.00
Ojo Alamo									
1,500.00	6.00	242.20	1,499.63	-4.88	-9.26	-3.09	3.00	3.00	0.00
1,503.40	6.10	242.20	1,503.02	-5.05	-9.57	-3.20	3.00	3.00	0.00
Kirtland									
1,600.00	9.00	242.20	1,598.77	-10.97	-20.80	-6.95	3.00	3.00	0.00
1,700.00	12.00	242.20	1,697.08	-19.46	-36.92	-12.34	3.00	3.00	0.00
1,731.76	12.95	242.20	1,728.09	-22.66	-42.99	-14.37	3.00	3.00	0.00
Fruitland									
1,800.00	15.00	242.20	1,794.31	-30.35	-57.57	-19.25	3.00	3.00	0.00
1,900.00	18.00	242.20	1,890.18	-43.59	-82.69	-27.65	3.00	3.00	0.00
1,977.33	20.32	242.20	1,963.22	-55.43	-105.14	-35.15	3.00	3.00	0.00
Pictured Cliffs									
2,000.00	21.00	242.20	1,984.43	-59.16	-112.21	-37.52	3.00	3.00	0.00
2,099.91	24.00	242.20	2,076.73	-76.99	-146.03	-48.83	3.00	3.00	0.00
Begin 24.00° tangent									
2,139.98	24.00	242.20	2,113.34	-84.59	-160.45	-53.65	0.00	0.00	0.00
Lewis									
2,200.00	24.00	242.20	2,168.17	-95.97	-182.04	-60.87	0.00	0.00	0.00
2,300.00	24.00	242.20	2,259.52	-114.94	-218.01	-72.89	0.00	0.00	0.00
2,400.00	24.00	242.20	2,350.88	-133.90	-253.99	-84.92	0.00	0.00	0.00
2,463.16	24.00	242.20	2,408.58	-145.88	-276.71	-92.52	0.00	0.00	0.00
Chacra									
2,500.00	24.00	242.20	2,442.24	-152.87	-289.96	-96.95	0.00	0.00	0.00
2,600.00	24.00	242.20	2,533.59	-171.84	-325.94	-108.98	0.00	0.00	0.00
2,700.00	24.00	242.20	2,624.95	-190.80	-361.92	-121.01	0.00	0.00	0.00
2,800.00	24.00	242.20	2,716.30	-209.77	-397.89	-133.04	0.00	0.00	0.00
2,900.00	24.00	242.20	2,807.66	-228.74	-433.87	-145.07	0.00	0.00	0.00
3,000.00	24.00	242.20	2,899.02	-247.70	-469.84	-157.10	0.00	0.00	0.00
3,100.00	24.00	242.20	2,990.37	-266.67	-505.82	-169.13	0.00	0.00	0.00
3,200.00	24.00	242.20	3,081.73	-285.63	-541.80	-181.15	0.00	0.00	0.00
3,300.00	24.00	242.20	3,173.09	-304.60	-577.77	-193.18	0.00	0.00	0.00
3,400.00	24.00	242.20	3,264.44	-323.57	-613.75	-205.21	0.00	0.00	0.00
3,500.00	24.00	242.20	3,355.80	-342.53	-649.72	-217.24	0.00	0.00	0.00
3,600.00	24.00	242.20	3,447.16	-361.50	-685.70	-229.27	0.00	0.00	0.00

Planning Report

Database:	DT_Jan1924v17	**Local Co-ordinate Reference:**	Well Haynes Canyon Unit 428H
Company:	Enduring Resources LLC	**TVD Reference:**	RKB=6703+25 @ 6728.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM C	**MD Reference:**	RKB=6703+25 @ 6728.00ft
Site:	Haynes Canyon Unit (428,430,440 & 442)	**North Reference:**	Grid
Well:	Haynes Canyon Unit 428H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

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)
3,679.19	24.00	242.20	3,519.50	-376.52	-714.19	-238.79	0.00	0.00	0.00
Cliff House									
3,684.67	24.00	242.20	3,524.50	-377.56	-716.16	-239.45	0.00	0.00	0.00
Menefee									
3,700.00	24.00	242.20	3,538.51	-380.47	-721.68	-241.30	0.00	0.00	0.00
3,800.00	24.00	242.20	3,629.87	-399.43	-757.65	-253.33	0.00	0.00	0.00
3,847.21	24.00	242.20	3,673.00	-408.39	-774.64	-259.01	0.00	0.00	0.00
9 5/8" Csg									
3,900.00	24.00	242.20	3,721.23	-418.40	-793.63	-265.36	0.00	0.00	0.00
4,000.00	24.00	242.20	3,812.58	-437.37	-829.60	-277.38	0.00	0.00	0.00
4,100.00	24.00	242.20	3,903.94	-456.33	-865.58	-289.41	0.00	0.00	0.00
4,155.15	24.00	242.20	3,954.32	-466.79	-885.42	-296.05	0.00	0.00	0.00
Begin 3°/100' drop									
4,200.00	22.65	242.20	3,995.51	-475.08	-901.13	-301.30	3.00	-3.00	0.00
4,300.00	19.65	242.20	4,088.76	-491.90	-933.05	-311.97	3.00	-3.00	0.00
4,400.00	16.65	242.20	4,183.77	-506.43	-960.60	-321.18	3.00	-3.00	0.00
4,442.94	15.36	242.20	4,225.04	-511.95	-971.07	-324.69	3.00	-3.00	0.00
Point Lookout									
4,500.00	13.65	242.20	4,280.28	-518.62	-983.72	-328.91	3.00	-3.00	0.00
4,600.00	10.65	242.20	4,378.03	-528.43	-1,002.34	-335.14	3.00	-3.00	0.00
4,700.00	7.65	242.20	4,476.75	-535.85	-1,016.41	-339.84	3.00	-3.00	0.00
4,723.59	6.94	242.20	4,500.14	-537.25	-1,019.06	-340.73	3.00	-3.00	0.00
Mancos									
4,800.00	4.65	242.20	4,576.16	-540.85	-1,025.88	-343.01	3.00	-3.00	0.00
4,900.00	1.65	242.20	4,676.00	-543.41	-1,030.75	-344.64	3.00	-3.00	0.00
4,955.06	0.00	360.00	4,731.05	-543.78	-1,031.45	-344.87	3.00	-3.00	0.00
Begin vertical hold									
5,000.00	0.00	0.00	4,775.99	-543.78	-1,031.45	-344.87	0.00	0.00	0.00
5,064.18	0.00	0.00	4,840.17	-543.78	-1,031.45	-344.87	0.00	0.00	0.00
MNCS_A									
5,100.00	0.00	0.00	4,875.99	-543.78	-1,031.45	-344.87	0.00	0.00	0.00
5,149.06	0.00	0.00	4,925.05	-543.78	-1,031.45	-344.87	0.00	0.00	0.00
Begin 10°/100' build									
5,154.18	0.51	135.00	4,930.17	-543.80	-1,031.43	-344.85	10.00	10.00	0.00
MNCS_B									
5,200.00	5.09	135.00	4,975.92	-545.38	-1,029.85	-342.61	10.00	10.00	0.00
5,250.00	10.09	135.00	5,025.47	-550.05	-1,025.18	-336.01	10.00	10.00	0.00
5,290.50	14.14	135.00	5,065.06	-556.06	-1,019.17	-327.50	10.00	10.00	0.00
MNCS_C									
5,300.00	15.09	135.00	5,074.25	-557.76	-1,017.47	-325.11	10.00	10.00	0.00
5,350.00	20.09	135.00	5,121.90	-568.44	-1,006.79	-310.00	10.00	10.00	0.00
5,358.58	20.95	135.00	5,129.93	-570.57	-1,004.66	-306.99	10.00	10.00	0.00
MNCS_Cms									
5,400.00	25.09	135.00	5,168.04	-582.02	-993.21	-290.79	10.00	10.00	0.00
5,441.22	29.22	135.00	5,204.71	-595.32	-979.91	-271.99	10.00	10.00	0.00
MNCS_D									
5,450.00	30.09	135.00	5,212.34	-598.39	-976.84	-267.64	10.00	10.00	0.00
5,500.00	35.09	135.00	5,254.45	-617.43	-957.80	-240.72	10.00	10.00	0.00
5,543.87	39.48	135.00	5,289.35	-636.22	-939.01	-214.15	10.00	10.00	0.00
MNCS_E									
5,550.00	40.09	135.00	5,294.06	-638.99	-936.24	-210.22	10.00	10.00	0.00
5,600.00	45.09	135.00	5,330.86	-662.91	-912.32	-176.39	10.00	10.00	0.00

Planning Report

Database:	DT_Jan1924v17	**Local Co-ordinate Reference:**	Well Haynes Canyon Unit 428H
Company:	Enduring Resources LLC	**TVD Reference:**	RKB=6703+25 @ 6728.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM C	**MD Reference:**	RKB=6703+25 @ 6728.00ft
Site:	Haynes Canyon Unit (428,430,440 & 442)	**North Reference:**	Grid
Well:	Haynes Canyon Unit 428H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

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)
5,604.60	45.55	135.00	5,334.09	-665.22	-910.01	-173.13	10.00	10.00	0.00
MNCS_F									
5,650.00	50.09	135.00	5,364.56	-689.01	-886.22	-139.49	10.00	10.00	0.00
5,700.00	55.09	135.00	5,394.93	-717.09	-858.14	-99.78	10.00	10.00	0.00
5,743.41	59.44	135.00	5,418.40	-742.90	-832.33	-63.27	10.00	10.00	0.00
MNCS_G									
5,750.00	60.09	135.00	5,421.72	-746.93	-828.30	-57.58	10.00	10.00	0.00
5,800.00	65.09	135.00	5,444.72	-778.30	-796.93	-13.21	10.00	10.00	0.00
5,833.38	68.43	135.00	5,457.89	-799.99	-775.24	17.46	10.00	10.00	0.00
MNCS_H @ 0VS									
5,849.06	70.00	135.00	5,463.45	-810.36	-764.87	32.12	10.00	10.00	0.00
FTP @ 70° inc @ 5849.06 MD 5463.45 TVD									
5,900.00	75.09	135.00	5,478.73	-844.71	-730.52	80.70	10.00	10.00	0.00
5,950.00	80.09	135.00	5,489.47	-879.22	-696.01	129.52	10.00	10.00	0.00
6,000.00	85.09	135.00	5,495.91	-914.27	-660.96	179.08	10.00	10.00	0.00
6,052.67	90.36	135.00	5,498.00	-951.48	-623.75	231.70	10.00	10.00	0.00
Begin 90.36° lateral									
6,100.00	90.36	135.00	5,497.70	-984.94	-590.29	279.02	0.00	0.00	0.00
6,200.00	90.36	135.00	5,497.07	-1,055.65	-519.58	379.02	0.00	0.00	0.00
6,300.00	90.36	135.00	5,496.44	-1,126.36	-448.87	479.02	0.00	0.00	0.00
6,400.00	90.36	135.00	5,495.81	-1,197.07	-378.16	579.02	0.00	0.00	0.00
6,500.00	90.36	135.00	5,495.18	-1,267.78	-307.45	679.01	0.00	0.00	0.00
6,600.00	90.36	135.00	5,494.55	-1,338.49	-236.74	779.01	0.00	0.00	0.00
6,700.00	90.36	135.00	5,493.92	-1,409.20	-166.03	879.01	0.00	0.00	0.00
6,800.00	90.36	135.00	5,493.29	-1,479.91	-95.32	979.01	0.00	0.00	0.00
6,900.00	90.36	135.00	5,492.66	-1,550.61	-24.61	1,079.01	0.00	0.00	0.00
7,000.00	90.36	135.00	5,492.02	-1,621.32	46.10	1,179.00	0.00	0.00	0.00
7,100.00	90.36	135.00	5,491.39	-1,692.03	116.80	1,279.00	0.00	0.00	0.00
7,200.00	90.36	135.00	5,490.76	-1,762.74	187.51	1,379.00	0.00	0.00	0.00
7,300.00	90.36	135.00	5,490.13	-1,833.45	258.22	1,479.00	0.00	0.00	0.00
7,400.00	90.36	135.00	5,489.50	-1,904.16	328.93	1,579.00	0.00	0.00	0.00
7,500.00	90.36	135.00	5,488.87	-1,974.87	399.64	1,678.99	0.00	0.00	0.00
7,600.00	90.36	135.00	5,488.24	-2,045.58	470.35	1,778.99	0.00	0.00	0.00
7,700.00	90.36	135.00	5,487.61	-2,116.29	541.06	1,878.99	0.00	0.00	0.00
7,800.00	90.36	135.00	5,486.98	-2,187.00	611.77	1,978.99	0.00	0.00	0.00
7,900.00	90.36	135.00	5,486.35	-2,257.71	682.48	2,078.99	0.00	0.00	0.00
8,000.00	90.36	135.00	5,485.72	-2,328.42	753.19	2,178.98	0.00	0.00	0.00
8,100.00	90.36	135.00	5,485.09	-2,399.13	823.90	2,278.98	0.00	0.00	0.00
8,200.00	90.36	135.00	5,484.46	-2,469.83	894.61	2,378.98	0.00	0.00	0.00
8,300.00	90.36	135.00	5,483.83	-2,540.54	965.32	2,478.98	0.00	0.00	0.00
8,400.00	90.36	135.00	5,483.20	-2,611.25	1,036.03	2,578.98	0.00	0.00	0.00
8,500.00	90.36	135.00	5,482.57	-2,681.96	1,106.74	2,678.97	0.00	0.00	0.00
8,600.00	90.36	135.00	5,481.94	-2,752.67	1,177.44	2,778.97	0.00	0.00	0.00
8,700.00	90.36	135.00	5,481.31	-2,823.38	1,248.15	2,878.97	0.00	0.00	0.00
8,800.00	90.36	135.00	5,480.68	-2,894.09	1,318.86	2,978.97	0.00	0.00	0.00
8,900.00	90.36	135.00	5,480.05	-2,964.80	1,389.57	3,078.97	0.00	0.00	0.00
9,000.00	90.36	135.00	5,479.42	-3,035.51	1,460.28	3,178.96	0.00	0.00	0.00
9,100.00	90.36	135.00	5,478.79	-3,106.22	1,530.99	3,278.96	0.00	0.00	0.00
9,200.00	90.36	135.00	5,478.16	-3,176.93	1,601.70	3,378.96	0.00	0.00	0.00
9,300.00	90.36	135.00	5,477.53	-3,247.64	1,672.41	3,478.96	0.00	0.00	0.00
9,400.00	90.36	135.00	5,476.90	-3,318.35	1,743.12	3,578.96	0.00	0.00	0.00
9,500.00	90.36	135.00	5,476.27	-3,389.05	1,813.83	3,678.95	0.00	0.00	0.00
9,600.00	90.36	135.00	5,475.64	-3,459.76	1,884.54	3,778.95	0.00	0.00	0.00

Planning Report

Database:	DT_Jan1924v17	**Local Co-ordinate Reference:**	Well Haynes Canyon Unit 428H
Company:	Enduring Resources LLC	**TVD Reference:**	RKB=6703+25 @ 6728.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM C	**MD Reference:**	RKB=6703+25 @ 6728.00ft
Site:	Haynes Canyon Unit (428,430,440 & 442)	**North Reference:**	Grid
Well:	Haynes Canyon Unit 428H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

