

Well Name: HAYNES CANYON UNIT	Well Location: T23N / R6W / SEC 3 / SWSW /	County or Parish/State:
Well Number: 440H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM130875	Unit or CA Name: Haynes Canyon Unit	Unit or CA Number: NMNM105770949
US Well Number: 3003931447	Well Status: Approved Application for Permit to Drill	Operator: ENDURING RESOURCES LLC

Notice of Intent

Sundry ID: 2773895

Type of Submission: Notice of Intent	Type of Action: APD Change
Date Sundry Submitted: 02/07/2024	Time Sundry Submitted: 11:25
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 6815-ft lateral. Enduring is seeking approval to shorten the lateral to 6509-ft changing the proposed depth from 5521’ / 12673’ to 5521’ / 12332’, adjusting the BHL with no change to the dedicated acres. 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

440H_NOI_Change_to_APD_Rev2_20240212142306.pdf

Well Name: HAYNES CANYON UNIT	Well Location: T23N / R6W / SEC 3 / SWSW /	County or Parish/State:
Well Number: 440H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM130875	Unit or CA Name: Haynes Canyon Unit	Unit or CA Number: NMNM105770949
US Well Number: 3003931447	Well Status: Approved Application for Permit to Drill	Operator: ENDURING RESOURCES LLC

Conditions of Approval

Additional

Enduring_Haynes_Canyon_Unit_440H_BHL_Change_2773895_MHK_20240212151907.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 12, 2024 02:23 PM
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	

1625 N. French Drive, Hobbs, NM 88240
Phone: (575) 393-6161 Fax: (575) 393-0720District II
811 S. First Street, Artesia, NM 88210
Phone: (575) 748-1283 Fax: (575) 748-9720District III
1000 Rio Brazos Road, Aztec, NM 87410
Phone: (505) 334-6178 Fax: (505) 334-6170District IV
1220 S. St. Francis Drive, Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462State of New Mexico
Energy, Minerals & Natural Resources DepartmentForm **Page 3 of 41**
Revised August 1, 2011Submit one copy to
Appropriate District OfficeOIL CONSERVATION DIVISION
1220 South St. Francis Drive
Santa Fe, NM 87505☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

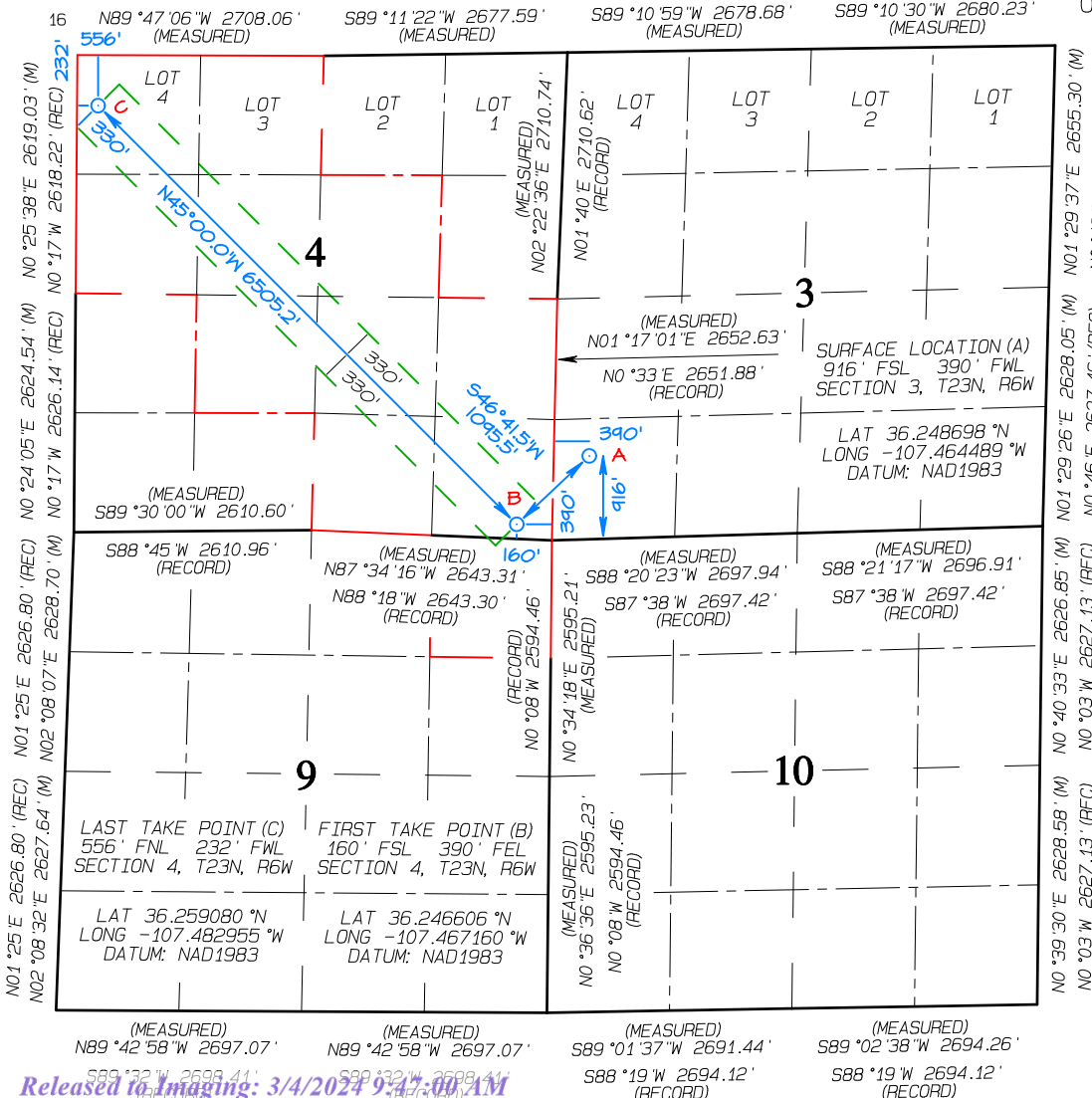
¹ API Number 30-039-31447	² Pool Code 13379	³ Pool Name COUNSELOR GALLUP-DAKOTA OIL POOL
⁴ Property Code 335063	⁵ Property Name HAYNES CANYON UNIT	⁶ Well Number 440H
⁷ OGRID No. 372286	⁸ Operator Name ENDURING RESOURCES, LLC	⁹ Elevation 6703'

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		916	SOUTH	390	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
D	4	23N	6W	4	556	NORTH	232	WEST	RIO ARRIBA
¹² Dedicated Acres 439.54	SW/4 NE/4, NE/4 SW/4 NW/4, SE/4 - Section 4 NE/4 NE/4 - Section 9				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@djrlc.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 31, 2023
Survey Date: JANUARY 12, 2023

Signature and Seal of 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 440H

API Number: 30-039-31447

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

916 ft FSL

390 ft FWL

36.248698 ° N latitude

107.464489 ° W longitude

(NAD 83)