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)
9,700.00	90.36	135.00	5,475.00	-3,530.47	1,955.25	3,878.95	0.00	0.00	0.00
9,800.00	90.36	135.00	5,474.37	-3,601.18	2,025.96	3,978.95	0.00	0.00	0.00
9,900.00	90.36	135.00	5,473.74	-3,671.89	2,096.67	4,078.95	0.00	0.00	0.00
10,000.00	90.36	135.00	5,473.11	-3,742.60	2,167.37	4,178.95	0.00	0.00	0.00
10,100.00	90.36	135.00	5,472.48	-3,813.31	2,238.08	4,278.94	0.00	0.00	0.00
10,200.00	90.36	135.00	5,471.85	-3,884.02	2,308.79	4,378.94	0.00	0.00	0.00
10,300.00	90.36	135.00	5,471.22	-3,954.73	2,379.50	4,478.94	0.00	0.00	0.00
10,400.00	90.36	135.00	5,470.59	-4,025.44	2,450.21	4,578.94	0.00	0.00	0.00
10,500.00	90.36	135.00	5,469.96	-4,096.15	2,520.92	4,678.94	0.00	0.00	0.00
10,600.00	90.36	135.00	5,469.33	-4,166.86	2,591.63	4,778.93	0.00	0.00	0.00
10,700.00	90.36	135.00	5,468.70	-4,237.57	2,662.34	4,878.93	0.00	0.00	0.00
10,800.00	90.36	135.00	5,468.07	-4,308.27	2,733.05	4,978.93	0.00	0.00	0.00
10,900.00	90.36	135.00	5,467.44	-4,378.98	2,803.76	5,078.93	0.00	0.00	0.00
11,000.00	90.36	135.00	5,466.81	-4,449.69	2,874.47	5,178.93	0.00	0.00	0.00
11,100.00	90.36	135.00	5,466.18	-4,520.40	2,945.18	5,278.92	0.00	0.00	0.00
11,200.00	90.36	135.00	5,465.55	-4,591.11	3,015.89	5,378.92	0.00	0.00	0.00
11,300.00	90.36	135.00	5,464.92	-4,661.82	3,086.60	5,478.92	0.00	0.00	0.00
11,400.00	90.36	135.00	5,464.29	-4,732.53	3,157.31	5,578.92	0.00	0.00	0.00
11,500.00	90.36	135.00	5,463.66	-4,803.24	3,228.01	5,678.92	0.00	0.00	0.00
11,600.00	90.36	135.00	5,463.03	-4,873.95	3,298.72	5,778.91	0.00	0.00	0.00
11,700.00	90.36	135.00	5,462.40	-4,944.66	3,369.43	5,878.91	0.00	0.00	0.00
11,800.00	90.36	135.00	5,461.77	-5,015.37	3,440.14	5,978.91	0.00	0.00	0.00
11,900.00	90.36	135.00	5,461.14	-5,086.08	3,510.85	6,078.91	0.00	0.00	0.00
12,000.00	90.36	135.00	5,460.51	-5,156.79	3,581.56	6,178.91	0.00	0.00	0.00
12,100.00	90.36	135.00	5,459.88	-5,227.49	3,652.27	6,278.90	0.00	0.00	0.00
12,200.00	90.36	135.00	5,459.25	-5,298.20	3,722.98	6,378.90	0.00	0.00	0.00
12,300.00	90.36	135.00	5,458.62	-5,368.91	3,793.69	6,478.90	0.00	0.00	0.00
12,400.00	90.36	135.00	5,457.99	-5,439.62	3,864.40	6,578.90	0.00	0.00	0.00
12,500.00	90.36	135.00	5,457.35	-5,510.33	3,935.11	6,678.90	0.00	0.00	0.00
12,600.00	90.36	135.00	5,456.72	-5,581.04	4,005.82	6,778.89	0.00	0.00	0.00
12,700.00	90.36	135.00	5,456.09	-5,651.75	4,076.53	6,878.89	0.00	0.00	0.00
12,800.00	90.36	135.00	5,455.46	-5,722.46	4,147.24	6,978.89	0.00	0.00	0.00
12,900.00	90.36	135.00	5,454.83	-5,793.17	4,217.95	7,078.89	0.00	0.00	0.00
13,000.00	90.36	135.00	5,454.20	-5,863.88	4,288.65	7,178.89	0.00	0.00	0.00
13,100.00	90.36	135.00	5,453.57	-5,934.59	4,359.36	7,278.88	0.00	0.00	0.00
13,200.00	90.36	135.00	5,452.94	-6,005.30	4,430.07	7,378.88	0.00	0.00	0.00
13,300.00	90.36	135.00	5,452.31	-6,076.01	4,500.78	7,478.88	0.00	0.00	0.00
13,400.00	90.36	135.00	5,451.68	-6,146.71	4,571.49	7,578.88	0.00	0.00	0.00
13,508.07	90.36	135.00	5,451.00	-6,223.13	4,647.91	7,686.95	0.00	0.00	0.00
PBHL @ 13508.07 MD 5451.00 TVD									

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
3,847.21	3,673.00	9 5/8" Csg	9-5/8	12-1/4

Planning Report

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Company:	Enduring Resources LLC	**TVD Reference:**	RKB=6703+25 @ 6728.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM C	**MD Reference:**	RKB=6703+25 @ 6728.00ft
Site:	Haynes Canyon Unit (428,430,440 & 442)	**North Reference:**	Grid
Well:	Haynes Canyon Unit 428H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,403.06	1,403.01	Ojo Alamo		-0.36	135.00
1,503.40	1,503.02	Kirtland		-0.36	135.00
1,731.76	1,728.09	Fruitland		-0.36	135.00
1,977.33	1,963.22	Pictured Cliffs		-0.36	135.00
2,139.98	2,113.34	Lewis		-0.36	135.00
2,463.16	2,408.58	Chacra		-0.36	135.00
3,679.19	3,519.50	Cliff House		-0.36	135.00
3,684.67	3,524.50	Menefee		-0.36	135.00
4,442.94	4,225.04	Point Lookout		-0.36	135.00
4,723.59	4,500.14	Mancos		-0.36	135.00
5,064.18	4,840.17	MNCS_A		-0.36	135.00
5,154.18	4,930.17	MNCS_B		-0.36	135.00
5,290.50	5,065.06	MNCS_C		-0.36	135.00
5,358.58	5,129.93	MNCS_Cms		-0.36	135.00
5,441.22	5,204.71	MNCS_D		-0.36	135.00
5,543.87	5,289.35	MNCS_E		-0.36	135.00
5,604.60	5,334.09	MNCS_F		-0.36	135.00
5,743.41	5,418.40	MNCS_G		-0.36	135.00
5,833.38	5,457.89	MNCS_H @ 0VS		-0.36	135.00

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
1,300.00	1,300.00	0.00	0.00	KOP Begin 3°/100' build
2,099.91	2,076.73	-76.99	-146.03	Begin 24.00° tangent
4,155.15	3,954.32	-466.79	-885.42	Begin 3°/100' drop
4,955.06	4,731.05	-543.78	-1,031.45	Begin vertical hold
5,149.06	4,925.05	-543.78	-1,031.45	Begin 10°/100' build
5,849.06	5,463.45	-810.36	-764.87	FTP @ 70° inc @ 5849.06 MD 5463.45 TVD
6,052.67	5,498.00	-951.48	-623.75	Begin 90.36° lateral
13,508.07	5,451.00	-6,223.13	4,647.91	PBHL @ 13508.07 MD 5451.00 TVD

Planning Report - Geographic

Database:	DT_Jan1924v17	**Local Co-ordinate Reference:**	Well Haynes Canyon Unit 428H
Company:	Enduring Resources LLC	**TVD Reference:**	RKB=6703+25 @ 6728.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM C	**MD Reference:**	RKB=6703+25 @ 6728.00ft
Site:	Haynes Canyon Unit (428,430,440 & 442)	**North Reference:**	Grid
Well:	Haynes Canyon Unit 428H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Project Rio Arriba County, New Mexico NAD83 NM C

Map System:	US State Plane 1983	**System Datum:**	Mean Sea Level
Geo Datum:	North American Datum 1983		
Map Zone:	New Mexico Central Zone		

Site Haynes Canyon Unit (428,430,440 & 442)

Site Position:		**Northing:**	1,912,025.28 usft	**Latitude:**	36.24866700
From:	Lat/Long	**Easting:**	1,282,353.75 usft	**Longitude:**	-107.46435800
Position Uncertainty:	0.00 ft	**Slot Radius:**	13-3/16 "		

Well Haynes Canyon Unit 428H, Surf loc: 903 FSL 429 FWL Section 03-T23N-R06W

Well Position	**+N/-S**	0.00 ft	**Northing:**	1,912,025.28 usft	**Latitude:**	36.24866700
	+E/-W	0.00 ft	**Easting:**	1,282,353.75 usft	**Longitude:**	-107.46435800
Position Uncertainty		0.00 ft	**Wellhead Elevation:**	ft	**Ground Level:**	6,703.00 ft
Grid Convergence:		-0.72 °				

Wellbore Original Hole

Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	8/1/2023	8.46	62.77	49,138.30694754

Design rev1

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	135.00

Plan Survey Tool Program **Date** 1/31/2024

	Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	13,508.02	rev1 (Original Hole)	MWD OWSG MWD - Standard	

Planning Report - Geographic

Database:	DT_Jan1924v17	**Local Co-ordinate Reference:**	Well Haynes Canyon Unit 428H
Company:	Enduring Resources LLC	**TVD Reference:**	RKB=6703+25 @ 6728.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM C	**MD Reference:**	RKB=6703+25 @ 6728.00ft
Site:	Haynes Canyon Unit (428,430,440 & 442)	**North Reference:**	Grid
Well:	Haynes Canyon Unit 428H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

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	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,300.00	0.00	0.00	1,300.00	0.00	0.00	0.00	0.00	0.00	0.00	
2,099.91	24.00	242.20	2,076.73	-76.99	-146.03	3.00	3.00	0.00	242.20	
4,155.15	24.00	242.20	3,954.32	-466.79	-885.42	0.00	0.00	0.00	0.00	
4,955.06	0.00	360.00	4,731.05	-543.78	-1,031.45	3.00	-3.00	0.00	180.00	
5,149.06	0.00	360.00	4,925.05	-543.78	-1,031.45	0.00	0.00	0.00	0.00	
5,849.06	70.00	135.00	5,463.45	-810.36	-764.87	10.00	10.00	0.00	135.00	
6,052.67	90.36	135.00	5,498.00	-951.48	-623.75	10.00	10.00	0.00	0.00	
13,508.07	90.36	135.00	5,451.00	-6,223.13	4,647.91	0.00	0.00	0.00	0.00	Haynes 428 LTP 204

Planning Report - Geographic

Database:	DT_Jan1924v17	**Local Co-ordinate Reference:**	Well Haynes Canyon Unit 428H
Company:	Enduring Resources LLC	**TVD Reference:**	RKB=6703+25 @ 6728.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM C	**MD Reference:**	RKB=6703+25 @ 6728.00ft
Site:	Haynes Canyon Unit (428,430,440 & 442)	**North Reference:**	Grid
Well:	Haynes Canyon Unit 428H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.00	0.00	0.00	0.00	1,912,025.28	1,282,353.75	36.24866700	-107.46435800
100.00	0.00	0.00	100.00	0.00	0.00	1,912,025.28	1,282,353.75	36.24866700	-107.46435800
200.00	0.00	0.00	200.00	0.00	0.00	1,912,025.28	1,282,353.75	36.24866700	-107.46435800
300.00	0.00	0.00	300.00	0.00	0.00	1,912,025.28	1,282,353.75	36.24866700	-107.46435800
350.00	0.00	0.00	350.00	0.00	0.00	1,912,025.28	1,282,353.75	36.24866700	-107.46435800
13 3/8" Csg									
400.00	0.00	0.00	400.00	0.00	0.00	1,912,025.28	1,282,353.75	36.24866700	-107.46435800
500.00	0.00	0.00	500.00	0.00	0.00	1,912,025.28	1,282,353.75	36.24866700	-107.46435800
600.00	0.00	0.00	600.00	0.00	0.00	1,912,025.28	1,282,353.75	36.24866700	-107.46435800
700.00	0.00	0.00	700.00	0.00	0.00	1,912,025.28	1,282,353.75	36.24866700	-107.46435800
800.00	0.00	0.00	800.00	0.00	0.00	1,912,025.28	1,282,353.75	36.24866700	-107.46435800
900.00	0.00	0.00	900.00	0.00	0.00	1,912,025.28	1,282,353.75	36.24866700	-107.46435800
1,000.00	0.00	0.00	1,000.00	0.00	0.00	1,912,025.28	1,282,353.75	36.24866700	-107.46435800
1,100.00	0.00	0.00	1,100.00	0.00	0.00	1,912,025.28	1,282,353.75	36.24866700	-107.46435800
1,200.00	0.00	0.00	1,200.00	0.00	0.00	1,912,025.28	1,282,353.75	36.24866700	-107.46435800
1,300.00	0.00	0.00	1,300.00	0.00	0.00	1,912,025.28	1,282,353.75	36.24866700	-107.46435800
KOP Begin 3°/100' build									
1,400.00	3.00	242.20	1,399.95	-1.22	-2.32	1,912,024.06	1,282,351.44	36.24866357	-107.46436580
1,403.06	3.09	242.20	1,403.01	-1.30	-2.46	1,912,023.99	1,282,351.29	36.24866336	-107.46436629
Ojo Alamo									
1,500.00	6.00	242.20	1,499.63	-4.88	-9.26	1,912,020.40	1,282,344.50	36.24865328	-107.46438918
1,503.40	6.10	242.20	1,503.02	-5.05	-9.57	1,912,020.24	1,282,344.18	36.24865281	-107.46439025
Kirtland									
1,600.00	9.00	242.20	1,598.77	-10.97	-20.80	1,912,014.32	1,282,332.95	36.24863617	-107.46442807
1,700.00	12.00	242.20	1,697.08	-19.46	-36.92	1,912,005.82	1,282,316.84	36.24861227	-107.46448236
1,731.76	12.95	242.20	1,728.09	-22.66	-42.99	1,912,002.62	1,282,310.77	36.24860328	-107.46450280
Fruitland									
1,800.00	15.00	242.20	1,794.31	-30.35	-57.57	1,911,994.93	1,282,296.19	36.24858166	-107.46455191
1,900.00	18.00	242.20	1,890.18	-43.59	-82.69	1,911,981.69	1,282,271.07	36.24854443	-107.46463653
1,977.33	20.32	242.20	1,963.22	-55.43	-105.14	1,911,969.85	1,282,248.62	36.24851115	-107.46471214
Pictured Cliffs									
2,000.00	21.00	242.20	1,984.43	-59.16	-112.21	1,911,966.12	1,282,241.54	36.24850066	-107.46473598
2,099.91	24.00	242.20	2,076.73	-76.99	-146.03	1,911,948.30	1,282,207.73	36.24845053	-107.46484988
Begin 24.00° tangent									
2,139.98	24.00	242.20	2,113.34	-84.59	-160.45	1,911,940.70	1,282,193.31	36.24842916	-107.46489844
Lewis									
2,200.00	24.00	242.20	2,168.17	-95.97	-182.04	1,911,929.31	1,282,171.72	36.24839715	-107.46497117
2,300.00	24.00	242.20	2,259.52	-114.94	-218.01	1,911,910.35	1,282,135.74	36.24834382	-107.46509235
2,400.00	24.00	242.20	2,350.88	-133.90	-253.99	1,911,891.38	1,282,099.77	36.24829049	-107.46521353
2,463.16	24.00	242.20	2,408.58	-145.88	-276.71	1,911,879.40	1,282,077.04	36.24825680	-107.46529006
Chacra									
2,500.00	24.00	242.20	2,442.24	-152.87	-289.96	1,911,872.41	1,282,063.79	36.24823716	-107.46533471
2,600.00	24.00	242.20	2,533.59	-171.84	-325.94	1,911,853.45	1,282,027.81	36.24818383	-107.46545588
2,700.00	24.00	242.20	2,624.95	-190.80	-361.92	1,911,834.48	1,281,991.84	36.24813050	-107.46557706
2,800.00	24.00	242.20	2,716.30	-209.77	-397.89	1,911,815.51	1,281,955.86	36.24807716	-107.46569824
2,900.00	24.00	242.20	2,807.66	-228.74	-433.87	1,911,796.55	1,281,919.89	36.24802383	-107.46581942
3,000.00	24.00	242.20	2,899.02	-247.70	-469.84	1,911,777.58	1,281,883.91	36.24797050	-107.46594060
3,100.00	24.00	242.20	2,990.37	-266.67	-505.82	1,911,758.61	1,281,847.93	36.24791717	-107.46606178
3,200.00	24.00	242.20	3,081.73	-285.63	-541.80	1,911,739.65	1,281,811.96	36.24786384	-107.46618295
3,300.00	24.00	242.20	3,173.09	-304.60	-577.77	1,911,720.68	1,281,775.98	36.24781051	-107.46630413
3,400.00	24.00	242.20	3,264.44	-323.57	-613.75	1,911,701.72	1,281,740.01	36.24775717	-107.46642531
3,500.00	24.00	242.20	3,355.80	-342.53	-649.72	1,911,682.75	1,281,704.03	36.24770384	-107.46654649
3,600.00	24.00	242.20	3,447.16	-361.50	-685.70	1,911,663.78	1,281,668.05	36.24765051	-107.46666766

Planning Report - Geographic

Database:	DT_Jan1924v17	**Local Co-ordinate Reference:**	Well Haynes Canyon Unit 428H
Company:	Enduring Resources LLC	**TVD Reference:**	RKB=6703+25 @ 6728.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM C	**MD Reference:**	RKB=6703+25 @ 6728.00ft
Site:	Haynes Canyon Unit (428,430,440 & 442)	**North Reference:**	Grid
Well:	Haynes Canyon Unit 428H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
3,679.19	24.00	242.20	3,519.50	-376.52	-714.19	1,911,648.76	1,281,639.57	36.24760828	-107.46676362
Cliff House									
3,684.67	24.00	242.20	3,524.50	-377.56	-716.16	1,911,647.72	1,281,637.60	36.24760536	-107.46677026
Menefee									
3,700.00	24.00	242.20	3,538.51	-380.47	-721.68	1,911,644.82	1,281,632.08	36.24759718	-107.46678884
3,800.00	24.00	242.20	3,629.87	-399.43	-757.65	1,911,625.85	1,281,596.10	36.24754385	-107.46691002
3,847.21	24.00	242.20	3,673.00	-408.39	-774.64	1,911,616.89	1,281,579.12	36.24751867	-107.46696723
9 5/8" Csg									
3,900.00	24.00	242.20	3,721.23	-418.40	-793.63	1,911,606.88	1,281,560.13	36.24749051	-107.46703119
4,000.00	24.00	242.20	3,812.58	-437.37	-829.60	1,911,587.92	1,281,524.15	36.24743718	-107.46715237
4,100.00	24.00	242.20	3,903.94	-456.33	-865.58	1,911,568.95	1,281,488.17	36.24738385	-107.46727355
4,155.15	24.00	242.20	3,954.32	-466.79	-885.42	1,911,558.49	1,281,468.33	36.24735443	-107.46734037
Begin 3°/100' drop									
4,200.00	22.65	242.20	3,995.51	-475.08	-901.13	1,911,550.21	1,281,452.63	36.24733115	-107.46739328
4,300.00	19.65	242.20	4,088.76	-491.90	-933.05	1,911,533.38	1,281,420.71	36.24728383	-107.46750079
4,400.00	16.65	242.20	4,183.77	-506.43	-960.60	1,911,518.86	1,281,393.15	36.24724298	-107.46759360
4,442.94	15.36	242.20	4,225.04	-511.95	-971.07	1,911,513.33	1,281,382.68	36.24722746	-107.46762888
Point Lookout									
4,500.00	13.65	242.20	4,280.28	-518.62	-983.72	1,911,506.67	1,281,370.04	36.24720871	-107.46767147
4,600.00	10.65	242.20	4,378.03	-528.43	-1,002.34	1,911,496.85	1,281,351.42	36.24718111	-107.46773418
4,700.00	7.65	242.20	4,476.75	-535.85	-1,016.41	1,911,489.43	1,281,337.35	36.24716025	-107.46778156
4,723.59	6.94	242.20	4,500.14	-537.25	-1,019.06	1,911,488.04	1,281,334.70	36.24715632	-107.46779049
Mancos									
4,800.00	4.65	242.20	4,576.16	-540.85	-1,025.88	1,911,484.44	1,281,327.87	36.24714620	-107.46781349
4,900.00	1.65	242.20	4,676.00	-543.41	-1,030.75	1,911,481.87	1,281,323.01	36.24713899	-107.46782987
4,955.06	0.00	360.00	4,731.05	-543.78	-1,031.45	1,911,481.50	1,281,322.31	36.24713795	-107.46783224
Begin vertical hold									
5,000.00	0.00	0.00	4,775.99	-543.78	-1,031.45	1,911,481.50	1,281,322.31	36.24713795	-107.46783224
5,064.18	0.00	0.00	4,840.17	-543.78	-1,031.45	1,911,481.50	1,281,322.31	36.24713795	-107.46783224
MNCS_A									
5,100.00	0.00	0.00	4,875.99	-543.78	-1,031.45	1,911,481.50	1,281,322.31	36.24713795	-107.46783224
5,149.06	0.00	0.00	4,925.05	-543.78	-1,031.45	1,911,481.50	1,281,322.31	36.24713795	-107.46783224
Begin 10°/100' build									
5,154.18	0.51	135.00	4,930.17	-543.80	-1,031.43	1,911,481.49	1,281,322.32	36.24713791	-107.46783218
MNCS_B									
5,200.00	5.09	135.00	4,975.92	-545.38	-1,029.85	1,911,479.90	1,281,323.91	36.24713361	-107.46782674
5,250.00	10.09	135.00	5,025.47	-550.05	-1,025.18	1,911,475.23	1,281,328.58	36.24712094	-107.46781071
5,290.50	14.14	135.00	5,065.06	-556.06	-1,019.17	1,911,469.22	1,281,334.59	36.24710464	-107.46779007
MNCS_C									
5,300.00	15.09	135.00	5,074.25	-557.76	-1,017.47	1,911,467.53	1,281,336.28	36.24710004	-107.46778425
5,350.00	20.09	135.00	5,121.90	-568.44	-1,006.79	1,911,456.84	1,281,346.97	36.24707107	-107.46774757
5,358.58	20.95	135.00	5,129.93	-570.57	-1,004.66	1,911,454.72	1,281,349.09	36.24706530	-107.46774027
MNCS_Cms									
5,400.00	25.09	135.00	5,168.04	-582.02	-993.21	1,911,443.26	1,281,360.55	36.24703424	-107.46770095
5,441.22	29.22	135.00	5,204.71	-595.32	-979.91	1,911,429.97	1,281,373.84	36.24699818	-107.46765529
MNCS_D									
5,450.00	30.09	135.00	5,212.34	-598.39	-976.84	1,911,426.89	1,281,376.92	36.24698985	-107.46764474
5,500.00	35.09	135.00	5,254.45	-617.43	-957.80	1,911,407.85	1,281,395.96	36.24693821	-107.46757937
5,543.87	39.48	135.00	5,289.35	-636.22	-939.01	1,911,389.07	1,281,414.74	36.24688726	-107.46751487
MNCS_E									
5,550.00	40.09	135.00	5,294.06	-638.99	-936.24	1,911,386.29	1,281,417.52	36.24687974	-107.46750534
5,600.00	45.09	135.00	5,330.86	-662.91	-912.32	1,911,362.37	1,281,441.44	36.24681486	-107.46742321

Planning Report - Geographic

Database:	DT_Jan1924v17	**Local Co-ordinate Reference:**	Well Haynes Canyon Unit 428H
Company:	Enduring Resources LLC	**TVD Reference:**	RKB=6703+25 @ 6728.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM C	**MD Reference:**	RKB=6703+25 @ 6728.00ft
Site:	Haynes Canyon Unit (428,430,440 & 442)	**North Reference:**	Grid
Well:	Haynes Canyon Unit 428H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
5,604.60	45.55	135.00	5,334.09	-665.22	-910.01	1,911,360.06	1,281,443.75	36.24680859	-107.46741528
MNCS_F									
5,650.00	50.09	135.00	5,364.56	-689.01	-886.22	1,911,336.27	1,281,467.54	36.24674409	-107.46733361
5,700.00	55.09	135.00	5,394.93	-717.09	-858.14	1,911,308.20	1,281,495.61	36.24666795	-107.46723722
5,743.41	59.44	135.00	5,418.40	-742.90	-832.33	1,911,282.38	1,281,521.43	36.24659794	-107.46714859
MNCS_G									
5,750.00	60.09	135.00	5,421.72	-746.93	-828.30	1,911,278.36	1,281,525.45	36.24658702	-107.46713477
5,800.00	65.09	135.00	5,444.72	-778.30	-796.93	1,911,246.98	1,281,556.83	36.24650192	-107.46702705
5,833.38	68.43	135.00	5,457.89	-799.99	-775.24	1,911,225.29	1,281,578.51	36.24644311	-107.46695259
MNCS_H @ 0VS									
5,849.06	70.00	135.00	5,463.45	-810.36	-764.87	1,911,214.93	1,281,588.88	36.24641500	-107.46691700
FTP @ 70° inc @ 5849.06 MD 5463.45 TVD									
5,900.00	75.09	135.00	5,478.73	-844.71	-730.52	1,911,180.58	1,281,623.23	36.24632184	-107.46679907
5,950.00	80.09	135.00	5,489.47	-879.22	-696.01	1,911,146.06	1,281,657.75	36.24622823	-107.46668056
6,000.00	85.09	135.00	5,495.91	-914.27	-660.96	1,911,111.01	1,281,692.80	36.24613317	-107.46656023
6,052.67	90.36	135.00	5,498.00	-951.48	-623.75	1,911,073.81	1,281,730.00	36.24603228	-107.46643250
Begin 90.36° lateral									
6,100.00	90.36	135.00	5,497.70	-984.94	-590.29	1,911,040.34	1,281,763.47	36.24594152	-107.46631761
6,200.00	90.36	135.00	5,497.07	-1,055.65	-519.58	1,910,969.63	1,281,834.18	36.24574976	-107.46607485
6,300.00	90.36	135.00	5,496.44	-1,126.36	-448.87	1,910,898.93	1,281,904.88	36.24555799	-107.46583209
6,400.00	90.36	135.00	5,495.81	-1,197.07	-378.16	1,910,828.22	1,281,975.59	36.24536622	-107.46558933
6,500.00	90.36	135.00	5,495.18	-1,267.78	-307.45	1,910,757.51	1,282,046.30	36.24517446	-107.46534658
6,600.00	90.36	135.00	5,494.55	-1,338.49	-236.74	1,910,686.80	1,282,117.01	36.24498269	-107.46510382
6,700.00	90.36	135.00	5,493.92	-1,409.20	-166.03	1,910,616.09	1,282,187.72	36.24479092	-107.46486107
6,800.00	90.36	135.00	5,493.29	-1,479.91	-95.32	1,910,545.38	1,282,258.43	36.24459915	-107.46461832
6,900.00	90.36	135.00	5,492.66	-1,550.61	-24.61	1,910,474.67	1,282,329.14	36.24440738	-107.46437557
7,000.00	90.36	135.00	5,492.02	-1,621.32	46.10	1,910,403.96	1,282,399.85	36.24421561	-107.46413282
7,100.00	90.36	135.00	5,491.39	-1,692.03	116.80	1,910,333.25	1,282,470.56	36.24402384	-107.46389007
7,200.00	90.36	135.00	5,490.76	-1,762.74	187.51	1,910,262.54	1,282,541.27	36.24383207	-107.46364732
7,300.00	90.36	135.00	5,490.13	-1,833.45	258.22	1,910,191.83	1,282,611.98	36.24364030	-107.46340457
7,400.00	90.36	135.00	5,489.50	-1,904.16	328.93	1,910,121.13	1,282,682.69	36.24344853	-107.46316183
7,500.00	90.36	135.00	5,488.87	-1,974.87	399.64	1,910,050.42	1,282,753.39	36.24325676	-107.46291908
7,600.00	90.36	135.00	5,488.24	-2,045.58	470.35	1,909,979.71	1,282,824.10	36.24306499	-107.46267634
7,700.00	90.36	135.00	5,487.61	-2,116.29	541.06	1,909,909.00	1,282,894.81	36.24287321	-107.46243360
7,800.00	90.36	135.00	5,486.98	-2,187.00	611.77	1,909,838.29	1,282,965.52	36.24268144	-107.46219086
7,900.00	90.36	135.00	5,486.35	-2,257.71	682.48	1,909,767.58	1,283,036.23	36.24248967	-107.46194812
8,000.00	90.36	135.00	5,485.72	-2,328.42	753.19	1,909,696.87	1,283,106.94	36.24229789	-107.46170538
8,100.00	90.36	135.00	5,485.09	-2,399.13	823.90	1,909,626.16	1,283,177.65	36.24210612	-107.46146264
8,200.00	90.36	135.00	5,484.46	-2,469.83	894.61	1,909,555.45	1,283,248.36	36.24191434	-107.46121990
8,300.00	90.36	135.00	5,483.83	-2,540.54	965.32	1,909,484.74	1,283,319.07	36.24172256	-107.46097717
8,400.00	90.36	135.00	5,483.20	-2,611.25	1,036.03	1,909,414.03	1,283,389.78	36.24153079	-107.46073444
8,500.00	90.36	135.00	5,482.57	-2,681.96	1,106.74	1,909,343.33	1,283,460.49	36.24133901	-107.46049170
8,600.00	90.36	135.00	5,481.94	-2,752.67	1,177.44	1,909,272.62	1,283,531.20	36.24114723	-107.46024897
8,700.00	90.36	135.00	5,481.31	-2,823.38	1,248.15	1,909,201.91	1,283,601.90	36.24095545	-107.46000624
8,800.00	90.36	135.00	5,480.68	-2,894.09	1,318.86	1,909,131.20	1,283,672.61	36.24076367	-107.45976351
8,900.00	90.36	135.00	5,480.05	-2,964.80	1,389.57	1,909,060.49	1,283,743.32	36.24057190	-107.45952078
9,000.00	90.36	135.00	5,479.42	-3,035.51	1,460.28	1,908,989.78	1,283,814.03	36.24038012	-107.45927806
9,100.00	90.36	135.00	5,478.79	-3,106.22	1,530.99	1,908,919.07	1,283,884.74	36.24018833	-107.45903533
9,200.00	90.36	135.00	5,478.16	-3,176.93	1,601.70	1,908,848.36	1,283,955.45	36.23999655	-107.45879261
9,300.00	90.36	135.00	5,477.53	-3,247.64	1,672.41	1,908,777.65	1,284,026.16	36.23980477	-107.45854989
9,400.00	90.36	135.00	5,476.90	-3,318.35	1,743.12	1,908,706.94	1,284,096.87	36.23961299	-107.45830716
9,500.00	90.36	135.00	5,476.27	-3,389.05	1,813.83	1,908,636.23	1,284,167.58	36.23942121	-107.45806444
9,600.00	90.36	135.00	5,475.64	-3,459.76	1,884.54	1,908,565.53	1,284,238.29	36.23922942	-107.45782172
9,700.00	90.36	135.00	5,475.00	-3,530.47	1,955.25	1,908,494.82	1,284,309.00	36.23903764	-107.45757901

Planning Report - Geographic

Database:	DT_Jan1924v17	**Local Co-ordinate Reference:**	Well Haynes Canyon Unit 428H
Company:	Enduring Resources LLC	**TVD Reference:**	RKB=6703+25 @ 6728.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM C	**MD Reference:**	RKB=6703+25 @ 6728.00ft
Site:	Haynes Canyon Unit (428,430,440 & 442)	**North Reference:**	Grid
Well:	Haynes Canyon Unit 428H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Planned Survey

Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
9,800.00	90.36	135.00	5,474.37	-3,601.18	2,025.96	1,908,424.11	1,284,379.71	36.23884586	-107.45733629
9,900.00	90.36	135.00	5,473.74	-3,671.89	2,096.67	1,908,353.40	1,284,450.42	36.23865407	-107.45709357
10,000.00	90.36	135.00	5,473.11	-3,742.60	2,167.37	1,908,282.69	1,284,521.12	36.23846229	-107.45685086
10,100.00	90.36	135.00	5,472.48	-3,813.31	2,238.08	1,908,211.98	1,284,591.83	36.23827050	-107.45660814
10,200.00	90.36	135.00	5,471.85	-3,884.02	2,308.79	1,908,141.27	1,284,662.54	36.23807872	-107.45636543
10,300.00	90.36	135.00	5,471.22	-3,954.73	2,379.50	1,908,070.56	1,284,733.25	36.23788693	-107.45612272
10,400.00	90.36	135.00	5,470.59	-4,025.44	2,450.21	1,907,999.85	1,284,803.96	36.23769514	-107.45588001
10,500.00	90.36	135.00	5,469.96	-4,096.15	2,520.92	1,907,929.14	1,284,874.67	36.23750335	-107.45563730
10,600.00	90.36	135.00	5,469.33	-4,166.86	2,591.63	1,907,858.43	1,284,945.38	36.23731157	-107.45539459
10,700.00	90.36	135.00	5,468.70	-4,237.57	2,662.34	1,907,787.73	1,285,016.09	36.23711978	-107.45515189
10,800.00	90.36	135.00	5,468.07	-4,308.27	2,733.05	1,907,717.02	1,285,086.80	36.23692799	-107.45490918
10,900.00	90.36	135.00	5,467.44	-4,378.98	2,803.76	1,907,646.31	1,285,157.51	36.23673620	-107.45466648
11,000.00	90.36	135.00	5,466.81	-4,449.69	2,874.47	1,907,575.60	1,285,228.22	36.23654441	-107.45442378
11,100.00	90.36	135.00	5,466.18	-4,520.40	2,945.18	1,907,504.89	1,285,298.93	36.23635262	-107.45418107
11,200.00	90.36	135.00	5,465.55	-4,591.11	3,015.89	1,907,434.18	1,285,369.63	36.23616083	-107.45393837
11,300.00	90.36	135.00	5,464.92	-4,661.82	3,086.60	1,907,363.47	1,285,440.34	36.23596903	-107.45369567
11,400.00	90.36	135.00	5,464.29	-4,732.53	3,157.31	1,907,292.76	1,285,511.05	36.23577724	-107.45345298
11,500.00	90.36	135.00	5,463.66	-4,803.24	3,228.01	1,907,222.05	1,285,581.76	36.23558545	-107.45321028
11,600.00	90.36	135.00	5,463.03	-4,873.95	3,298.72	1,907,151.34	1,285,652.47	36.23539365	-107.45296758
11,700.00	90.36	135.00	5,462.40	-4,944.66	3,369.43	1,907,080.63	1,285,723.18	36.23520186	-107.45272489
11,800.00	90.36	135.00	5,461.77	-5,015.37	3,440.14	1,907,009.93	1,285,793.89	36.23501007	-107.45248219
11,900.00	90.36	135.00	5,461.14	-5,086.08	3,510.85	1,906,939.22	1,285,864.60	36.23481827	-107.45223950
12,000.00	90.36	135.00	5,460.51	-5,156.79	3,581.56	1,906,868.51	1,285,935.31	36.23462648	-107.45199681
12,100.00	90.36	135.00	5,459.88	-5,227.49	3,652.27	1,906,797.80	1,286,006.02	36.23443468	-107.45175412
12,200.00	90.36	135.00	5,459.25	-5,298.20	3,722.98	1,906,727.09	1,286,076.73	36.23424288	-107.45151143
12,300.00	90.36	135.00	5,458.62	-5,368.91	3,793.69	1,906,656.38	1,286,147.44	36.23405109	-107.45126875
12,400.00	90.36	135.00	5,457.99	-5,439.62	3,864.40	1,906,585.67	1,286,218.14	36.23385929	-107.45102606
12,500.00	90.36	135.00	5,457.35	-5,510.33	3,935.11	1,906,514.96	1,286,288.85	36.23366749	-107.45078337
12,600.00	90.36	135.00	5,456.72	-5,581.04	4,005.82	1,906,444.25	1,286,359.56	36.23347569	-107.45054069
12,700.00	90.36	135.00	5,456.09	-5,651.75	4,076.53	1,906,373.54	1,286,430.27	36.23328389	-107.45029801
12,800.00	90.36	135.00	5,455.46	-5,722.46	4,147.24	1,906,302.83	1,286,500.98	36.23309209	-107.45005533
12,900.00	90.36	135.00	5,454.83	-5,793.17	4,217.95	1,906,232.13	1,286,571.69	36.23290029	-107.44981265
13,000.00	90.36	135.00	5,454.20	-5,863.88	4,288.65	1,906,161.42	1,286,642.40	36.23270849	-107.44956997
13,100.00	90.36	135.00	5,453.57	-5,934.59	4,359.36	1,906,090.71	1,286,713.11	36.23251669	-107.44932729
13,200.00	90.36	135.00	5,452.94	-6,005.30	4,430.07	1,906,020.00	1,286,783.82	36.23232489	-107.44908461
13,300.00	90.36	135.00	5,452.31	-6,076.01	4,500.78	1,905,949.29	1,286,854.53	36.23213309	-107.44884194
13,400.00	90.36	135.00	5,451.68	-6,146.71	4,571.49	1,905,878.58	1,286,925.24	36.23194128	-107.44859926
13,508.07	90.36	135.00	5,451.00	-6,223.13	4,647.91	1,905,802.16	1,287,001.65	36.23173400	-107.44833700
PBHL @ 13508.07 MD 5451.00 TVD									