BH Location: 4-23-6 Sec-Twn-Rng

556 ft FNL

232 ft FWL

36.25908 ° N latitude

107.482955 ° 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	1,406	W	normal
	Kirtland	5,225	1,503	1,509	W	normal
	Fruitland	5,000	1,728	1,746	G, W	sub
	Pictured Cliffs	4,765	1,963	1,998	G, W	sub
	Lewis	4,615	2,113	2,158	G, W	normal
	Chacra	4,320	2,408	2,473	G, W	normal
	Cliff House	3,211	3,517	3,660	G, W	sub
	Menefee	3,206	3,522	3,665	G, W	normal
	Point Lookout	2,506	4,222	4,411	G, W	normal
	Mancos	2,231	4,497	4,691	O,G	sub (~0.38)
	Gallup (MNCS_A)	1,892	4,836	5,032	O,G	sub (~0.38)
	MNCS_B	1,801	4,927	5,122	O,G	sub (~0.38)
	MNCS_C	1,666	5,062	5,258	O,G	sub (~0.38)
	MNCS_Cms	1,601	5,127	5,326	O,G	sub (~0.38)
	MNCS_D	1,526	5,202	5,409	O,G	sub (~0.38)
	MNCS_E	1,441	5,287	5,511	O,G	sub (~0.38)
	MNCS_F	1,396	5,332	5,572	O,G	sub (~0.38)
	MNCS_G	1,310	5,418	5,710	O,G	sub (~0.38)
	MNCS_H	1,270	5,458	5,800	O,G	sub (~0.38)
	MNCS_I	0	0	0	O,G	sub (~0.38)
	FTP TARGET	1,262	5,466	5,823	O,G	sub (~0.38)
	PROJECTED LTP	1,207	5,521	12,332	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: 2,380 psi

Maximum anticipated surface pressure, assuming partially evacuated hole: 1,170 psi

Temperature: Maximum anticipated BHT is 125° F or less

H₂S INFORMATION:

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

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

LOGGING, CORING, AND TESTING:

Mud Logs: None planned; remote geo-steering from drill out of 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 installed on rams. A valve will be installed on the annular preventer's closing line as close as possible to the preventer to act as a locking device. The valve will be maintained in the open position and shall only be closed when there is no power to the accumulator.

FLUIDS AND SOLIDS CONTROL PROGRAM:

Fluid Measurement:

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

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

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

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

Fluid Program: See "Detailed Drilling Plan" section 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
Loading				153	791	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

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

Tail	ASTM Type III Blend	Calcium Chloride 2% BWOC Accelerator	D-CD2 .3% BWOC Dispersant/Friction reducer	.25 lbs/sx Cello Flake - seepage	Cu Ft Slurry
					505.3

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

350 ft (MD)	to	3,826 ft (MD)	Hole Section Length:	3,476 ft
350 ft (TVD)	to	3,672 ft (TVD)	Casing Required:	3,826 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 Min. S.F.					1,604	1,380	215,278	215,278
						1.26	2.55	2.62	2.10
Cement:	Type	Weight (ppg)	Yield (cuft/sk)	Water (gal/sk)	% Excess	Planned TOC (ft MD)	Total Cmt (sx)	Total Cmt (cu ft)	
Spacer	D-Mud Breaker	8.5				0	10 bbls		
Lead	90:10 Type III:POZ	12.5	2.140	12.05	70%	0	800	1,711	
Tail	Type III	14.6	1.380	6.64	20%	3,326	150	207	
Displacement	292	est bbls							

Stage 1

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						
	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.

3,826 ft (MD)	to	12,332 ft (MD)	Hole Section Length:	8,506 ft
3,672 ft (TVD)	to	5,521 ft (TVD)	Casing Required:	12,332 ft

Estimated KOP:	5,123 ft (MD)	4,928 ft (TVD)
Estimated Landing Point (FTP):	5,823 ft (MD)	5,466 ft (TVD)
Estimated Lateral Length:	6,509 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					2,727	9,017	280,904	280,904
Min. S.F.					2.74	1.18	1.94	1.58
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	560	1,327
Tail	G:POZ blend	13.3	1.570	7.70	10%	4,691	1,227	1,926
Displacement	120	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					

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

COMPLETION AND PRODUCTION PLAN:

Est Lateral Length: 6,409
Est Frac Inform: 27 Frac Stages 103,000 bbls slick water 8,340,000 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: 4/1/2024
Completion: 5/31/2024
Production: 7/15/2024

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

WELL NAME: Haynes Canyon Unit 440H

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

API Number: 30-039-31447

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 916 ft FSL 390 ft FWL

BH Location: 4-23-6 Sec-Twn- Rng 556 ft FNL 232 ft FWL

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)	3,826 ft
KOP (MD)	5,123 ft
KOP (TVD)	4,928 ft
Target (TVD)	5,466 ft
Curve BUR	10 °/100 ft
POE (MD)	5,823 ft
TD (MD)	12,332 ft
Lat Len (ft)	6,509 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	3,826	9.625	36.0	J-55	LTC	0	3,826
Production	8.500	12,332	5.500	17.0	P-110	LTC	0	12,332

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	800	1,711
Inter. (Tail)	Type III	14.6	1.38	6.64	20%	3326	150	207
Prod. (Lead)	ASTM type I/I	12.4	2.370	13.4	50%	0	560	1,327
Prod. (Tail)	G:POZ blend	13.3	1.570	7.7	10%	4691	1227	1,926

COMPLETION / PRODUCTION SUMMARY:

Frac: 6409

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	1,406
Kirtland	1,503	1,509
Fruitland	1,728	1,746
Pictured Cliffs	1,963	1,998
Lewis	2,113	2,158
Chacra	2,408	2,473
Cliff House	3,517	3,660
Menefee	3,522	3,665
Point Lookout	4,222	4,411
Mancos	4,497	4,691
Gallup (MNCS_A)	4,836	5,032
MNCS_B	4,927	5,122
MNCS_C	5,062	5,258
MNCS_Cms	5,127	5,326
MNCS_D	5,202	5,409
MNCS_E	5,287	5,511
MNCS_F	5,332	5,572
MNCS_G	5,418	5,710
MNCS_H	5,458	5,800
MNCS_I	0	0
FTP TARGET	5,466	5,823
PROJECTED LTP	5,521	12,332



Well: Haynes Canyon Unit 440H
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 440 FTP 160 FSL 390 FEL r1	5501.00	-751.69	-797.17	1911285.36	1281518.10	36.24660600	-107.46716000
Haynes 440 LTP 556 FNL 232 FWL r1	5521.00	3848.27	-5397.00	1915685.32	1276918.28	36.25908000	-107.48295500

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	1000.00	0.00	0.00	1000.00	0.00	0.00	0.00	0.00	0.00	KOP Begin 3°/100' build
3	1692.18	20.77	207.52	1677.13	-110.03	-57.33	3.00	207.52	-37.26	Begin 20.77° tangent
4	4230.89	20.77	207.52	4050.92	-908.24	-473.26	0.00	0.00	-307.55	Begin 3°/100' drop
5	4923.07	0.00	0.00	4728.05	-1018.27	-530.59	3.00	180.00	-344.80	Begin vertical hold
6	5123.07	0.00	0.00	4928.05	-1018.27	-530.59	0.00	0.00	-344.80	Begin 10°/100' build
7	5823.07	70.00	315.00	5466.45	-751.69	-797.17	10.00	315.00	32.19	FTP & 70° inc @ 5823.07 MD 5466.45
8	6021.26	89.82	315.00	5501.00	-614.41	-934.45	10.00	0.00	226.34	Begin 89.82° lateral
9	12332.39	89.82	315.00	5521.00	3848.27	-5397.00	0.00	0.00	6537.44	PBHL @ 12332.39 MD 5521.00 TVD