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
Haynes 428 LTP 204 FN - plan hits target center - Point	0.00	0.00	5,451.00	-6,223.13	4,647.91	1,905,802.16	1,287,001.65	36.23173400	-107.44833700
Haynes 428 FTP 92 FSL - plan misses target center by 32.59ft at 5859.43ft MD (5466.91 TVD, -817.26 N, -757.97 E) - Point	0.00	360.00	5,498.00	-810.36	-764.87	1,911,214.93	1,281,588.88	36.24641500	-107.46691700

Planning Report - Geographic

Database:	DT_Jan1924v17	**Local Co-ordinate Reference:**	Well Haynes Canyon Unit 428H
Company:	Enduring Resources LLC	**TVD Reference:**	RKB=6703+25 @ 6728.00ft
Project:	Rio Arriba County, New Mexico NAD83 NM C	**MD Reference:**	RKB=6703+25 @ 6728.00ft
Site:	Haynes Canyon Unit (428,430,440 & 442)	**North Reference:**	Grid
Well:	Haynes Canyon Unit 428H	**Survey Calculation Method:**	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

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
3,847.21	3,673.00	9 5/8" Csg	9-5/8	12-1/4

Formations

Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,403.06	1,403.01	Ojo Alamo		-0.36	135.00
1,503.40	1,503.02	Kirtland		-0.36	135.00
1,731.76	1,728.09	Fruitland		-0.36	135.00
1,977.33	1,963.22	Pictured Cliffs		-0.36	135.00
2,139.98	2,113.34	Lewis		-0.36	135.00
2,463.16	2,408.58	Chacra		-0.36	135.00
3,679.19	3,519.50	Cliff House		-0.36	135.00
3,684.67	3,524.50	Menefee		-0.36	135.00
4,442.94	4,225.04	Point Lookout		-0.36	135.00
4,723.59	4,500.14	Mancos		-0.36	135.00
5,064.18	4,840.17	MNCS_A		-0.36	135.00
5,154.18	4,930.17	MNCS_B		-0.36	135.00
5,290.50	5,065.06	MNCS_C		-0.36	135.00
5,358.58	5,129.93	MNCS_Cms		-0.36	135.00
5,441.22	5,204.71	MNCS_D		-0.36	135.00
5,543.87	5,289.35	MNCS_E		-0.36	135.00
5,604.60	5,334.09	MNCS_F		-0.36	135.00
5,743.41	5,418.40	MNCS_G		-0.36	135.00
5,833.38	5,457.89	MNCS_H @ 0VS		-0.36	135.00

Plan Annotations

Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates +N/-S (ft)	Local Coordinates +E/-W (ft)	Comment
1,300.00	1,300.00	0.00	0.00	KOP Begin 3°/100' build
2,099.91	2,076.73	-76.99	-146.03	Begin 24.00° tangent
4,155.15	3,954.32	-466.79	-885.42	Begin 3°/100' drop
4,955.06	4,731.05	-543.78	-1,031.45	Begin vertical hold
5,149.06	4,925.05	-543.78	-1,031.45	Begin 10°/100' build
5,849.06	5,463.45	-810.36	-764.87	FTP @ 70° inc @ 5849.06 MD 5463.45 TVD
6,052.67	5,498.00	-951.48	-623.75	Begin 90.36° lateral
13,508.07	5,451.00	-6,223.13	4,647.91	PBHL @ 13508.07 MD 5451.00 TVD

Anticollision Report

Company:	Enduring Resources LLC	**Local Co-ordinate Reference:**	Well Haynes Canyon Unit 428H
Project:	Rio Arriba County, New Mexico NAD83 NM C	**TVD Reference:**	RKB=6703+25 @ 6728.00ft
Reference Site:	Haynes Canyon Unit (428,430,440 & 442)	**MD Reference:**	RKB=6703+25 @ 6728.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Haynes Canyon Unit 428H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Original Hole	**Database:**	DT_Jan1924v17
Reference Design:	rev1	**Offset TVD Reference:**	Offset Datum

Reference rev1

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 1,550.81ft	**Error Surface:**	Ellipsoid Separation
Warning Levels Evaluated at:	2.00 **Sigma**	**Casing Method:**	Not applied

Survey Tool Program **Date** 1/31/2024

From (ft)	To (ft)	Survey (Wellbore)	Tool Name	Description
0.00	13,508.02	rev1 (Original Hole)	MWD	OWSG MWD - Standard

Summary

Site Name Offset Well - Wellbore - Design	Reference Measured Depth (ft)	Offset Measured Depth (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Separation Factor	Warning
Haynes Canyon Unit (420, 422, 424 & 426)						
Haynes Canyon Unit 426 H - Original Hole - rev0	5,822.40	11,600.30	1,230.59	1,078.97	8.116	CC
Haynes Canyon Unit 426 H - Original Hole - rev0	13,508.07	19,279.86	1,231.34	743.21	2.523	ES, SF
Haynes Canyon Unit (428,430,440 & 442)						
Haynes Canyon Unit 430H - Original Hole - rev0	1,198.87	1,199.23	17.05	8.77	2.059	CC
Haynes Canyon Unit 430H - Original Hole - rev0	1,200.00	1,200.35	17.06	8.77	2.057	ES, SF
Haynes Canyon Unit 440H - Orignal Hole - rev1	5,800.00	5,764.43	1.26	-16.95	0.069	Level 3<2.00, CC, ES, SF
Haynes Canyon Unit 442H - Original Hole - rev0	1,547.06	1,547.02	9.57	-1.09	0.898	Level 3<2.00, CC, ES, SF

Offset Design: Haynes Canyon Unit (420, 422, 424 & 426) - Haynes Canyon Unit 426 H - Original Hole - rev0

Offset Site Error: 0.00 ft

Survey Program: 0-MWD **Rule Assigned:** **Offset Well Error:** 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
4,800.00	4,576.16	11,254.77	5,517.70	26.26	123.00	-18.53	-1,418.62	-1,896.92	1,517.49	1,399.23	118.26	12.832	
4,900.00	4,676.00	11,252.60	5,517.71	26.55	122.95	-17.72	-1,417.08	-1,898.46	1,457.46	1,335.43	122.02	11.944	
5,000.00	4,775.99	11,251.82	5,517.72	26.78	122.93	-135.17	-1,416.53	-1,899.01	1,405.84	1,279.89	125.95	11.162	
5,100.00	4,875.99	11,251.28	5,517.72	27.00	122.92	-135.15	-1,416.15	-1,899.39	1,360.31	1,230.50	129.81	10.479	
5,200.00	4,975.92	11,253.00	5,517.71	27.21	122.96	91.86	-1,417.37	-1,898.18	1,320.81	1,187.32	133.49	9.894	
5,300.00	5,074.25	11,269.97	5,517.62	27.38	123.34	94.52	-1,429.37	-1,886.18	1,288.33	1,151.29	137.03	9.402	
5,400.00	5,168.04	11,303.77	5,517.43	27.51	124.10	95.59	-1,453.27	-1,862.28	1,263.70	1,123.38	140.32	9.006	
5,500.00	5,254.45	11,353.38	5,517.16	27.61	125.22	95.32	-1,488.35	-1,827.20	1,246.85	1,103.56	143.28	8.702	
5,600.00	5,330.86	11,417.29	5,516.82	27.66	126.66	94.06	-1,533.53	-1,782.01	1,236.82	1,090.86	145.96	8.474	
5,700.00	5,394.93	11,493.55	5,516.40	27.69	128.39	92.26	-1,587.46	-1,728.09	1,232.03	1,083.55	148.48	8.298	
5,800.00	5,444.72	11,579.85	5,515.93	27.68	130.33	90.39	-1,648.49	-1,667.06	1,230.63	1,079.61	151.01	8.149	
5,822.40	5,453.76	11,600.30	5,515.82	27.67	130.80	90.00	-1,662.94	-1,652.61	1,230.59	1,078.97	151.62	8.116	CC
5,900.00	5,478.73	11,673.57	5,515.42	27.65	132.45	88.86	-1,714.76	-1,600.80	1,230.85	1,077.13	153.72	8.007	
6,000.00	5,495.91	11,771.86	5,514.89	27.60	134.67	88.01	-1,784.26	-1,531.30	1,231.35	1,074.66	156.69	7.859	
6,100.00	5,497.70	11,871.79	5,514.35	27.54	136.93	87.89	-1,854.92	-1,460.64	1,231.43	1,071.54	159.89	7.702	
6,200.00	5,497.07	11,971.79	5,513.80	27.50	139.20	87.89	-1,925.63	-1,389.93	1,231.43	1,068.14	163.29	7.541	
6,300.00	5,496.44	12,071.79	5,513.26	27.51	141.46	87.90	-1,996.34	-1,319.22	1,231.43	1,064.59	166.84	7.381	
6,400.00	5,495.81	12,171.79	5,512.72	27.87	143.73	87.90	-2,067.05	-1,248.51	1,231.43	1,060.90	170.53	7.221	
6,500.00	5,495.18	12,271.79	5,512.17	29.16	145.99	87.91	-2,137.76	-1,177.81	1,231.43	1,057.10	174.33	7.064	
6,600.00	5,494.55	12,371.79	5,511.63	30.76	148.26	87.91	-2,208.47	-1,107.10	1,231.42	1,053.20	178.22	6.909	

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

Anticollision Report

Company:	Enduring Resources LLC	**Local Co-ordinate Reference:**	Well Haynes Canyon Unit 428H
Project:	Rio Arriba County, New Mexico NAD83 NM C	**TVD Reference:**	RKB=6703+25 @ 6728.00ft
Reference Site:	Haynes Canyon Unit (428,430,440 & 442)	**MD Reference:**	RKB=6703+25 @ 6728.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Haynes Canyon Unit 428H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Original Hole	**Database:**	DT_Jan1924v17
Reference Design:	rev1	**Offset TVD Reference:**	Offset Datum

Offset Design: Haynes Canyon Unit (420, 422, 424 & 426) - Haynes Canyon Unit 426 H - Original Hole - rev0

Offset Site Error: 0.00 ft

Survey Program: 0-MWD

Offset Well Error: 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Rule Assigned: Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
6,700.00	5,493.92	12,471.79	5,511.09	32.47	150.53	87.91	-2,279.18	-1,036.39	1,231.42	1,049.22	182.21	6.758	
6,800.00	5,493.29	12,571.79	5,510.54	34.25	152.80	87.92	-2,349.89	-965.68	1,231.42	1,045.17	186.26	6.611	
6,900.00	5,492.66	12,671.79	5,510.00	36.09	155.07	87.92	-2,420.60	-894.97	1,231.42	1,041.05	190.37	6.469	
7,000.00	5,492.02	12,771.79	5,509.45	37.98	157.35	87.93	-2,491.31	-824.26	1,231.42	1,036.89	194.53	6.330	
7,100.00	5,491.39	12,871.79	5,508.91	39.92	159.62	87.93	-2,562.02	-753.56	1,231.42	1,032.68	198.74	6.196	
7,200.00	5,490.76	12,971.79	5,508.37	41.89	161.89	87.93	-2,632.73	-682.85	1,231.42	1,028.43	202.98	6.067	
7,300.00	5,490.13	13,071.79	5,507.82	43.89	164.17	87.94	-2,703.44	-612.14	1,231.41	1,024.15	207.26	5.941	
7,400.00	5,489.50	13,171.79	5,507.28	45.92	166.44	87.94	-2,774.16	-541.43	1,231.41	1,019.84	211.57	5.820	
7,500.00	5,488.87	13,271.79	5,506.74	47.98	168.72	87.95	-2,844.87	-470.72	1,231.41	1,015.51	215.91	5.703	
7,600.00	5,488.24	13,371.79	5,506.19	50.05	171.00	87.95	-2,915.58	-400.01	1,231.41	1,011.15	220.26	5.591	
7,700.00	5,487.61	13,471.79	5,505.65	52.15	173.28	87.95	-2,986.29	-329.30	1,231.41	1,006.77	224.64	5.482	
7,800.00	5,486.98	13,571.79	5,505.11	54.26	175.55	87.96	-3,057.00	-258.60	1,231.41	1,002.38	229.03	5.377	
7,900.00	5,486.35	13,671.79	5,504.56	56.38	177.83	87.96	-3,127.71	-187.89	1,231.41	997.97	233.44	5.275	
8,000.00	5,485.72	13,771.79	5,504.02	58.52	180.11	87.97	-3,198.42	-117.18	1,231.40	993.54	237.86	5.177	
8,100.00	5,485.09	13,871.79	5,503.48	60.67	182.39	87.97	-3,269.13	-46.47	1,231.40	989.11	242.30	5.082	
8,200.00	5,484.46	13,971.79	5,502.93	62.83	184.67	87.97	-3,339.84	24.24	1,231.40	984.66	246.74	4.991	
8,300.00	5,483.83	14,071.79	5,502.39	65.01	186.96	87.98	-3,410.55	94.95	1,231.40	980.20	251.20	4.902	
8,400.00	5,483.20	14,171.79	5,501.84	67.19	189.24	87.98	-3,481.26	165.65	1,231.40	975.74	255.66	4.816	
8,500.00	5,482.57	14,271.79	5,501.30	69.37	191.52	87.99	-3,551.97	236.36	1,231.40	971.26	260.14	4.734	
8,600.00	5,481.94	14,371.79	5,500.76	71.57	193.80	87.99	-3,622.68	307.07	1,231.40	966.78	264.62	4.654	
8,700.00	5,481.31	14,471.79	5,500.21	73.77	196.09	87.99	-3,693.40	377.78	1,231.39	962.29	269.10	4.576	
8,800.00	5,480.68	14,571.79	5,499.67	75.98	198.37	88.00	-3,764.11	448.49	1,231.39	957.79	273.60	4.501	
8,900.00	5,480.05	14,671.79	5,499.13	78.19	200.66	88.00	-3,834.82	519.20	1,231.39	953.29	278.10	4.428	
9,000.00	5,479.42	14,771.79	5,498.58	80.41	202.94	88.01	-3,905.53	589.91	1,231.39	948.79	282.60	4.357	
9,100.00	5,478.79	14,871.79	5,498.04	82.63	205.23	88.01	-3,976.24	660.61	1,231.39	944.27	287.12	4.289	
9,200.00	5,478.16	14,971.79	5,497.50	84.86	207.51	88.01	-4,046.95	731.32	1,231.39	939.76	291.63	4.222	
9,300.00	5,477.53	15,071.79	5,496.95	87.09	209.80	88.02	-4,117.66	802.03	1,231.39	935.24	296.15	4.158	
9,400.00	5,476.90	15,171.79	5,496.41	89.32	212.09	88.02	-4,188.37	872.74	1,231.39	930.71	300.67	4.095	
9,500.00	5,476.27	15,271.79	5,495.87	91.56	214.37	88.03	-4,259.08	943.45	1,231.38	926.18	305.20	4.035	
9,600.00	5,475.64	15,371.79	5,495.32	93.80	216.66	88.03	-4,329.79	1,014.16	1,231.38	921.65	309.73	3.976	
9,700.00	5,475.00	15,471.79	5,494.78	96.04	218.95	88.03	-4,400.50	1,084.86	1,231.38	917.12	314.26	3.918	
9,800.00	5,474.37	15,571.79	5,494.24	98.29	221.24	88.04	-4,471.21	1,155.57	1,231.38	912.58	318.80	3.863	
9,900.00	5,473.74	15,671.79	5,493.69	100.54	223.52	88.04	-4,541.92	1,226.28	1,231.38	908.04	323.34	3.808	
10,000.00	5,473.11	15,771.79	5,493.15	102.79	225.81	88.05	-4,612.64	1,296.99	1,231.38	903.50	327.88	3.756	
10,100.00	5,472.48	15,871.79	5,492.60	105.04	228.10	88.05	-4,683.35	1,367.70	1,231.38	898.95	332.42	3.704	
10,200.00	5,471.85	15,971.79	5,492.06	107.30	230.39	88.06	-4,754.06	1,438.41	1,231.37	894.40	336.97	3.654	
10,300.00	5,471.22	16,071.79	5,491.52	109.56	232.68	88.06	-4,824.77	1,509.12	1,231.37	889.85	341.52	3.606	
10,400.00	5,470.59	16,171.79	5,490.97	111.82	234.97	88.06	-4,895.48	1,579.82	1,231.37	885.30	346.07	3.558	
10,500.00	5,469.96	16,271.79	5,490.43	114.08	237.26	88.07	-4,966.19	1,650.53	1,231.37	880.75	350.62	3.512	
10,600.00	5,469.33	16,371.79	5,489.89	116.34	239.55	88.07	-5,036.90	1,721.24	1,231.37	876.19	355.18	3.467	
10,700.00	5,468.70	16,471.79	5,489.34	118.61	241.84	88.08	-5,107.61	1,791.95	1,231.37	871.64	359.73	3.423	
10,800.00	5,468.07	16,571.79	5,488.80	120.87	244.13	88.08	-5,178.32	1,862.66	1,231.37	867.08	364.29	3.380	
10,900.00	5,467.44	16,671.79	5,488.26	123.14	246.43	88.08	-5,249.03	1,933.37	1,231.37	862.52	368.85	3.338	
11,000.00	5,466.81	16,771.79	5,487.71	125.41	248.72	88.09	-5,319.74	2,004.07	1,231.37	857.95	373.41	3.298	
11,100.00	5,466.18	16,871.79	5,487.17	127.68	251.01	88.09	-5,390.45	2,074.78	1,231.36	853.39	377.97	3.258	
11,200.00	5,465.55	16,971.79	5,486.63	129.95	253.30	88.10	-5,461.16	2,145.49	1,231.36	848.83	382.54	3.219	
11,300.00	5,464.92	17,071.79	5,486.08	132.22	255.59	88.10	-5,531.87	2,216.20	1,231.36	844.26	387.10	3.181	
11,400.00	5,464.29	17,171.79	5,485.54	134.50	257.89	88.10	-5,602.59	2,286.91	1,231.36	839.69	391.67	3.144	
11,500.00	5,463.66	17,271.79	5,485.00	136.77	260.18	88.11	-5,673.30	2,357.62	1,231.36	835.12	396.24	3.108	
11,600.00	5,463.03	17,371.79	5,484.45	139.05	262.47	88.11	-5,744.01	2,428.33	1,231.36	830.55	400.80	3.072	
11,700.00	5,462.40	17,471.79	5,483.91	141.32	264.76	88.12	-5,814.72	2,499.03	1,231.36	825.98	405.37	3.038	
11,800.00	5,461.77	17,571.79	5,483.36	143.60	267.06	88.12	-5,885.43	2,569.74	1,231.36	821.41	409.94	3.004	