Azinuths 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

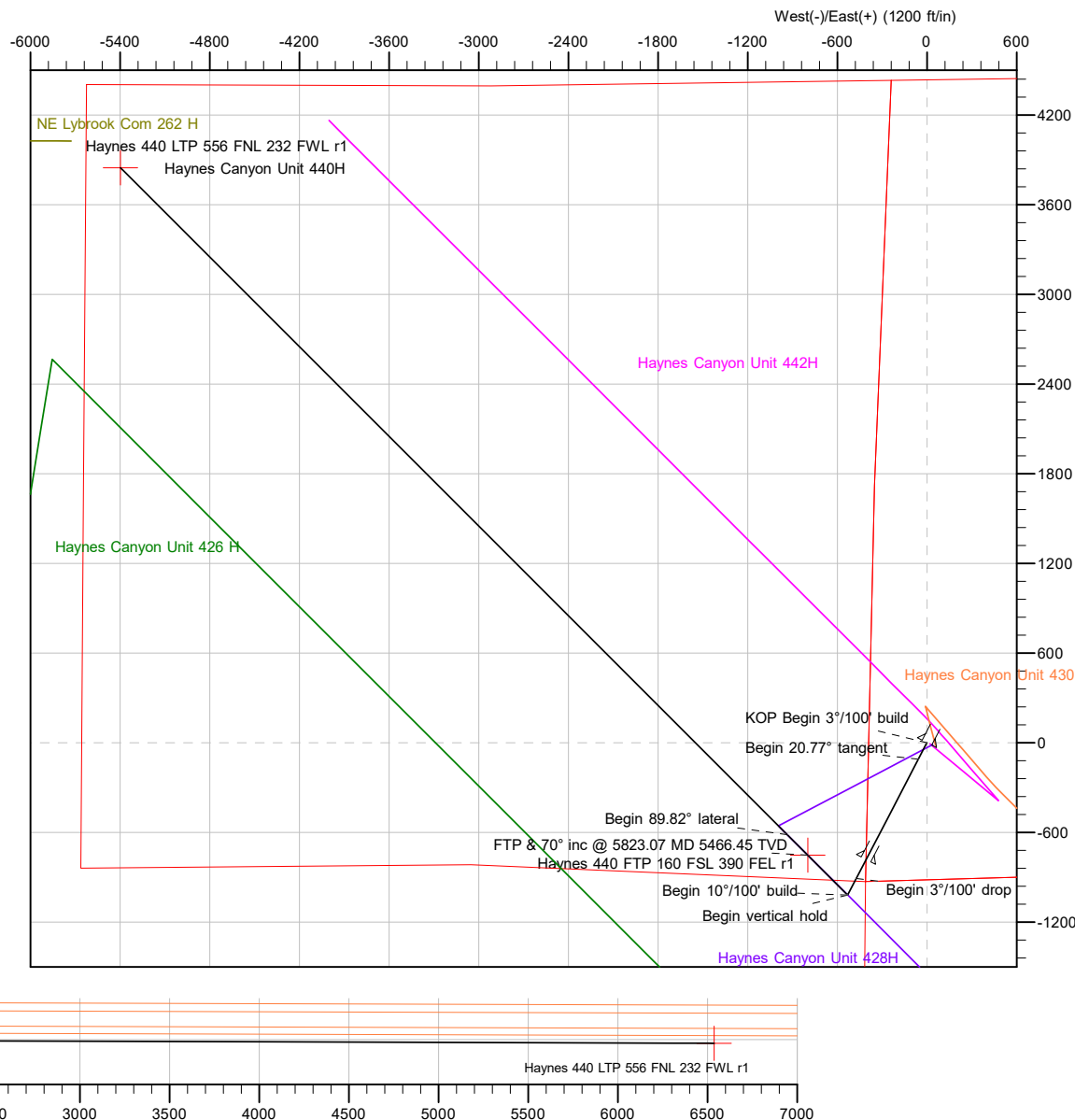
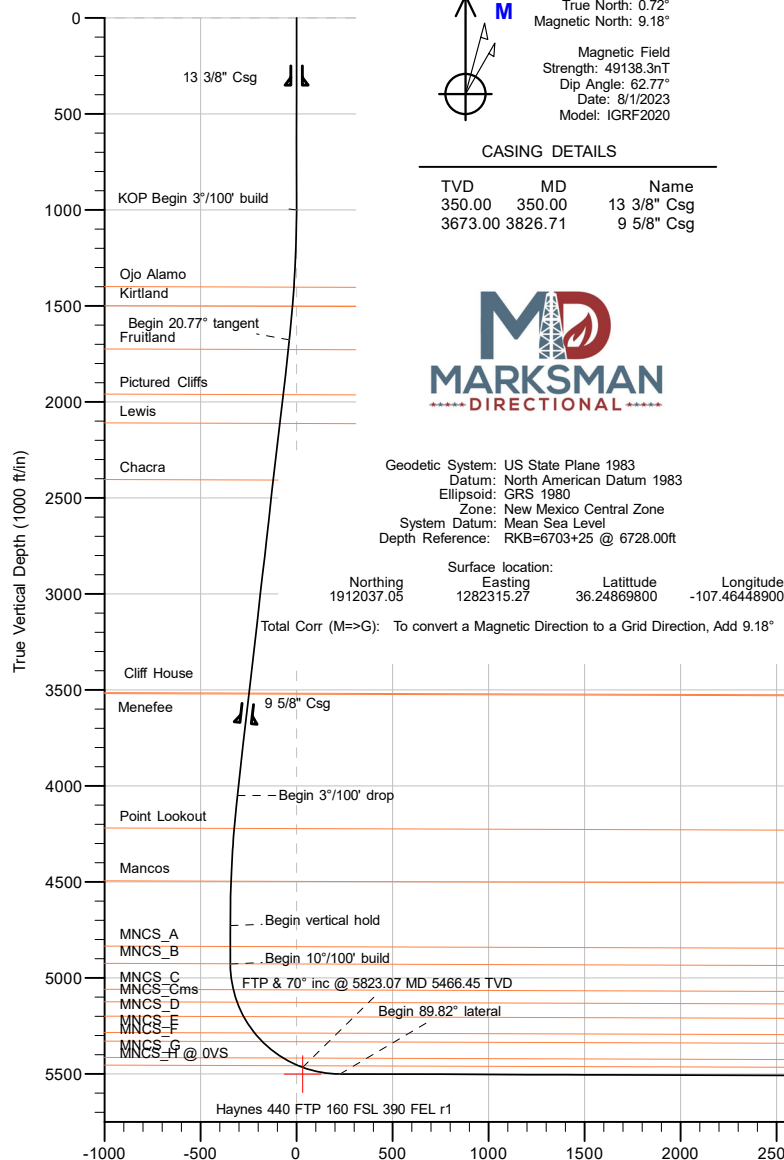
TVD	MD	Name
350.00	350.00	13 3/8" Csg
3673.00	3826.71	9 5/8" Csg