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

Anticollision Report

Company:	Enduring Resources LLC	**Local Co-ordinate Reference:**	Well Haynes Canyon Unit 428H
Project:	Rio Arriba County, New Mexico NAD83 NM C	**TVD Reference:**	RKB=6703+25 @ 6728.00ft
Reference Site:	Haynes Canyon Unit (428,430,440 & 442)	**MD Reference:**	RKB=6703+25 @ 6728.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Haynes Canyon Unit 428H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Original Hole	**Database:**	DT_Jan1924v17
Reference Design:	rev1	**Offset TVD Reference:**	Offset Datum

Offset Design: Haynes Canyon Unit (420, 422, 424 & 426) - Haynes Canyon Unit 426 H - Original Hole - rev0

Offset Site Error: 0.00 ft

Survey Program: 0-MWD

Rule Assigned:

Offset Well Error: 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
11,900.00	5,461.14	17,671.79	5,482.82	145.88	269.35	88.12	-5,956.14	2,640.45	1,231.35	816.84	414.51	2.971	
12,000.00	5,460.51	17,771.79	5,482.28	148.16	271.64	88.13	-6,026.85	2,711.16	1,231.35	812.27	419.09	2.938	
12,100.00	5,459.88	17,871.79	5,481.73	150.44	273.94	88.13	-6,097.56	2,781.87	1,231.35	807.69	423.66	2.906	
12,200.00	5,459.25	17,971.79	5,481.19	152.72	276.23	88.14	-6,168.27	2,852.58	1,231.35	803.12	428.23	2.875	
12,300.00	5,458.62	18,071.79	5,480.65	155.00	278.53	88.14	-6,238.98	2,923.28	1,231.35	798.54	432.81	2.845	
12,400.00	5,457.99	18,171.79	5,480.10	157.28	280.82	88.14	-6,309.69	2,993.99	1,231.35	793.96	437.38	2.815	
12,500.00	5,457.35	18,271.79	5,479.56	159.57	283.12	88.15	-6,380.40	3,064.70	1,231.35	789.39	441.96	2.786	
12,600.00	5,456.72	18,371.79	5,479.02	161.85	285.41	88.15	-6,451.11	3,135.41	1,231.35	784.81	446.54	2.758	
12,700.00	5,456.09	18,471.79	5,478.47	164.13	287.71	88.16	-6,521.83	3,206.12	1,231.35	780.23	451.11	2.730	
12,800.00	5,455.46	18,571.79	5,477.93	166.42	290.00	88.16	-6,592.54	3,276.83	1,231.34	775.65	455.69	2.702	
12,900.00	5,454.83	18,671.79	5,477.39	168.70	292.30	88.16	-6,663.25	3,347.54	1,231.34	771.07	460.27	2.675	
13,000.00	5,454.20	18,771.79	5,476.84	170.99	294.59	88.17	-6,733.96	3,418.24	1,231.34	766.49	464.85	2.649	
13,100.00	5,453.57	18,871.78	5,476.30	173.27	296.89	88.17	-6,804.67	3,488.95	1,231.34	761.91	469.43	2.623	
13,200.00	5,452.94	18,971.78	5,475.76	175.56	299.18	88.18	-6,875.38	3,559.66	1,231.34	757.33	474.01	2.598	
13,300.00	5,452.31	19,071.78	5,475.21	177.85	301.48	88.18	-6,946.09	3,630.37	1,231.34	752.75	478.59	2.573	
13,400.00	5,451.68	19,171.78	5,474.67	180.13	303.77	88.18	-7,016.80	3,701.08	1,231.34	748.16	483.17	2.548	
13,500.00	5,451.05	19,271.78	5,474.12	182.42	306.07	88.19	-7,087.51	3,771.79	1,231.34	743.58	487.76	2.524	
13,508.07	5,451.00	19,279.86	5,474.08	182.61	306.25	88.19	-7,093.22	3,777.49	1,231.34	743.21	488.13	2.523	ES, SF

Anticollision Report

Company:	Enduring Resources LLC	**Local Co-ordinate Reference:**	Well Haynes Canyon Unit 428H
Project:	Rio Arriba County, New Mexico NAD83 NM C	**TVD Reference:**	RKB=6703+25 @ 6728.00ft
Reference Site:	Haynes Canyon Unit (428,430,440 & 442)	**MD Reference:**	RKB=6703+25 @ 6728.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Haynes Canyon Unit 428H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Original Hole	**Database:**	DT_Jan1924v17
Reference Design:	rev1	**Offset TVD Reference:**	Offset Datum

Offset Design: Haynes Canyon Unit (428,430,440 & 442) - Haynes Canyon Unit 430H - Original Hole - rev0

Offset Site Error: 0.00 ft

Survey Program: 0-MWD

Offset Well Error: 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Rule Assigned: Distance Between Centres (ft)	Rule Assigned: Distance Between Ellipses (ft)	Rule Assigned: Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	106.62	-5.70	19.10	19.93				
100.00	100.00	100.00	100.00	0.27	0.13	106.62	-5.70	19.10	19.93	19.53	0.40	49.422	
200.00	200.00	200.00	200.00	0.63	0.49	106.62	-5.70	19.10	19.93	18.81	1.12	17.792	
300.00	300.00	300.00	300.00	0.99	0.85	106.62	-5.70	19.10	19.93	18.09	1.84	10.849	
400.00	400.00	400.00	400.00	1.34	1.21	106.62	-5.70	19.10	19.93	17.38	2.55	7.803	
500.00	500.00	500.00	500.00	1.70	1.57	106.62	-5.70	19.10	19.93	16.66	3.27	6.093	
600.00	600.00	600.00	600.00	2.06	1.93	106.62	-5.70	19.10	19.93	15.94	3.99	4.998	
700.00	700.00	700.00	700.00	2.42	2.29	106.62	-5.70	19.10	19.93	15.23	4.70	4.236	
800.00	800.00	800.00	800.00	2.78	2.64	106.62	-5.70	19.10	19.93	14.51	5.42	3.676	
900.00	900.00	900.00	900.00	3.14	3.00	106.62	-5.70	19.10	19.93	13.79	6.14	3.247	
1,000.00	1,000.00	1,000.00	1,000.00	3.50	3.36	106.62	-5.70	19.10	19.93	13.08	6.86	2.907	
1,100.00	1,100.00	1,100.45	1,100.40	3.85	3.72	99.68	-3.14	18.44	18.71	11.13	7.57	2.470	
1,198.87	1,198.87	1,199.23	1,198.87	4.21	4.08	75.46	4.28	16.51	17.05	8.77	8.28	2.059	CC
1,200.00	1,200.00	1,200.35	1,199.99	4.21	4.08	75.10	4.39	16.48	17.06	8.77	8.29	2.057	ES, SF
1,300.00	1,300.00	1,299.89	1,299.07	4.57	4.44	46.00	13.61	14.09	19.61	10.61	9.00	2.179	
1,400.00	1,399.95	1,399.33	1,398.06	4.92	4.80	147.90	22.82	11.70	27.89	18.19	9.70	2.876	
1,500.00	1,499.63	1,498.38	1,496.65	5.26	5.17	144.13	31.99	9.32	41.40	31.00	10.40	3.981	
1,600.00	1,598.77	1,596.77	1,594.59	5.60	5.54	145.16	41.11	6.96	59.16	48.05	11.10	5.327	
1,700.00	1,697.08	1,694.23	1,691.61	5.97	5.90	147.62	50.14	4.61	81.24	69.42	11.82	6.875	
1,800.00	1,794.31	1,790.50	1,787.43	6.36	6.26	150.28	59.06	2.30	107.82	95.29	12.53	8.606	
1,900.00	1,890.18	1,885.31	1,881.81	6.79	6.62	152.73	67.84	0.02	139.02	125.79	13.24	10.501	
2,000.00	1,984.43	1,978.40	1,974.47	7.27	6.97	154.86	76.46	-2.21	174.90	160.96	13.95	12.539	
2,099.91	2,076.73	2,069.43	2,065.08	7.80	7.32	156.65	84.89	-4.40	215.40	200.75	14.65	14.701	
2,200.00	2,168.17	2,159.56	2,154.79	8.39	7.66	158.48	93.24	-6.57	258.40	243.05	15.35	16.831	
2,300.00	2,259.52	2,249.60	2,244.42	9.01	8.00	159.80	101.58	-8.73	301.51	285.46	16.05	18.783	
2,400.00	2,350.88	2,339.65	2,334.06	9.66	8.34	160.78	109.93	-10.90	344.72	327.96	16.76	20.569	
2,500.00	2,442.24	2,429.69	2,423.69	10.33	8.69	161.55	118.27	-13.06	387.99	370.52	17.47	22.207	
2,600.00	2,533.59	2,519.73	2,513.32	11.02	9.03	162.16	126.61	-15.22	431.31	413.12	18.19	23.711	
2,700.00	2,624.95	2,609.78	2,602.95	11.72	9.37	162.66	134.95	-17.39	474.66	455.74	18.91	25.096	
2,800.00	2,716.30	2,699.82	2,692.58	12.44	9.72	163.08	143.29	-19.55	518.03	498.39	19.64	26.374	
2,900.00	2,807.66	2,789.87	2,782.21	13.16	10.06	163.43	151.63	-21.71	561.43	541.05	20.37	27.556	
3,000.00	2,899.02	2,879.91	2,871.84	13.90	10.41	163.73	159.97	-23.88	604.83	583.72	21.11	28.652	
3,100.00	2,990.37	2,969.96	2,961.48	14.64	10.76	163.99	168.32	-26.04	648.25	626.41	21.85	29.670	
3,200.00	3,081.73	3,060.00	3,051.11	15.39	11.10	164.22	176.66	-28.21	691.68	669.09	22.59	30.618	
3,300.00	3,173.09	3,150.05	3,140.74	16.14	11.45	164.42	185.00	-30.37	735.12	711.79	23.34	31.502	
3,400.00	3,264.44	3,240.09	3,230.37	16.90	11.79	164.60	193.34	-32.53	778.57	754.48	24.08	32.329	
3,500.00	3,355.80	3,330.14	3,320.00	17.66	12.14	164.76	201.68	-34.70	822.02	797.18	24.83	33.103	
3,600.00	3,447.16	3,420.18	3,409.63	18.43	12.49	164.91	210.02	-36.86	865.47	839.89	25.58	33.829	
3,700.00	3,538.51	3,510.23	3,499.26	19.20	12.83	165.04	218.36	-39.02	908.93	882.59	26.34	34.511	
3,800.00	3,629.87	3,600.27	3,588.90	19.97	13.18	165.16	226.70	-41.19	952.39	925.30	27.09	35.154	
3,900.00	3,721.23	3,690.31	3,678.53	20.74	13.53	165.26	235.05	-43.35	995.86	968.01	27.85	35.759	
4,000.00	3,812.58	3,780.36	3,768.16	21.52	13.87	165.36	243.39	-45.52	1,039.32	1,010.72	28.61	36.331	
4,100.00	3,903.94	3,884.15	3,871.54	22.30	14.27	165.51	252.25	-47.82	1,082.54	1,053.07	29.47	36.736	
4,200.00	3,995.51	4,006.65	3,993.94	23.07	14.71	166.12	256.43	-48.90	1,123.12	1,092.70	30.42	36.925	
4,300.00	4,088.76	4,101.47	4,088.76	23.78	15.03	166.81	256.44	-48.90	1,158.33	1,127.19	31.14	37.199	
4,400.00	4,183.77	4,196.48	4,183.77	24.42	15.36	167.36	256.44	-48.90	1,188.76	1,156.91	31.85	37.324	
4,500.00	4,280.28	4,292.99	4,280.28	24.99	15.69	167.80	256.44	-48.90	1,214.33	1,181.77	32.56	37.296	
4,600.00	4,378.03	4,390.74	4,378.03	25.48	16.02	168.14	256.44	-48.90	1,234.94	1,201.67	33.26	37.127	
4,700.00	4,476.75	4,489.45	4,476.75	25.90	16.36	168.38	256.44	-48.90	1,250.51	1,216.56	33.96	36.827	
4,800.00	4,576.16	4,588.87	4,576.16	26.26	16.71	168.54	256.44	-48.90	1,261.02	1,226.38	34.64	36.404	
4,900.00	4,676.00	4,688.71	4,676.00	26.55	17.05	168.63	256.44	-48.90	1,266.40	1,231.10	35.31	35.866	
5,000.00	4,775.99	4,788.70	4,775.99	26.78	17.40	50.84	256.44	-48.90	1,267.18	1,231.22	35.96	35.239	

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

Anticollision Report

Company:	Enduring Resources LLC	**Local Co-ordinate Reference:**	Well Haynes Canyon Unit 428H
Project:	Rio Arriba County, New Mexico NAD83 NM C	**TVD Reference:**	RKB=6703+25 @ 6728.00ft
Reference Site:	Haynes Canyon Unit (428,430,440 & 442)	**MD Reference:**	RKB=6703+25 @ 6728.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Haynes Canyon Unit 428H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Original Hole	**Database:**	DT_Jan1924v17
Reference Design:	rev1	**Offset TVD Reference:**	Offset Datum

Offset Design: Haynes Canyon Unit (428,430,440 & 442) - Haynes Canyon Unit 430H - Original Hole - rev0