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

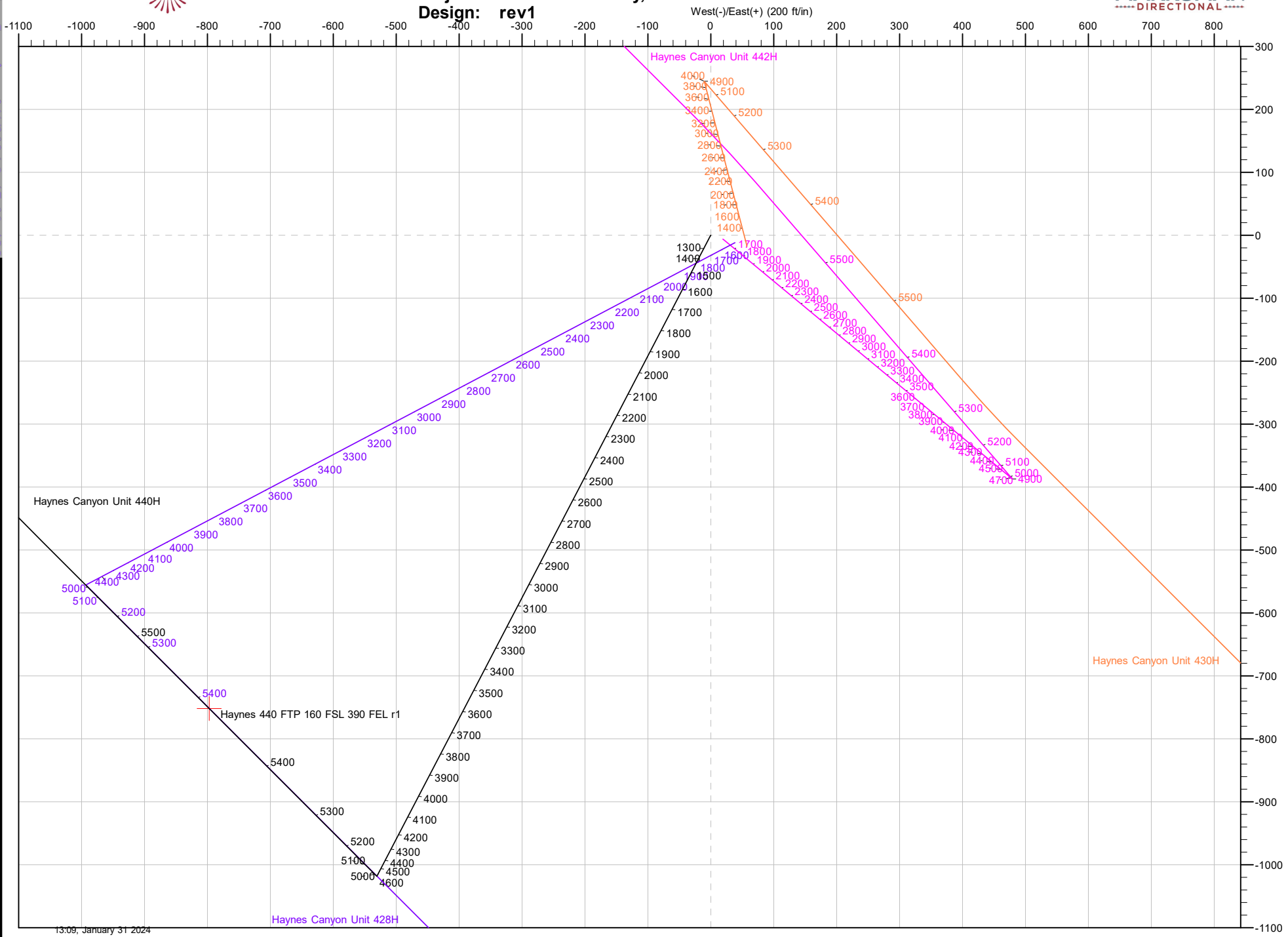
Surface location:
Northing 1912037.05 Easting 1282315.27 Latitude 36.24869800 Longitude -107.46448900

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





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





Planning Report

Database:	DT_Jan1924v17	Local Co-ordinate Reference:	Well Haynes Canyon Unit 440H
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 440H	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 440H, Surf loc: 916 FSL 390 FWL Section 03-T23N-R06W					
Well Position	+N/-S	0.00 ft	Northing:	1,912,037.05 usft	Latitude:	36.24869800
	+E/-W	0.00 ft	Easting:	1,282,315.27 usft	Longitude:	-107.46448900
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	49,138.30816237

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	315.00	

Plan Survey Tool Program	Date	1/31/2024			
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	12,331.75	rev1 (Original Hole)	MWD	
				OWSG MWD - Standard	



Planning Report

Database:	DT_Jan1924v17	Local Co-ordinate Reference:	Well Haynes Canyon Unit 440H
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 440H	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	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,692.18	20.77	207.52	1,677.13	-110.03	-57.33	3.00	3.00	0.00	207.52	
4,230.89	20.77	207.52	4,050.92	-908.24	-473.26	0.00	0.00	0.00	0.00	
4,923.07	0.00	0.00	4,728.05	-1,018.27	-530.59	3.00	-3.00	0.00	180.00	
5,123.07	0.00	0.00	4,928.05	-1,018.27	-530.59	0.00	0.00	0.00	0.00	
5,823.07	70.00	315.00	5,466.45	-751.69	-797.17	10.00	10.00	0.00	315.00	
6,021.26	89.82	315.00	5,501.01	-614.41	-934.45	10.00	10.00	0.00	0.00	
12,332.39	89.82	315.00	5,521.00	3,848.27	-5,397.00	0.00	0.00	0.00	0.00	Haynes 440 LTP 556



Planning Report

Database:	DT_Jan1924v17	Local Co-ordinate Reference:	Well Haynes Canyon Unit 440H
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 440H	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	
KOP Begin 3°/100' build										
1,100.00	3.00	207.52	1,099.95	-2.32	-1.21	-0.79	3.00	3.00	0.00	
1,200.00	6.00	207.52	1,199.63	-9.28	-4.83	-3.14	3.00	3.00	0.00	
1,300.00	9.00	207.52	1,298.77	-20.85	-10.87	-7.06	3.00	3.00	0.00	
1,400.00	12.00	207.52	1,397.08	-37.01	-19.29	-12.53	3.00	3.00	0.00	
1,406.01	12.18	207.52	1,402.96	-38.13	-19.87	-12.91	3.00	3.00	0.00	
Ojo Alamo										
1,500.00	15.00	207.52	1,494.31	-57.71	-30.07	-19.54	3.00	3.00	0.00	
1,508.94	15.27	207.52	1,502.94	-59.78	-31.15	-20.24	3.00	3.00	0.00	
Kirtland										
1,600.00	18.00	207.52	1,590.18	-82.90	-43.19	-28.07	3.00	3.00	0.00	
1,692.18	20.77	207.52	1,677.13	-110.03	-57.33	-37.26	3.00	3.00	0.00	
Begin 20.77° tangent										
1,700.00	20.77	207.52	1,684.44	-112.48	-58.61	-38.09	0.00	0.00	0.00	
1,746.44	20.77	207.52	1,727.86	-127.09	-66.22	-43.03	0.00	0.00	0.00	
Fruitland										
1,800.00	20.77	207.52	1,777.94	-143.92	-74.99	-48.74	0.00	0.00	0.00	
1,900.00	20.77	207.52	1,871.45	-175.37	-91.38	-59.38	0.00	0.00	0.00	
1,997.68	20.77	207.52	1,962.78	-206.08	-107.38	-69.78	0.00	0.00	0.00	
Pictured Cliffs										
2,000.00	20.77	207.52	1,964.95	-206.81	-107.76	-70.03	0.00	0.00	0.00	
2,100.00	20.77	207.52	2,058.45	-238.25	-124.15	-80.68	0.00	0.00	0.00	
2,158.04	20.77	207.52	2,112.73	-256.50	-133.65	-86.86	0.00	0.00	0.00	
Lewis										
2,200.00	20.77	207.52	2,151.96	-269.69	-140.53	-91.32	0.00	0.00	0.00	
2,300.00	20.77	207.52	2,245.46	-301.13	-156.91	-101.97	0.00	0.00	0.00	
2,400.00	20.77	207.52	2,338.97	-332.58	-173.30	-112.62	0.00	0.00	0.00	
2,473.43	20.77	207.52	2,407.62	-355.66	-185.33	-120.43	0.00	0.00	0.00	
Chacra										
2,500.00	20.77	207.52	2,432.47	-364.02	-189.68	-123.26	0.00	0.00	0.00	
2,600.00	20.77	207.52	2,525.97	-395.46	-206.06	-133.91	0.00	0.00	0.00	
2,700.00	20.77	207.52	2,619.48	-426.90	-222.45	-144.56	0.00	0.00	0.00	
2,800.00	20.77	207.52	2,712.98	-458.34	-238.83	-155.20	0.00	0.00	0.00	
2,900.00	20.77	207.52	2,806.49	-489.79	-255.21	-165.85	0.00	0.00	0.00	
3,000.00	20.77	207.52	2,899.99	-521.23	-271.60	-176.50	0.00	0.00	0.00	
3,100.00	20.77	207.52	2,993.49	-552.67	-287.98	-187.14	0.00	0.00	0.00	
3,200.00	20.77	207.52	3,087.00	-584.11	-304.36	-197.79	0.00	0.00	0.00	
3,300.00	20.77	207.52	3,180.50	-615.55	-320.75	-208.44	0.00	0.00	0.00	
3,400.00	20.77	207.52	3,274.00	-647.00	-337.13	-219.08	0.00	0.00	0.00	
3,500.00	20.77	207.52	3,367.51	-678.44	-353.51	-229.73	0.00	0.00	0.00	



Planning Report

Database:	DT_Jan1924v17	Local Co-ordinate Reference:	Well Haynes Canyon Unit 440H
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 440H	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)	
3,600.00	20.77	207.52	3,461.01	-709.88	-369.90	-240.38	0.00	0.00	0.00	
3,660.12	20.77	207.52	3,517.22	-728.78	-379.75	-246.78	0.00	0.00	0.00	
Cliff House										
3,665.46	20.77	207.52	3,522.22	-730.46	-380.62	-247.35	0.00	0.00	0.00	
Menefee										
3,700.00	20.77	207.52	3,554.52	-741.32	-386.28	-251.02	0.00	0.00	0.00	
3,800.00	20.77	207.52	3,648.02	-772.76	-402.66	-261.67	0.00	0.00	0.00	
3,826.72	20.77	207.52	3,673.00	-781.16	-407.04	-264.52	0.00	0.00	0.00	
9 5/8" Csg										
3,900.00	20.77	207.52	3,741.52	-804.21	-419.05	-272.32	0.00	0.00	0.00	
4,000.00	20.77	207.52	3,835.03	-835.65	-435.43	-282.96	0.00	0.00	0.00	
4,100.00	20.77	207.52	3,928.53	-867.09	-451.81	-293.61	0.00	0.00	0.00	
4,200.00	20.77	207.52	4,022.04	-898.53	-468.20	-304.26	0.00	0.00	0.00	
4,230.89	20.77	207.52	4,050.92	-908.24	-473.26	-307.55	0.00	0.00	0.00	
Begin 3°/100' drop										
4,300.00	18.69	207.52	4,115.97	-928.93	-484.04	-314.55	3.00	-3.00	0.00	
4,400.00	15.69	207.52	4,211.49	-955.14	-497.70	-323.43	3.00	-3.00	0.00	
4,410.89	15.37	207.52	4,221.98	-957.73	-499.04	-324.30	3.00	-3.00	0.00	
Point Lookout										
4,500.00	12.69	207.52	4,308.43	-976.88	-509.02	-330.79	3.00	-3.00	0.00	
4,600.00	9.69	207.52	4,406.51	-994.09	-517.99	-336.62	3.00	-3.00	0.00	
4,691.39	6.95	207.52	4,496.93	-1,005.82	-524.10	-340.59	3.00	-3.00	0.00	
Mancos										
4,700.00	6.69	207.52	4,505.48	-1,006.73	-524.58	-340.90	3.00	-3.00	0.00	
4,800.00	3.69	207.52	4,605.06	-1,014.75	-528.76	-343.61	3.00	-3.00	0.00	
4,900.00	0.69	207.52	4,704.98	-1,018.15	-530.53	-344.76	3.00	-3.00	0.00	
4,923.07	0.00	0.00	4,728.05	-1,018.27	-530.59	-344.80	3.00	-3.00	0.00	
Begin vertical hold										
5,000.00	0.00	0.00	4,804.98	-1,018.27	-530.59	-344.80	0.00	0.00	0.00	
5,031.94	0.00	0.00	4,836.92	-1,018.27	-530.59	-344.80	0.00	0.00	0.00	
MNCS_A										
5,100.00	0.00	0.00	4,904.98	-1,018.27	-530.59	-344.80	0.00	0.00	0.00	
5,121.94	0.00	0.00	4,926.92	-1,018.27	-530.59	-344.80	0.00	0.00	0.00	
MNCS_B										
5,123.07	0.00	0.00	4,928.05	-1,018.27	-530.59	-344.80	0.00	0.00	0.00	
Begin 10°/100' build										
5,150.00	2.69	315.00	4,954.97	-1,017.82	-531.04	-344.17	10.00	10.00	0.00	
5,200.00	7.69	315.00	5,004.74	-1,014.62	-534.24	-339.65	10.00	10.00	0.00	
5,250.00	12.69	315.00	5,053.94	-1,008.37	-540.49	-330.80	10.00	10.00	0.00	
5,258.24	13.52	315.00	5,061.97	-1,007.05	-541.81	-328.93	10.00	10.00	0.00	
MNCS_C										
5,300.00	17.69	315.00	5,102.18	-999.11	-549.75	-317.70	10.00	10.00	0.00	
5,326.29	20.32	315.00	5,127.03	-993.05	-555.81	-309.14	10.00	10.00	0.00	
MNCS_Cms										
5,350.00	22.69	315.00	5,149.09	-986.91	-561.95	-300.45	10.00	10.00	0.00	
5,400.00	27.69	315.00	5,194.32	-971.86	-577.00	-279.17	10.00	10.00	0.00	
5,408.87	28.58	315.00	5,202.14	-968.91	-579.95	-274.99	10.00	10.00	0.00	
MNCS_D										
5,450.00	32.69	315.00	5,237.52	-954.09	-594.77	-254.04	10.00	10.00	0.00	
5,500.00	37.69	315.00	5,278.37	-933.72	-615.14	-225.23	10.00	10.00	0.00	
5,511.39	38.83	315.00	5,287.31	-928.73	-620.13	-218.17	10.00	10.00	0.00	
MNCS_E										