Offset Site Error: 0.00 ft

Survey Program: 0-MWD

Offset Well Error: 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Rule Assigned: Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.00	4,875.99	4,888.70	4,875.99	27.00	17.74	50.84	256.44	-48.90	1,267.18	1,230.57	36.61	34.615	
5,200.00	4,975.92	4,985.34	4,972.56	27.21	18.06	-84.17	254.68	-47.38	1,267.02	1,229.82	37.21	34.054	
5,300.00	5,074.25	5,079.23	5,064.96	27.38	18.31	-84.31	242.54	-36.89	1,265.74	1,228.06	37.69	33.584	
5,400.00	5,168.04	5,173.22	5,153.60	27.51	18.53	-84.62	219.13	-16.65	1,263.22	1,225.11	38.11	33.146	
5,500.00	5,254.45	5,267.46	5,236.20	27.61	18.72	-85.08	184.98	12.87	1,259.52	1,221.00	38.52	32.698	
5,600.00	5,330.86	5,362.08	5,310.58	27.66	18.93	-85.70	140.86	51.00	1,254.77	1,215.78	38.99	32.181	
5,700.00	5,394.93	5,457.22	5,374.67	27.69	19.21	-86.44	87.78	96.89	1,249.12	1,209.50	39.62	31.526	
5,800.00	5,444.72	5,553.71	5,427.23	27.68	19.62	-87.32	26.64	149.74	1,242.74	1,202.23	40.52	30.672	
5,900.00	5,478.73	5,651.35	5,473.49	27.65	20.17	-88.66	-38.36	205.92	1,235.78	1,194.01	41.77	29.583	
6,000.00	5,495.91	5,750.17	5,506.12	27.60	20.90	-90.13	-108.84	266.84	1,228.67	1,185.29	43.39	28.317	
6,100.00	5,497.70	5,852.12	5,522.50	27.54	21.83	-91.19	-184.85	332.55	1,221.63	1,176.28	45.35	26.937	
6,200.00	5,497.07	5,932.32	5,523.73	27.50	22.68	-91.28	-245.30	385.20	1,214.91	1,167.53	47.38	25.643	
6,300.00	5,496.44	6,000.00	5,523.18	27.51	23.47	-91.28	-294.90	431.25	1,211.05	1,161.59	49.47	24.483	
6,383.12	5,495.91	6,048.93	5,522.79	27.73	24.10	-91.27	-329.75	465.59	1,210.21	1,158.89	51.31	23.585	
6,400.00	5,495.81	6,065.80	5,522.66	27.87	24.33	-91.27	-341.68	477.52	1,210.21	1,158.48	51.73	23.396	
6,500.00	5,495.18	6,165.80	5,521.85	29.16	25.75	-91.26	-412.39	548.23	1,210.20	1,155.53	54.68	22.133	
6,600.00	5,494.55	6,265.80	5,521.05	30.76	27.29	-91.26	-483.10	618.94	1,210.20	1,152.36	57.84	20.923	
6,700.00	5,493.92	6,365.80	5,520.25	32.47	28.93	-91.25	-553.80	689.65	1,210.20	1,149.01	61.19	19.778	
6,800.00	5,493.29	6,465.80	5,519.45	34.25	30.66	-91.24	-624.51	760.36	1,210.19	1,145.50	64.69	18.707	
6,900.00	5,492.66	6,565.80	5,518.65	36.09	32.46	-91.23	-695.22	831.06	1,210.19	1,141.86	68.33	17.712	
7,000.00	5,492.02	6,665.80	5,517.85	37.98	34.32	-91.22	-765.93	901.77	1,210.19	1,138.12	72.07	16.791	
7,100.00	5,491.39	6,765.80	5,517.05	39.92	36.23	-91.21	-836.63	972.48	1,210.19	1,134.27	75.92	15.941	
7,200.00	5,490.76	6,865.80	5,516.24	41.89	38.18	-91.21	-907.34	1,043.19	1,210.18	1,130.34	79.84	15.158	
7,300.00	5,490.13	6,965.80	5,515.44	43.89	40.17	-91.20	-978.05	1,113.90	1,210.18	1,126.35	83.83	14.436	
7,400.00	5,489.50	7,065.80	5,514.64	45.92	42.20	-91.19	-1,048.76	1,184.61	1,210.18	1,122.29	87.89	13.770	
7,500.00	5,488.87	7,165.80	5,513.84	47.98	44.25	-91.18	-1,119.47	1,255.32	1,210.17	1,118.18	91.99	13.155	
7,600.00	5,488.24	7,265.80	5,513.04	50.05	46.32	-91.17	-1,190.17	1,326.03	1,210.17	1,114.03	96.14	12.587	
7,700.00	5,487.61	7,365.80	5,512.24	52.15	48.42	-91.17	-1,260.88	1,396.73	1,210.17	1,109.83	100.33	12.061	
7,800.00	5,486.98	7,465.80	5,511.44	54.26	50.53	-91.16	-1,331.59	1,467.44	1,210.17	1,105.60	104.56	11.574	
7,900.00	5,486.35	7,565.80	5,510.63	56.38	52.66	-91.15	-1,402.30	1,538.15	1,210.16	1,101.34	108.82	11.121	
8,000.00	5,485.72	7,665.80	5,509.83	58.52	54.81	-91.14	-1,473.00	1,608.86	1,210.16	1,097.06	113.10	10.699	
8,100.00	5,485.09	7,765.80	5,509.03	60.67	56.96	-91.13	-1,543.71	1,679.57	1,210.16	1,092.74	117.41	10.307	
8,200.00	5,484.46	7,865.80	5,508.23	62.83	59.13	-91.13	-1,614.42	1,750.28	1,210.15	1,088.41	121.75	9.940	
8,300.00	5,483.83	7,965.80	5,507.43	65.01	61.31	-91.12	-1,685.13	1,820.99	1,210.15	1,084.05	126.10	9.597	
8,400.00	5,483.20	8,065.80	5,506.63	67.19	63.49	-91.11	-1,755.84	1,891.70	1,210.15	1,079.68	130.47	9.276	
8,500.00	5,482.57	8,165.80	5,505.83	69.37	65.69	-91.10	-1,826.54	1,962.41	1,210.15	1,075.30	134.85	8.974	
8,600.00	5,481.94	8,265.80	5,505.02	71.57	67.89	-91.09	-1,897.25	2,033.11	1,210.14	1,070.89	139.25	8.690	
8,700.00	5,481.31	8,365.80	5,504.22	73.77	70.10	-91.08	-1,967.96	2,103.82	1,210.14	1,066.48	143.66	8.423	
8,800.00	5,480.68	8,465.80	5,503.42	75.98	72.31	-91.08	-2,038.67	2,174.53	1,210.14	1,062.05	148.09	8.172	
8,900.00	5,480.05	8,565.80	5,502.62	78.19	74.53	-91.07	-2,109.37	2,245.24	1,210.14	1,057.61	152.52	7.934	
9,000.00	5,479.42	8,665.80	5,501.82	80.41	76.76	-91.06	-2,180.08	2,315.95	1,210.13	1,053.17	156.97	7.709	
9,100.00	5,478.79	8,765.80	5,501.02	82.63	78.99	-91.05	-2,250.79	2,386.66	1,210.13	1,048.71	161.42	7.497	
9,200.00	5,478.16	8,865.80	5,500.21	84.86	81.22	-91.04	-2,321.50	2,457.37	1,210.13	1,044.24	165.88	7.295	
9,300.00	5,477.53	8,965.80	5,499.41	87.09	83.46	-91.04	-2,392.21	2,528.08	1,210.13	1,039.77	170.35	7.104	
9,400.00	5,476.90	9,065.80	5,498.61	89.32	85.70	-91.03	-2,462.91	2,598.78	1,210.12	1,035.29	174.83	6.922	
9,500.00	5,476.27	9,165.80	5,497.81	91.56	87.95	-91.02	-2,533.62	2,669.49	1,210.12	1,030.81	179.32	6.749	
9,600.00	5,475.64	9,265.80	5,497.01	93.80	90.19	-91.01	-2,604.33	2,740.20	1,210.12	1,026.31	183.81	6.584	
9,700.00	5,475.00	9,365.80	5,496.21	96.04	92.44	-91.00	-2,675.04	2,810.91	1,210.12	1,021.81	188.30	6.426	
9,800.00	5,474.37	9,465.80	5,495.41	98.29	94.70	-91.00	-2,745.74	2,881.62	1,210.11	1,017.31	192.80	6.276	
9,900.00	5,473.74	9,565.80	5,494.60	100.54	96.95	-90.99	-2,816.45	2,952.33	1,210.11	1,012.80	197.31	6.133	
10,000.00	5,473.11	9,665.80	5,493.80	102.79	99.21	-90.98	-2,887.16	3,023.04	1,210.11	1,008.29	201.82	5.996	
10,100.00	5,472.48	9,765.80	5,493.00	105.04	101.47	-90.97	-2,957.87	3,093.75	1,210.11	1,003.77	206.34	5.865	

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

Anticollision Report

Company:	Enduring Resources LLC	**Local Co-ordinate Reference:**	Well Haynes Canyon Unit 428H
Project:	Rio Arriba County, New Mexico NAD83 NM C	**TVD Reference:**	RKB=6703+25 @ 6728.00ft
Reference Site:	Haynes Canyon Unit (428,430,440 & 442)	**MD Reference:**	RKB=6703+25 @ 6728.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Haynes Canyon Unit 428H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Original Hole	**Database:**	DT_Jan1924v17
Reference Design:	rev1	**Offset TVD Reference:**	Offset Datum

Offset Design: Haynes Canyon Unit (428,430,440 & 442) - Haynes Canyon Unit 430H - Original Hole - rev0

Offset Site Error: 0.00 ft

Survey Program: 0-MWD

Offset Well Error: 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Rule Assigned: Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,200.00	5,471.85	9,865.80	5,492.20	107.30	103.73	-90.96	-3,028.58	3,164.46	1,210.11	999.25	210.86	5.739	
10,300.00	5,471.22	9,965.80	5,491.40	109.56	105.99	-90.96	-3,099.28	3,235.16	1,210.10	994.72	215.38	5.618	
10,400.00	5,470.59	10,065.80	5,490.60	111.82	108.26	-90.95	-3,169.99	3,305.87	1,210.10	990.20	219.91	5.503	
10,500.00	5,469.96	10,165.80	5,489.80	114.08	110.53	-90.94	-3,240.70	3,376.58	1,210.10	985.66	224.44	5.392	
10,600.00	5,469.33	10,265.80	5,488.99	116.34	112.79	-90.93	-3,311.41	3,447.29	1,210.10	981.13	228.97	5.285	
10,700.00	5,468.70	10,365.80	5,488.19	118.61	115.06	-90.92	-3,382.11	3,518.00	1,210.09	976.59	233.51	5.182	
10,800.00	5,468.07	10,465.80	5,487.39	120.87	117.34	-90.91	-3,452.82	3,588.71	1,210.09	972.05	238.04	5.083	
10,900.00	5,467.44	10,565.80	5,486.59	123.14	119.61	-90.91	-3,523.53	3,659.42	1,210.09	967.51	242.59	4.988	
11,000.00	5,466.81	10,665.80	5,485.79	125.41	121.88	-90.90	-3,594.24	3,730.13	1,210.09	962.96	247.13	4.897	
11,100.00	5,466.18	10,765.80	5,484.99	127.68	124.16	-90.89	-3,664.95	3,800.83	1,210.09	958.41	251.68	4.808	
11,200.00	5,465.55	10,865.80	5,484.19	129.95	126.43	-90.88	-3,735.65	3,871.54	1,210.08	953.86	256.22	4.723	
11,300.00	5,464.92	10,965.80	5,483.38	132.22	128.71	-90.87	-3,806.36	3,942.25	1,210.08	949.31	260.77	4.640	
11,400.00	5,464.29	11,065.80	5,482.58	134.50	130.99	-90.87	-3,877.07	4,012.96	1,210.08	944.75	265.33	4.561	
11,500.00	5,463.66	11,165.80	5,481.78	136.77	133.27	-90.86	-3,947.78	4,083.67	1,210.08	940.20	269.88	4.484	
11,600.00	5,463.03	11,265.80	5,480.98	139.05	135.55	-90.85	-4,018.48	4,154.38	1,210.08	935.64	274.44	4.409	
11,700.00	5,462.40	11,365.80	5,480.18	141.32	137.83	-90.84	-4,089.19	4,225.09	1,210.08	931.08	279.00	4.337	
11,800.00	5,461.77	11,465.80	5,479.38	143.60	140.11	-90.83	-4,159.90	4,295.80	1,210.07	926.52	283.56	4.267	
11,900.00	5,461.14	11,565.80	5,478.58	145.88	142.39	-90.83	-4,230.61	4,366.51	1,210.07	921.95	288.12	4.200	
12,000.00	5,460.51	11,665.80	5,477.77	148.16	144.67	-90.82	-4,301.32	4,437.21	1,210.07	917.39	292.68	4.134	
12,100.00	5,459.88	11,765.80	5,476.97	150.44	146.96	-90.81	-4,372.02	4,507.92	1,210.07	912.82	297.24	4.071	
12,200.00	5,459.25	11,865.80	5,476.17	152.72	149.24	-90.80	-4,442.73	4,578.63	1,210.07	908.26	301.81	4.009	
12,300.00	5,458.62	11,965.80	5,475.37	155.00	151.52	-90.79	-4,513.44	4,649.34	1,210.06	903.69	306.38	3.950	
12,400.00	5,457.99	12,065.80	5,474.57	157.28	153.81	-90.79	-4,584.15	4,720.05	1,210.06	899.12	310.95	3.892	
12,500.00	5,457.35	12,165.80	5,473.77	159.57	156.10	-90.78	-4,654.85	4,790.76	1,210.06	894.55	315.51	3.835	
12,600.00	5,456.72	12,265.80	5,472.96	161.85	158.38	-90.77	-4,725.56	4,861.47	1,210.06	889.97	320.09	3.780	
12,700.00	5,456.09	12,365.80	5,472.16	164.13	160.67	-90.76	-4,796.27	4,932.18	1,210.06	885.40	324.66	3.727	
12,800.00	5,455.46	12,465.80	5,471.36	166.42	162.96	-90.75	-4,866.98	5,002.89	1,210.06	880.83	329.23	3.675	
12,900.00	5,454.83	12,565.80	5,470.56	168.70	165.24	-90.74	-4,937.69	5,073.59	1,210.05	876.25	333.80	3.625	
13,000.00	5,454.20	12,665.80	5,469.76	170.99	167.53	-90.74	-5,008.39	5,144.30	1,210.05	871.68	338.38	3.576	
13,100.00	5,453.57	12,765.80	5,468.96	173.27	169.82	-90.73	-5,079.10	5,215.01	1,210.05	867.10	342.95	3.528	
13,200.00	5,452.94	12,865.79	5,468.16	175.56	172.11	-90.72	-5,149.81	5,285.72	1,210.05	862.52	347.53	3.482	
13,300.00	5,452.31	12,965.79	5,467.35	177.85	174.40	-90.71	-5,220.52	5,356.43	1,210.05	857.94	352.11	3.437	
13,400.00	5,451.68	13,065.79	5,466.55	180.13	176.69	-90.70	-5,291.22	5,427.14	1,210.05	853.36	356.68	3.392	
13,500.00	5,451.05	13,165.79	5,465.75	182.42	178.98	-90.70	-5,361.93	5,497.85	1,210.05	848.78	361.26	3.349	
13,508.07	5,451.00	13,173.87	5,465.69	182.61	179.16	-90.70	-5,367.64	5,503.55	1,210.05	848.41	361.63	3.346	

Anticollision Report

Company:	Enduring Resources LLC	**Local Co-ordinate Reference:**	Well Haynes Canyon Unit 428H
Project:	Rio Arriba County, New Mexico NAD83 NM C	**TVD Reference:**	RKB=6703+25 @ 6728.00ft
Reference Site:	Haynes Canyon Unit (428,430,440 & 442)	**MD Reference:**	RKB=6703+25 @ 6728.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Haynes Canyon Unit 428H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Original Hole	**Database:**	DT_Jan1924v17
Reference Design:	rev1	**Offset TVD Reference:**	Offset Datum

Offset Design: Haynes Canyon Unit (428,430,440 & 442) - Haynes Canyon Unit 440H - Orignal Hole - rev1

Offset Site Error: 0.00 ft

Survey Program: 0-MWD

Offset Well Error: 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Rule Assigned: Distance Between Centres (ft)	Rule Assigned: Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-73.00	11.77	-38.49	40.25				
100.00	100.00	100.00	100.00	0.27	0.27	-73.00	11.77	-38.49	40.25	39.71	0.54	74.848	
200.00	200.00	200.00	200.00	0.63	0.63	-73.00	11.77	-38.49	40.25	38.99	1.25	32.078	
300.00	300.00	300.00	300.00	0.99	0.99	-73.00	11.77	-38.49	40.25	38.27	1.97	20.413	
400.00	400.00	400.00	400.00	1.34	1.34	-73.00	11.77	-38.49	40.25	37.56	2.69	14.970	
500.00	500.00	500.00	500.00	1.70	1.70	-73.00	11.77	-38.49	40.25	36.84	3.41	11.818	
600.00	600.00	600.00	600.00	2.06	2.06	-73.00	11.77	-38.49	40.25	36.12	4.12	9.763	
700.00	700.00	700.00	700.00	2.42	2.42	-73.00	11.77	-38.49	40.25	35.41	4.84	8.316	
800.00	800.00	800.00	800.00	2.78	2.78	-73.00	11.77	-38.49	40.25	34.69	5.56	7.243	
900.00	900.00	900.00	900.00	3.14	3.14	-73.00	11.77	-38.49	40.25	33.97	6.27	6.416	
1,000.00	1,000.00	1,000.00	1,000.00	3.50	3.50	-73.00	11.77	-38.49	40.25	33.26	6.99	5.758	
1,100.00	1,100.00	1,099.53	1,099.48	3.85	3.84	-76.58	9.47	-39.68	40.80	33.11	7.69	5.307	
1,200.00	1,200.00	1,198.52	1,198.16	4.21	4.17	-86.52	2.63	-43.25	43.37	35.00	8.37	5.183	
1,300.00	1,300.00	1,296.45	1,295.26	4.57	4.50	-99.93	-8.59	-49.10	50.07	41.04	9.03	5.544	
1,400.00	1,399.95	1,393.22	1,390.45	4.92	4.85	5.19	-24.00	-57.13	60.11	50.47	9.64	6.233	
1,500.00	1,499.63	1,488.99	1,483.67	5.26	5.23	-5.72	-43.44	-67.26	71.46	61.26	10.20	7.005	
1,600.00	1,598.77	1,583.67	1,574.63	5.60	5.63	-15.26	-66.71	-79.38	84.39	73.67	10.72	7.874	
1,700.00	1,697.08	1,677.19	1,663.08	5.97	6.08	-23.62	-93.59	-93.39	99.19	87.97	11.22	8.842	
1,800.00	1,794.31	1,774.13	1,753.75	6.36	6.58	-31.25	-124.02	-109.24	114.41	102.53	11.88	9.627	
1,900.00	1,890.18	1,872.06	1,845.32	6.79	7.12	-38.41	-154.81	-125.29	127.27	114.61	12.65	10.058	
2,000.00	1,984.43	1,969.92	1,936.82	7.27	7.68	-45.62	-185.58	-141.32	138.19	124.66	13.53	10.215	
2,099.91	2,076.73	2,067.36	2,027.94	7.80	8.25	-53.19	-216.22	-157.28	147.96	133.41	14.55	10.166	
2,200.00	2,168.17	2,164.73	2,118.98	8.39	8.84	-60.71	-246.83	-173.24	158.92	143.19	15.74	10.098	
2,300.00	2,259.52	2,262.01	2,209.94	9.01	9.44	-67.20	-277.42	-189.17	172.31	155.29	17.02	10.124	
2,400.00	2,350.88	2,359.29	2,300.90	9.66	10.04	-72.72	-308.01	-205.11	187.61	169.25	18.36	10.217	
2,500.00	2,442.24	2,456.57	2,391.86	10.33	10.66	-77.40	-338.59	-221.05	204.40	184.66	19.74	10.356	
2,600.00	2,533.59	2,553.85	2,482.82	11.02	11.28	-81.36	-369.18	-236.99	222.34	201.21	21.13	10.523	
2,700.00	2,624.95	2,651.13	2,573.78	11.72	11.91	-84.72	-399.77	-252.93	241.17	218.64	22.53	10.705	
2,800.00	2,716.30	2,748.41	2,664.74	12.44	12.54	-87.61	-430.35	-268.86	260.70	236.77	23.93	10.895	
2,900.00	2,807.66	2,845.69	2,755.70	13.16	13.18	-90.08	-460.94	-284.80	280.78	255.46	25.33	11.086	
3,000.00	2,899.02	2,942.96	2,846.66	13.90	13.82	-92.23	-491.53	-300.74	301.31	274.58	26.73	11.274	
3,100.00	2,990.37	3,040.24	2,937.62	14.64	14.46	-94.11	-522.11	-316.68	322.20	294.07	28.12	11.457	
3,200.00	3,081.73	3,137.52	3,028.58	15.39	15.10	-95.76	-552.70	-332.61	343.37	313.86	29.52	11.634	
3,300.00	3,173.09	3,234.80	3,119.54	16.14	15.75	-97.21	-583.29	-348.55	364.79	333.89	30.91	11.803	
3,400.00	3,264.44	3,332.08	3,210.50	16.90	16.40	-98.51	-613.87	-364.49	386.41	354.12	32.30	11.964	
3,500.00	3,355.80	3,429.36	3,301.46	17.66	17.05	-99.67	-644.46	-380.43	408.21	374.52	33.69	12.117	
3,600.00	3,447.16	3,526.64	3,392.42	18.43	17.70	-100.71	-675.05	-396.37	430.14	395.07	35.08	12.263	
3,700.00	3,538.51	3,623.92	3,483.38	19.20	18.36	-101.65	-705.63	-412.30	452.20	415.74	36.46	12.402	
3,800.00	3,629.87	3,721.20	3,574.34	19.97	19.01	-102.50	-736.22	-428.24	474.36	436.51	37.85	12.533	
3,900.00	3,721.23	3,818.48	3,665.30	20.74	19.67	-103.28	-766.81	-444.18	496.62	457.38	39.23	12.658	
4,000.00	3,812.58	3,915.76	3,756.26	21.52	20.33	-103.99	-797.39	-460.12	518.95	478.33	40.62	12.776	
4,100.00	3,903.94	4,013.04	3,847.22	22.30	20.99	-104.65	-827.98	-476.05	541.36	499.35	42.01	12.888	
4,200.00	3,995.51	4,110.37	3,938.23	23.07	21.65	-105.49	-858.58	-492.00	563.69	520.30	43.38	12.993	
4,300.00	4,088.76	4,208.09	4,029.60	23.78	22.31	-106.19	-889.31	-508.01	584.88	540.17	44.71	13.082	
4,400.00	4,183.77	4,313.61	4,128.88	24.42	23.00	-106.48	-920.99	-524.52	604.19	558.13	46.06	13.118	
4,500.00	4,280.28	4,422.42	4,233.11	24.99	23.64	-106.70	-948.64	-538.93	620.47	573.16	47.31	13.116	
4,600.00	4,378.03	4,532.16	4,339.86	25.48	24.22	-106.88	-971.14	-550.65	633.62	585.20	48.41	13.088	
4,700.00	4,476.75	4,642.65	4,448.63	25.90	24.72	-107.01	-988.28	-559.58	643.56	594.19	49.37	13.035	
4,800.00	4,576.16	4,753.68	4,558.88	26.26	25.14	-107.11	-999.84	-565.61	650.26	600.08	50.18	12.959	
4,900.00	4,676.00	4,865.04	4,670.03	26.55	25.48	-107.17	-1,005.72	-568.67	653.67	602.84	50.83	12.860	
5,000.00	4,775.99	4,971.01	4,775.99	26.78	25.74	135.02	-1,006.50	-569.08	654.14	602.81	51.33	12.745	
5,100.00	4,875.99	6,102.28	5,501.26	27.00	26.85	141.99	-545.35	-1,030.22	625.28	605.77	19.51	32.055	

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

Anticollision Report

Company:	Enduring Resources LLC	**Local Co-ordinate Reference:**	Well Haynes Canyon Unit 428H
Project:	Rio Arriba County, New Mexico NAD83 NM C	**TVD Reference:**	RKB=6703+25 @ 6728.00ft
Reference Site:	Haynes Canyon Unit (428,430,440 & 442)	**MD Reference:**	RKB=6703+25 @ 6728.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Haynes Canyon Unit 428H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Original Hole	**Database:**	DT_Jan1924v17
Reference Design:	rev1	**Offset TVD Reference:**	Offset Datum

Offset Design: Haynes Canyon Unit (428,430,440 & 442) - Haynes Canyon Unit 440H - Orignal Hole - rev1

Offset Site Error: 0.00 ft

Survey Program: 0-MWD

Rule Assigned:

Offset Well Error: 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,200.00	4,975.92	6,100.33	5,501.26	27.21	26.85	179.69	-546.73	-1,028.84	525.34	505.75	19.58	26.827	
5,300.00	5,074.25	6,083.14	5,501.20	27.38	26.79	179.87	-558.89	-1,016.69	426.95	407.40	19.56	21.830	
5,400.00	5,168.04	6,049.12	5,501.09	27.51	26.71	179.90	-582.94	-992.64	333.05	313.63	19.43	17.145	
5,500.00	5,254.45	5,982.81	5,499.59	27.61	26.60	179.89	-629.80	-945.77	245.75	226.29	19.46	12.631	
5,600.00	5,330.86	5,900.79	5,488.01	27.66	26.55	179.84	-687.17	-888.41	160.80	140.16	20.64	7.792	
5,700.00	5,394.93	5,829.62	5,468.66	27.69	26.54	179.69	-735.56	-840.01	78.14	56.93	21.22	3.683	
5,784.27	5,437.90	5,774.40	5,447.89	27.68	26.54	177.95	-771.73	-803.85	11.01	-7.33	18.34	0.600	Level 3<2.00
5,800.00	5,444.72	5,764.43	5,443.61	27.68	26.54	17.50	-778.10	-797.48	1.26	-16.95	18.20	0.069	Level 3<2.00, CC, ES, SF
5,900.00	5,478.73	5,700.00	5,412.31	27.65	26.56	0.26	-817.89	-757.69	76.60	51.62	24.98	3.066	
6,000.00	5,495.91	5,643.63	5,379.89	27.60	26.57	0.13	-850.48	-725.10	147.12	114.77	32.35	4.548	
6,100.00	5,497.70	5,586.95	5,342.88	27.54	26.57	0.09	-880.82	-694.76	213.83	176.67	37.16	5.754	
6,200.00	5,497.07	5,538.27	5,307.85	27.50	26.57	0.07	-904.70	-670.88	285.45	244.73	40.72	7.010	
6,300.00	5,496.44	5,500.00	5,278.37	27.51	26.56	0.06	-921.95	-653.63	362.30	318.75	43.55	8.319	
6,400.00	5,495.81	5,462.77	5,248.19	27.87	26.55	0.06	-937.36	-638.22	443.16	397.89	45.28	9.788	
6,500.00	5,495.18	5,433.38	5,223.41	29.16	26.53	0.05	-948.52	-627.06	527.19	480.44	46.75	11.276	
6,600.00	5,494.55	5,400.00	5,194.32	30.76	26.51	0.05	-960.09	-615.48	613.81	566.23	47.58	12.899	
6,700.00	5,493.92	5,400.00	5,194.32	32.47	26.51	0.05	-960.09	-615.48	702.47	653.27	49.19	14.280	
6,800.00	5,493.29	5,367.66	5,165.27	34.25	26.47	0.04	-970.14	-605.43	792.25	742.74	49.51	16.002	
6,900.00	5,492.66	5,350.00	5,149.09	36.09	26.46	0.04	-975.14	-600.44	883.62	833.56	50.06	17.650	
7,000.00	5,492.02	5,350.00	5,149.09	37.98	26.46	0.04	-975.14	-600.44	976.30	925.51	50.79	19.221	
7,100.00	5,491.39	5,323.68	5,124.58	39.92	26.42	0.04	-981.92	-593.66	1,069.38	1,018.42	50.95	20.987	
7,200.00	5,490.76	5,300.00	5,102.18	41.89	26.40	0.04	-987.34	-588.24	1,163.63	1,112.51	51.12	22.762	
7,300.00	5,490.13	5,300.00	5,102.18	43.89	26.40	0.04	-987.34	-588.24	1,258.14	1,206.60	51.54	24.410	
7,400.00	5,489.50	5,300.00	5,102.18	45.92	26.40	0.04	-987.34	-588.24	1,353.44	1,301.56	51.88	26.089	
7,500.00	5,488.87	5,300.00	5,102.18	47.98	26.40	0.04	-987.34	-588.24	1,449.37	1,397.22	52.15	27.793	
7,600.00	5,488.24	5,276.43	5,079.58	50.05	26.36	0.03	-992.07	-583.50	1,545.15	1,492.96	52.19	29.609	

Anticollision Report

Company:	Enduring Resources LLC	**Local Co-ordinate Reference:**	Well Haynes Canyon Unit 428H
Project:	Rio Arriba County, New Mexico NAD83 NM C	**TVD Reference:**	RKB=6703+25 @ 6728.00ft
Reference Site:	Haynes Canyon Unit (428,430,440 & 442)	**MD Reference:**	RKB=6703+25 @ 6728.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Haynes Canyon Unit 428H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Original Hole	**Database:**	DT_Jan1924v17
Reference Design:	rev1	**Offset TVD Reference:**	Offset Datum

Offset Design: Haynes Canyon Unit (428,430,440 & 442) - Haynes Canyon Unit 442H - Original Hole - rev0

Offset Site Error: 0.00 ft

Survey Program: 0-MWD

Offset Well Error: 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	-73.38	5.70	-19.10	19.93				
100.00	100.00	100.00	100.00	0.27	0.13	-73.38	5.70	-19.10	19.93	19.53	0.40	49.422	
200.00	200.00	200.00	200.00	0.63	0.49	-73.38	5.70	-19.10	19.93	18.81	1.12	17.792	
300.00	300.00	300.00	300.00	0.99	0.85	-73.38	5.70	-19.10	19.93	18.09	1.84	10.849	
400.00	400.00	400.00	400.00	1.34	1.21	-73.38	5.70	-19.10	19.93	17.38	2.55	7.803	
500.00	500.00	500.00	500.00	1.70	1.57	-73.38	5.70	-19.10	19.93	16.66	3.27	6.093	
600.00	600.00	600.00	600.00	2.06	1.93	-73.38	5.70	-19.10	19.93	15.94	3.99	4.998	
700.00	700.00	700.00	700.00	2.42	2.29	-73.38	5.70	-19.10	19.93	15.23	4.70	4.236	
800.00	800.00	800.00	800.00	2.78	2.64	-73.38	5.70	-19.10	19.93	14.51	5.42	3.676	
900.00	900.00	900.00	900.00	3.14	3.00	-73.38	5.70	-19.10	19.93	13.79	6.14	3.247	
1,000.00	1,000.00	1,000.00	1,000.00	3.50	3.36	-73.38	5.70	-19.10	19.93	13.08	6.86	2.907	
1,100.00	1,100.00	1,100.00	1,100.00	3.85	3.72	-73.38	5.70	-19.10	19.93	12.36	7.57	2.632	
1,200.00	1,200.00	1,200.00	1,200.00	4.21	4.08	-73.38	5.70	-19.10	19.93	11.64	8.29	2.404	
1,300.00	1,300.00	1,300.00	1,300.00	4.57	4.44	-73.38	5.70	-19.10	19.93	10.92	9.01	2.213	
1,400.00	1,399.95	1,399.95	1,399.95	4.92	4.79	50.25	5.70	-19.10	18.15	8.44	9.71	1.870	Level 3<2.00
1,500.00	1,499.63	1,500.30	1,500.25	5.26	5.14	76.89	4.02	-17.07	11.86	1.49	10.37	1.144	Level 3<2.00
1,547.06	1,546.37	1,547.02	1,546.88	5.42	5.30	114.22	2.09	-14.74	9.57	-1.09	10.66	0.898	Level 3<2.00, CC, ES, SF
1,600.00	1,598.77	1,599.02	1,598.66	5.60	5.47	161.47	-0.91	-11.12	13.96	2.89	11.07	1.262	Level 3<2.00
1,700.00	1,697.08	1,695.07	1,693.90	5.97	5.80	-168.53	-8.81	-1.58	37.05	25.36	11.69	3.169	
1,800.00	1,794.31	1,787.91	1,785.26	6.36	6.14	-160.05	-19.30	11.09	70.12	57.81	12.31	5.697	
1,900.00	1,890.18	1,879.86	1,875.47	6.79	6.48	-157.11	-30.66	24.80	109.26	96.28	12.98	8.418	
2,000.00	1,984.43	1,969.85	1,963.76	7.27	6.83	-156.24	-41.77	38.22	152.83	139.18	13.66	11.189	
2,099.91	2,076.73	2,057.56	2,049.81	7.80	7.18	-156.09	-52.60	51.29	200.64	186.29	14.34	13.987	
2,200.00	2,168.17	2,144.24	2,134.85	8.39	7.53	-156.68	-63.31	64.22	250.64	235.60	15.03	16.673	
2,300.00	2,259.52	2,230.85	2,219.82	9.01	7.89	-157.07	-74.00	77.13	300.60	284.88	15.73	19.114	
2,400.00	2,350.88	2,317.45	2,304.79	9.66	8.26	-157.35	-84.70	90.05	350.58	334.14	16.43	21.332	
2,500.00	2,442.24	2,404.06	2,389.75	10.33	8.63	-157.57	-95.39	102.96	400.56	383.40	17.15	23.350	
2,600.00	2,533.59	2,490.67	2,474.72	11.02	9.00	-157.73	-106.09	115.87	450.54	432.66	17.89	25.190	
2,700.00	2,624.95	2,577.27	2,559.69	11.72	9.38	-157.86	-116.79	128.79	500.53	481.90	18.63	26.873	
2,800.00	2,716.30	2,663.88	2,644.66	12.44	9.76	-157.97	-127.48	141.70	550.51	531.14	19.37	28.415	
2,900.00	2,807.66	2,750.48	2,729.62	13.16	10.14	-158.06	-138.18	154.61	600.50	580.37	20.13	29.831	
3,000.00	2,899.02	2,837.09	2,814.59	13.90	10.53	-158.13	-148.87	167.53	650.49	629.60	20.89	31.135	
3,100.00	2,990.37	2,923.70	2,899.56	14.64	10.92	-158.20	-159.57	180.44	700.48	678.82	21.66	32.339	
3,200.00	3,081.73	3,010.30	2,984.52	15.39	11.31	-158.26	-170.26	193.35	750.47	728.04	22.43	33.452	
3,300.00	3,173.09	3,096.91	3,069.49	16.14	11.70	-158.31	-180.96	206.27	800.46	777.25	23.21	34.483	
3,400.00	3,264.44	3,183.51	3,154.46	16.90	12.10	-158.35	-191.66	219.18	850.45	826.46	24.00	35.441	
3,500.00	3,355.80	3,270.12	3,239.43	17.66	12.50	-158.39	-202.35	232.09	900.44	875.66	24.78	36.333	
3,600.00	3,447.16	3,356.73	3,324.39	18.43	12.89	-158.42	-213.05	245.01	950.43	924.86	25.57	37.164	
3,700.00	3,538.51	3,443.33	3,409.36	19.20	13.29	-158.45	-223.74	257.92	1,000.43	974.06	26.37	37.941	
3,800.00	3,629.87	3,529.94	3,494.33	19.97	13.69	-158.48	-234.44	270.83	1,050.42	1,023.25	27.17	38.668	
3,900.00	3,721.23	3,616.54	3,579.30	20.74	14.10	-158.51	-245.13	283.75	1,100.41	1,072.45	27.96	39.350	
4,000.00	3,812.58	3,703.15	3,664.26	21.52	14.50	-158.53	-255.83	296.66	1,150.40	1,121.64	28.77	39.990	
4,100.00	3,903.94	3,789.76	3,749.23	22.30	14.90	-158.55	-266.53	309.57	1,200.40	1,170.82	29.57	40.592	
4,200.00	3,995.51	3,876.60	3,834.43	23.07	15.31	-158.84	-277.25	322.52	1,249.96	1,219.58	30.38	41.147	
4,300.00	4,088.76	3,965.41	3,921.56	23.78	15.72	-159.32	-288.22	335.77	1,295.89	1,264.70	31.19	41.553	
4,400.00	4,183.77	4,056.31	4,010.74	24.42	16.15	-159.64	-299.44	349.32	1,337.41	1,305.42	32.00	41.800	
4,500.00	4,280.28	4,149.06	4,101.73	24.99	16.58	-159.83	-310.90	363.15	1,374.44	1,341.63	32.80	41.898	
4,600.00	4,378.03	4,243.39	4,194.28	25.48	17.03	-159.89	-322.55	377.21	1,406.88	1,373.27	33.61	41.861	
4,700.00	4,476.75	4,339.06	4,288.14	25.90	17.48	-159.83	-334.36	391.48	1,434.68	1,400.28	34.40	41.701	
4,800.00	4,576.16	4,435.79	4,383.04	26.26	17.93	-159.66	-346.31	405.90	1,457.79	1,422.60	35.19	41.429	
4,900.00	4,676.00	4,589.78	4,534.63	26.55	18.63	-159.18	-363.48	426.64	1,475.24	1,438.79	36.45	40.478	
5,000.00	4,775.99	6,235.86	5,526.77	26.78	26.17	45.09	310.36	-174.52	1,423.92	1,382.58	41.34	34.447	