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 440H	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)
5,550.00	42.69	315.00	5,316.55	-910.91	-637.95	-192.97	10.00	10.00	0.00
5,572.01	44.89	315.00	5,332.44	-900.14	-648.72	-177.74	10.00	10.00	0.00
MNCS_F									
5,600.00	47.69	315.00	5,351.78	-885.83	-663.03	-157.51	10.00	10.00	0.00
5,650.00	52.69	315.00	5,383.78	-858.68	-690.18	-119.11	10.00	10.00	0.00
5,700.00	57.69	315.00	5,412.31	-829.66	-719.20	-78.07	10.00	10.00	0.00
5,710.39	58.73	315.00	5,417.78	-823.42	-725.44	-69.24	10.00	10.00	0.00
MNCS_G									
5,750.00	62.69	315.00	5,437.16	-798.99	-749.87	-34.70	10.00	10.00	0.00
5,799.75	67.67	315.00	5,458.03	-767.07	-781.79	10.44	10.00	10.00	0.00
MNCS_H @ 0VS									
5,800.00	67.69	315.00	5,458.13	-766.91	-781.95	10.67	10.00	10.00	0.00
5,823.07	70.00	315.00	5,466.45	-751.69	-797.17	32.19	10.00	10.00	0.00
FTP & 70° inc @ 5823.07 MD 5466.45 TVD									
5,850.00	72.69	315.00	5,475.07	-733.66	-815.20	57.70	10.00	10.00	0.00
5,900.00	77.69	315.00	5,487.84	-699.49	-849.37	106.02	10.00	10.00	0.00
5,950.00	82.69	315.00	5,496.35	-664.66	-884.20	155.28	10.00	10.00	0.00
6,000.00	87.69	315.00	5,500.54	-629.44	-919.42	205.09	10.00	10.00	0.00
6,021.26	89.82	315.00	5,501.01	-614.41	-934.45	226.34	10.00	10.00	0.00
Begin 89.82° lateral									
6,100.00	89.82	315.00	5,501.25	-558.73	-990.12	305.08	0.00	0.00	0.00
6,200.00	89.82	315.00	5,501.57	-488.02	-1,060.83	405.08	0.00	0.00	0.00
6,300.00	89.82	315.00	5,501.89	-417.31	-1,131.54	505.08	0.00	0.00	0.00
6,400.00	89.82	315.00	5,502.20	-346.60	-1,202.25	605.08	0.00	0.00	0.00
6,500.00	89.82	315.00	5,502.52	-275.89	-1,272.96	705.08	0.00	0.00	0.00
6,600.00	89.82	315.00	5,502.84	-205.18	-1,343.67	805.08	0.00	0.00	0.00
6,700.00	89.82	315.00	5,503.16	-134.46	-1,414.38	905.08	0.00	0.00	0.00
6,800.00	89.82	315.00	5,503.47	-63.75	-1,485.09	1,005.08	0.00	0.00	0.00
6,900.00	89.82	315.00	5,503.79	6.96	-1,555.80	1,105.07	0.00	0.00	0.00
7,000.00	89.82	315.00	5,504.11	77.67	-1,626.51	1,205.07	0.00	0.00	0.00
7,100.00	89.82	315.00	5,504.42	148.38	-1,697.22	1,305.07	0.00	0.00	0.00
7,200.00	89.82	315.00	5,504.74	219.09	-1,767.93	1,405.07	0.00	0.00	0.00
7,300.00	89.82	315.00	5,505.06	289.80	-1,838.64	1,505.07	0.00	0.00	0.00
7,400.00	89.82	315.00	5,505.37	360.52	-1,909.35	1,605.07	0.00	0.00	0.00
7,500.00	89.82	315.00	5,505.69	431.23	-1,980.05	1,705.07	0.00	0.00	0.00
7,600.00	89.82	315.00	5,506.01	501.94	-2,050.76	1,805.07	0.00	0.00	0.00
7,700.00	89.82	315.00	5,506.32	572.65	-2,121.47	1,905.07	0.00	0.00	0.00
7,800.00	89.82	315.00	5,506.64	643.36	-2,192.18	2,005.07	0.00	0.00	0.00
7,900.00	89.82	315.00	5,506.96	714.07	-2,262.89	2,105.07	0.00	0.00	0.00
8,000.00	89.82	315.00	5,507.27	784.78	-2,333.60	2,205.07	0.00	0.00	0.00
8,100.00	89.82	315.00	5,507.59	855.50	-2,404.31	2,305.07	0.00	0.00	0.00
8,200.00	89.82	315.00	5,507.91	926.21	-2,475.02	2,405.07	0.00	0.00	0.00
8,300.00	89.82	315.00	5,508.22	996.92	-2,545.73	2,505.07	0.00	0.00	0.00
8,400.00	89.82	315.00	5,508.54	1,067.63	-2,616.44	2,605.07	0.00	0.00	0.00
8,500.00	89.82	315.00	5,508.86	1,138.34	-2,687.15	2,705.07	0.00	0.00	0.00
8,600.00	89.82	315.00	5,509.18	1,209.05	-2,757.86	2,805.07	0.00	0.00	0.00
8,700.00	89.82	315.00	5,509.49	1,279.76	-2,828.57	2,905.07	0.00	0.00	0.00
8,800.00	89.82	315.00	5,509.81	1,350.47	-2,899.28	3,005.07	0.00	0.00	0.00
8,900.00	89.82	315.00	5,510.13	1,421.19	-2,969.98	3,105.06	0.00	0.00	0.00
9,000.00	89.82	315.00	5,510.44	1,491.90	-3,040.69	3,205.06	0.00	0.00	0.00
9,100.00	89.82	315.00	5,510.76	1,562.61	-3,111.40	3,305.06	0.00	0.00	0.00
9,200.00	89.82	315.00	5,511.08	1,633.32	-3,182.11	3,405.06	0.00	0.00	0.00
9,300.00	89.82	315.00	5,511.39	1,704.03	-3,252.82	3,505.06	0.00	0.00	0.00



Planning Report

Database:	DT_Jan1924v17	Local Co-ordinate Reference:	Well Haynes Canyon Unit 440H
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 440H	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)
9,400.00	89.82	315.00	5,511.71	1,774.74	-3,323.53	3,605.06	0.00	0.00	0.00
9,500.00	89.82	315.00	5,512.03	1,845.45	-3,394.24	3,705.06	0.00	0.00	0.00
9,600.00	89.82	315.00	5,512.34	1,916.17	-3,464.95	3,805.06	0.00	0.00	0.00
9,700.00	89.82	315.00	5,512.66	1,986.88	-3,535.66	3,905.06	0.00	0.00	0.00
9,800.00	89.82	315.00	5,512.98	2,057.59	-3,606.37	4,005.06	0.00	0.00	0.00
9,900.00	89.82	315.00	5,513.29	2,128.30	-3,677.08	4,105.06	0.00	0.00	0.00
10,000.00	89.82	315.00	5,513.61	2,199.01	-3,747.79	4,205.06	0.00	0.00	0.00
10,100.00	89.82	315.00	5,513.93	2,269.72	-3,818.50	4,305.06	0.00	0.00	0.00
10,200.00	89.82	315.00	5,514.24	2,340.43	-3,889.21	4,405.06	0.00	0.00	0.00
10,300.00	89.82	315.00	5,514.56	2,411.15	-3,959.92	4,505.06	0.00	0.00	0.00
10,400.00	89.82	315.00	5,514.88	2,481.86	-4,030.62	4,605.06	0.00	0.00	0.00
10,500.00	89.82	315.00	5,515.19	2,552.57	-4,101.33	4,705.06	0.00	0.00	0.00
10,600.00	89.82	315.00	5,515.51	2,623.28	-4,172.04	4,805.06	0.00	0.00	0.00
10,700.00	89.82	315.00	5,515.83	2,693.99	-4,242.75	4,905.06	0.00	0.00	0.00
10,800.00	89.82	315.00	5,516.15	2,764.70	-4,313.46	5,005.06	0.00	0.00	0.00
10,900.00	89.82	315.00	5,516.46	2,835.41	-4,384.17	5,105.05	0.00	0.00	0.00
11,000.00	89.82	315.00	5,516.78	2,906.12	-4,454.88	5,205.05	0.00	0.00	0.00
11,100.00	89.82	315.00	5,517.10	2,976.84	-4,525.59	5,305.05	0.00	0.00	0.00
11,200.00	89.82	315.00	5,517.41	3,047.55	-4,596.30	5,405.05	0.00	0.00	0.00
11,300.00	89.82	315.00	5,517.73	3,118.26	-4,667.01	5,505.05	0.00	0.00	0.00
11,400.00	89.82	315.00	5,518.05	3,188.97	-4,737.72	5,605.05	0.00	0.00	0.00
11,500.00	89.82	315.00	5,518.36	3,259.68	-4,808.43	5,705.05	0.00	0.00	0.00
11,600.00	89.82	315.00	5,518.68	3,330.39	-4,879.14	5,805.05	0.00	0.00	0.00
11,700.00	89.82	315.00	5,519.00	3,401.10	-4,949.85	5,905.05	0.00	0.00	0.00
11,800.00	89.82	315.00	5,519.31	3,471.82	-5,020.55	6,005.05	0.00	0.00	0.00
11,900.00	89.82	315.00	5,519.63	3,542.53	-5,091.26	6,105.05	0.00	0.00	0.00
12,000.00	89.82	315.00	5,519.95	3,613.24	-5,161.97	6,205.05	0.00	0.00	0.00
12,100.00	89.82	315.00	5,520.26	3,683.95	-5,232.68	6,305.05	0.00	0.00	0.00
12,200.00	89.82	315.00	5,520.58	3,754.66	-5,303.39	6,405.05	0.00	0.00	0.00
12,300.00	89.82	315.00	5,520.90	3,825.37	-5,374.10	6,505.05	0.00	0.00	0.00
12,332.39	89.82	315.00	5,521.00	3,848.27	-5,397.00	6,537.44	0.00	0.00	0.00
PBHL @ 12332.39 MD 5521.00 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	
3,826.72	3,673.00	9 5/8" Csg	9-5/8	12-1/4	



Planning Report

Database:	DT_Jan1924v17	Local Co-ordinate Reference:	Well Haynes Canyon Unit 440H
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 440H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,406.01	1,402.96	Ojo Alamo		0.18	315.00	
1,508.94	1,502.94	Kirtland		0.18	315.00	
1,746.44	1,727.86	Fruitland		0.18	315.00	
1,997.68	1,962.78	Pictured Cliffs		0.18	315.00	
2,158.04	2,112.73	Lewis		0.18	315.00	
2,473.43	2,407.62	Chacra		0.18	315.00	
3,660.12	3,517.22	Cliff House		0.18	315.00	
3,665.46	3,522.22	Menefee		0.18	315.00	
4,410.89	4,221.98	Point Lookout		0.18	315.00	
4,691.39	4,496.93	Mancos		0.18	315.00	
5,031.94	4,836.92	MNCS_A		0.18	315.00	
5,121.94	4,926.92	MNCS_B		0.18	315.00	
5,258.24	5,061.97	MNCS_C		0.18	315.00	
5,326.29	5,127.03	MNCS_Cms		0.18	315.00	
5,408.87	5,202.14	MNCS_D		0.18	315.00	
5,511.39	5,287.31	MNCS_E		0.18	315.00	
5,572.01	5,332.44	MNCS_F		0.18	315.00	
5,710.39	5,417.78	MNCS_G		0.18	315.00	
5,799.75	5,458.03	MNCS_H @ 0VS		0.18	315.00	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,000.00	1,000.00	0.00	0.00	KOP Begin 3°/100' build	
1,692.18	1,677.13	-110.03	-57.33	Begin 20.77° tangent	
4,230.89	4,050.92	-908.24	-473.26	Begin 3°/100' drop	
4,923.07	4,728.05	-1,018.27	-530.59	Begin vertical hold	
5,123.07	4,928.05	-1,018.27	-530.59	Begin 10°/100' build	
5,823.07	5,466.45	-751.69	-797.17	FTP & 70° inc @ 5823.07 MD 5466.45 TVD	
6,021.26	5,501.01	-614.41	-934.45	Begin 89.82° lateral	
12,332.39	5,521.00	3,848.27	-5,397.00	PBHL @ 12332.39 MD 5521.00 TVD	



Planning Report - Geographic

Database:	DT_Jan1924v17	Local Co-ordinate Reference:	Well Haynes Canyon Unit 440H
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 440H	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 440H, Surf loc: 916 FSL 390 FWL Section 03-T23N-R06W					
Well Position	+N/-S	0.00 ft	Northing:	1,912,037.05 usft	Latitude:	36.24869800
	+E/-W	0.00 ft	Easting:	1,282,315.27 usft	Longitude:	-107.46448900
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	49,138.30816237

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	315.00

Plan Survey Tool Program	Date	1/31/2024			
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	12,331.75 rev1 (Original Hole)	MWD		
			OWSG MWD - Standard		