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

Anticollision Report

Company:	Enduring Resources LLC	**Local Co-ordinate Reference:**	Well Haynes Canyon Unit 428H
Project:	Rio Arriba County, New Mexico NAD83 NM C	**TVD Reference:**	RKB=6703+25 @ 6728.00ft
Reference Site:	Haynes Canyon Unit (428,430,440 & 442)	**MD Reference:**	RKB=6703+25 @ 6728.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Haynes Canyon Unit 428H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Original Hole	**Database:**	DT_Jan1924v17
Reference Design:	rev1	**Offset TVD Reference:**	Offset Datum

Offset Design: Haynes Canyon Unit (428,430,440 & 442) - Haynes Canyon Unit 442H - Original Hole - rev0

Offset Site Error: 0.00 ft

Survey Program: 0-MWD

Offset Well Error: 0.00 ft

Reference Measured Depth (ft)	Reference Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Semi Major Axis Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	Offset Wellbore Centre +E/-W (ft)	Rule Assigned: Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
5,100.00	4,875.99	6,236.12	5,526.77	27.00	26.18	45.08	310.54	-174.71	1,373.83	1,331.23	42.59	32.254	
5,200.00	4,975.92	6,234.12	5,526.77	27.21	26.15	-92.25	309.12	-173.29	1,329.40	1,285.64	43.76	30.380	
5,300.00	5,074.25	6,216.87	5,526.72	27.38	25.92	-95.51	296.93	-161.09	1,291.75	1,247.18	44.57	28.985	
5,400.00	5,168.04	6,182.80	5,526.64	27.51	25.47	-97.12	272.84	-137.00	1,261.93	1,216.96	44.96	28.066	
5,500.00	5,254.45	6,132.95	5,526.51	27.61	24.86	-97.34	237.59	-101.75	1,240.11	1,195.14	44.98	27.573	
5,600.00	5,330.86	6,058.69	5,526.31	27.66	24.01	-96.18	185.03	-49.29	1,225.57	1,181.02	44.55	27.510	
5,700.00	5,394.93	5,896.29	5,524.40	27.69	22.52	-92.44	64.86	59.83	1,212.79	1,169.56	43.23	28.054	
5,800.00	5,444.72	5,802.57	5,509.82	27.68	21.86	-90.77	-5.06	120.36	1,201.48	1,158.51	42.98	27.957	
5,900.00	5,478.73	5,718.43	5,484.04	27.65	21.39	-89.16	-65.55	172.73	1,192.89	1,149.87	43.02	27.729	
6,000.00	5,495.91	5,640.83	5,450.12	27.60	21.06	-87.55	-118.26	218.37	1,186.99	1,143.66	43.32	27.398	
6,100.00	5,497.70	5,559.18	5,409.01	27.54	20.82	-85.71	-171.59	264.54	1,183.27	1,139.44	43.83	26.997	
6,168.40	5,497.27	5,512.62	5,382.77	27.50	20.73	-84.44	-200.65	289.70	1,182.38	1,138.02	44.36	26.654	
6,200.00	5,497.07	5,492.80	5,370.66	27.50	20.69	-83.86	-212.52	299.97	1,182.59	1,138.01	44.58	26.527	
6,300.00	5,496.44	5,436.65	5,333.52	27.51	20.62	-82.07	-244.34	327.52	1,186.29	1,140.83	45.46	26.094	
6,400.00	5,495.81	5,389.38	5,299.18	27.87	20.57	-80.42	-268.88	348.77	1,195.25	1,148.83	46.41	25.752	
6,500.00	5,495.18	5,350.00	5,268.61	29.16	20.53	-78.96	-287.64	365.01	1,210.04	1,162.65	47.40	25.530	
6,600.00	5,494.55	5,315.84	5,240.77	30.76	20.50	-77.65	-302.59	377.96	1,230.99	1,182.63	48.36	25.456	
6,700.00	5,493.92	5,287.13	5,216.49	32.47	20.48	-76.51	-314.17	387.98	1,258.16	1,208.89	49.28	25.533	
6,800.00	5,493.29	5,250.00	5,184.00	34.25	20.45	-74.99	-327.76	399.74	1,291.58	1,241.57	50.01	25.825	
6,900.00	5,492.66	5,250.00	5,184.00	36.09	20.45	-74.99	-327.76	399.74	1,330.68	1,279.72	50.97	26.109	
7,000.00	5,492.02	5,222.66	5,159.38	37.98	20.42	-73.86	-336.73	407.51	1,375.30	1,323.75	51.56	26.676	
7,100.00	5,491.39	5,200.00	5,138.55	39.92	20.39	-72.92	-343.49	413.36	1,425.14	1,373.06	52.07	27.367	
7,200.00	5,490.76	5,200.00	5,138.55	41.89	20.39	-72.92	-343.49	413.36	1,479.64	1,426.96	52.68	28.088	
7,300.00	5,490.13	5,179.32	5,119.26	43.89	20.37	-72.05	-349.11	418.22	1,538.32	1,485.31	53.02	29.016	

Anticollision Report

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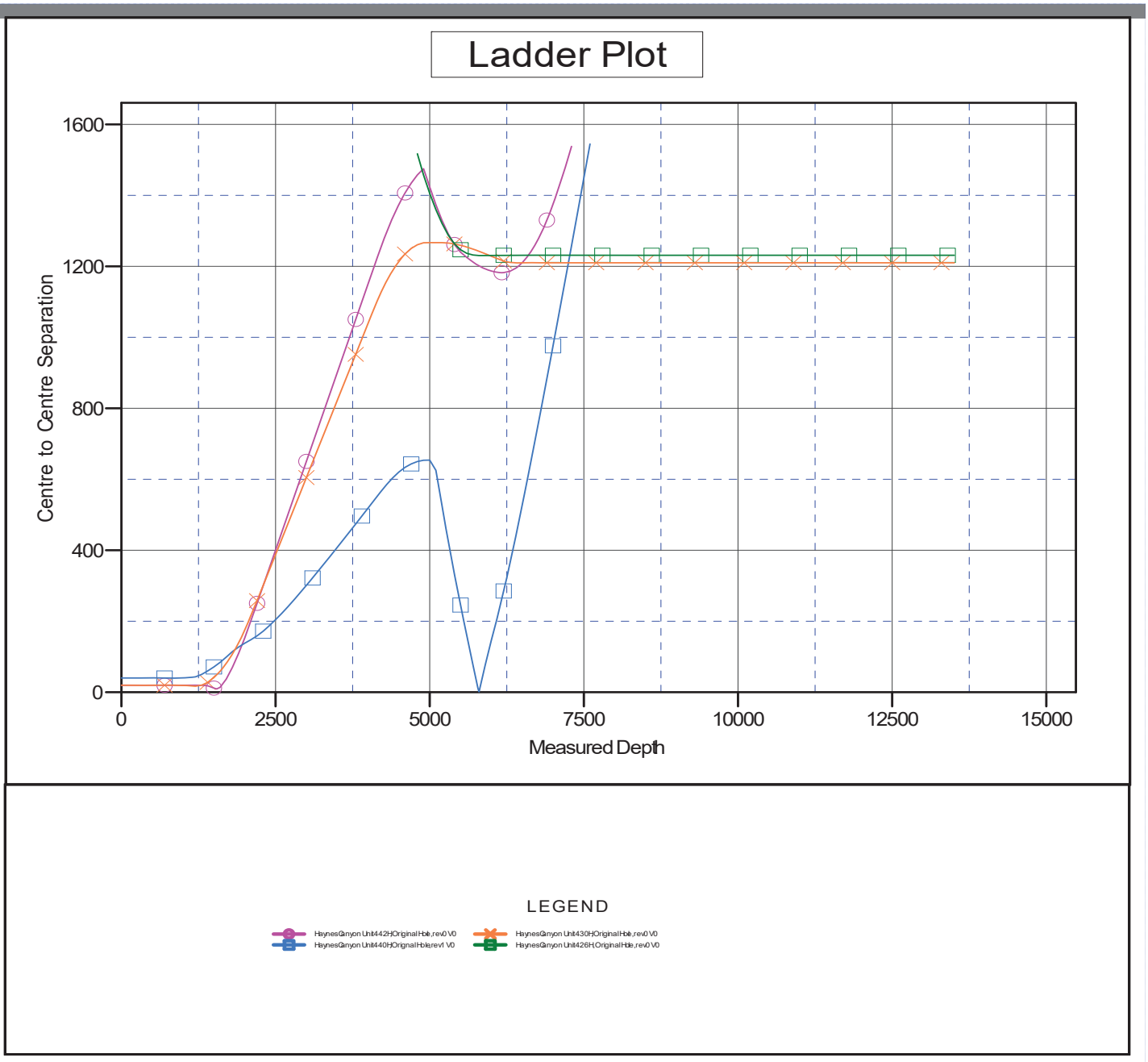
Reference Site:	Haynes Canyon Unit (428,430,440 & 442)	**MD Reference:**	RKB=6703+25 @ 6728.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Haynes Canyon Unit 428H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Original Hole	**Database:**	DT_Jan1924v17
Reference Design:	rev1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to RKB=6703+25 @ 6728.00ft
Offset Depths are relative to Offset Datum
Central Meridian is -106.25000000

Coordinates are relative to: Haynes Canyon Unit 428H
Coordinate System is US State Plane 1983, New Mexico Central Zone
Grid Convergence at Surface is: -0.72°



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

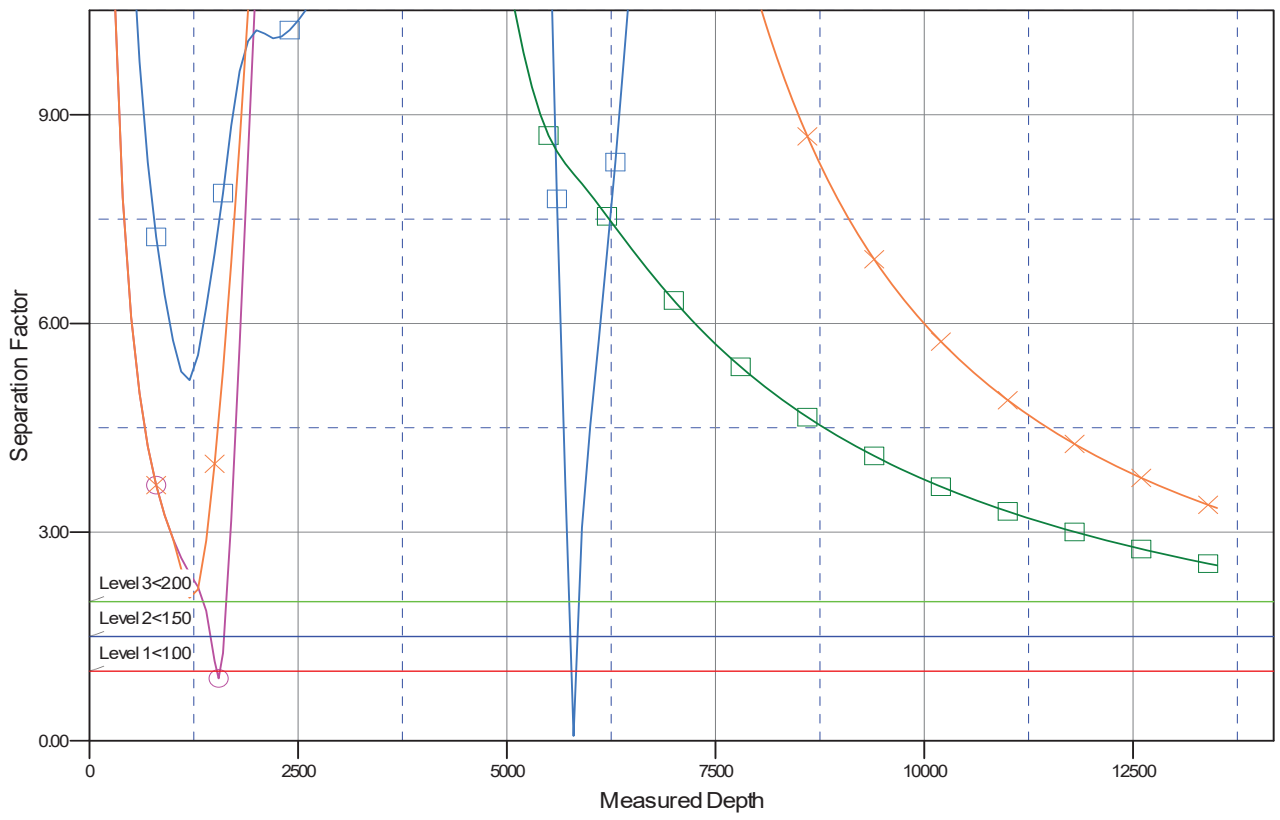
Anticollision Report

Company:	Enduring Resources LLC	**Local Co-ordinate Reference:**	Well Haynes Canyon Unit 428H
Project:	Rio Arriba County, New Mexico NAD83 NM C	**TVD Reference:**	RKB=6703+25 @ 6728.00ft
Reference Site:	Haynes Canyon Unit (428,430,440 & 442)	**MD Reference:**	RKB=6703+25 @ 6728.00ft
Site Error:	0.00 ft	**North Reference:**	Grid
Reference Well:	Haynes Canyon Unit 428H	**Survey Calculation Method:**	Minimum Curvature
Well Error:	0.00 ft	**Output errors are at**	2.00 sigma
Reference Wellbore	Original Hole	**Database:**	DT_Jan1924v17
Reference Design:	rev1	**Offset TVD Reference:**	Offset Datum

Reference Depths are relative to RKB=6703+25 @ 6728.00ft
Offset Depths are relative to Offset Datum
Central Meridian is -106.25000000

Coordinates are relative to: Haynes Canyon Unit 428H
Coordinate System is US State Plane 1983, New Mexico Central Zone
Grid Convergence at Surface is: -0.72°

Separation Factor Plot



LEGEND

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 314340

CONDITIONS

Operator: ENDURING RESOURCES, LLC 6300 S Syracuse Way, Suite 525 Centennial, CO 80111	OGRID: 372286
	Action Number: 314340
	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 during cementing operations, then a CBL is required.	3/4/2024