Planning Report - Geographic

Database:	DT_Jan1924v17	Local Co-ordinate Reference:	Well Haynes Canyon Unit 440H
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 440H	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	
1,000.00	0.00	0.00	1,000.00	0.00	0.00	0.00	0.00	0.00	0.00	
1,692.18	20.77	207.52	1,677.13	-110.03	-57.33	3.00	3.00	0.00	207.52	
4,230.89	20.77	207.52	4,050.92	-908.24	-473.26	0.00	0.00	0.00	0.00	
4,923.07	0.00	0.00	4,728.05	-1,018.27	-530.59	3.00	-3.00	0.00	180.00	
5,123.07	0.00	0.00	4,928.05	-1,018.27	-530.59	0.00	0.00	0.00	0.00	
5,823.07	70.00	315.00	5,466.45	-751.69	-797.17	10.00	10.00	0.00	315.00	
6,021.26	89.82	315.00	5,501.01	-614.41	-934.45	10.00	10.00	0.00	0.00	
12,332.39	89.82	315.00	5,521.00	3,848.27	-5,397.00	0.00	0.00	0.00	0.00	Haynes 440 LTP 556



Planning Report - Geographic

Database:	DT_Jan1924v17	Local Co-ordinate Reference:	Well Haynes Canyon Unit 440H
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 440H	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	1,912,037.05	1,282,315.27	36.24869800	-107.46448900
100.00	0.00	0.00	100.00	0.00	0.00	1,912,037.05	1,282,315.27	36.24869800	-107.46448900
200.00	0.00	0.00	200.00	0.00	0.00	1,912,037.05	1,282,315.27	36.24869800	-107.46448900
300.00	0.00	0.00	300.00	0.00	0.00	1,912,037.05	1,282,315.27	36.24869800	-107.46448900
350.00	0.00	0.00	350.00	0.00	0.00	1,912,037.05	1,282,315.27	36.24869800	-107.46448900
13 3/8" Csg									
400.00	0.00	0.00	400.00	0.00	0.00	1,912,037.05	1,282,315.27	36.24869800	-107.46448900
500.00	0.00	0.00	500.00	0.00	0.00	1,912,037.05	1,282,315.27	36.24869800	-107.46448900
600.00	0.00	0.00	600.00	0.00	0.00	1,912,037.05	1,282,315.27	36.24869800	-107.46448900
700.00	0.00	0.00	700.00	0.00	0.00	1,912,037.05	1,282,315.27	36.24869800	-107.46448900
800.00	0.00	0.00	800.00	0.00	0.00	1,912,037.05	1,282,315.27	36.24869800	-107.46448900
900.00	0.00	0.00	900.00	0.00	0.00	1,912,037.05	1,282,315.27	36.24869800	-107.46448900
1,000.00	0.00	0.00	1,000.00	0.00	0.00	1,912,037.05	1,282,315.27	36.24869800	-107.46448900
KOP Begin 3"/100' build									
1,100.00	3.00	207.52	1,099.95	-2.32	-1.21	1,912,034.73	1,282,314.06	36.24869158	-107.46449301
1,200.00	6.00	207.52	1,199.63	-9.28	-4.83	1,912,027.77	1,282,310.43	36.24867235	-107.46450500
1,300.00	9.00	207.52	1,298.77	-20.85	-10.87	1,912,016.20	1,282,304.40	36.24864035	-107.46452496
1,400.00	12.00	207.52	1,397.08	-37.01	-19.29	1,912,000.04	1,282,295.98	36.24859568	-107.46455282
1,406.01	12.18	207.52	1,402.96	-38.13	-19.87	1,911,998.92	1,282,295.40	36.24859260	-107.46455475
Ojo Alamo									
1,500.00	15.00	207.52	1,494.31	-57.71	-30.07	1,911,979.34	1,282,285.20	36.24853846	-107.46458852
1,508.94	15.27	207.52	1,502.94	-59.78	-31.15	1,911,977.27	1,282,284.12	36.24853274	-107.46459209
Kirtland									
1,600.00	18.00	207.52	1,590.18	-82.90	-43.19	1,911,954.16	1,282,272.07	36.24846884	-107.46463194
1,692.18	20.77	207.52	1,677.13	-110.03	-57.33	1,911,927.03	1,282,257.94	36.24839384	-107.46467872
Begin 20.77° tangent									
1,700.00	20.77	207.52	1,684.44	-112.48	-58.61	1,911,924.57	1,282,256.66	36.24838705	-107.46468296
1,746.44	20.77	207.52	1,727.86	-127.09	-66.22	1,911,909.97	1,282,249.05	36.24834668	-107.46470814
Fruitland									
1,800.00	20.77	207.52	1,777.94	-143.92	-74.99	1,911,893.13	1,282,240.27	36.24830013	-107.46473717
1,900.00	20.77	207.52	1,871.45	-175.37	-91.38	1,911,861.69	1,282,223.89	36.24821321	-107.46479139
1,997.68	20.77	207.52	1,962.78	-206.08	-107.38	1,911,830.97	1,282,207.89	36.24812831	-107.46484435
Pictured Cliffs									
2,000.00	20.77	207.52	1,964.95	-206.81	-107.76	1,911,830.24	1,282,207.51	36.24812629	-107.46484561
2,100.00	20.77	207.52	2,058.45	-238.25	-124.15	1,911,798.80	1,282,191.12	36.24803937	-107.46489982
2,158.04	20.77	207.52	2,112.73	-256.50	-133.65	1,911,780.55	1,282,181.61	36.24798892	-107.46493129
Lewis									
2,200.00	20.77	207.52	2,151.96	-269.69	-140.53	1,911,767.36	1,282,174.74	36.24795245	-107.46495404
2,300.00	20.77	207.52	2,245.46	-301.13	-156.91	1,911,735.92	1,282,158.36	36.24786553	-107.46500825
2,400.00	20.77	207.52	2,338.97	-332.58	-173.30	1,911,704.48	1,282,141.97	36.24777861	-107.46506247
2,473.43	20.77	207.52	2,407.62	-355.66	-185.33	1,911,681.39	1,282,129.94	36.24771479	-107.46510227
Chacra									
2,500.00	20.77	207.52	2,432.47	-364.02	-189.68	1,911,673.03	1,282,125.59	36.24769169	-107.46511668
2,600.00	20.77	207.52	2,525.97	-395.46	-206.06	1,911,641.59	1,282,109.20	36.24760477	-107.46517090
2,700.00	20.77	207.52	2,619.48	-426.90	-222.45	1,911,610.15	1,282,092.82	36.24751785	-107.46522511
2,800.00	20.77	207.52	2,712.98	-458.34	-238.83	1,911,578.71	1,282,076.44	36.24743093	-107.46527933
2,900.00	20.77	207.52	2,806.49	-489.79	-255.21	1,911,547.27	1,282,060.05	36.24734401	-107.46533354
3,000.00	20.77	207.52	2,899.99	-521.23	-271.60	1,911,515.82	1,282,043.67	36.24725709	-107.46538775
3,100.00	20.77	207.52	2,993.49	-552.67	-287.98	1,911,484.38	1,282,027.29	36.24717017	-107.46544197
3,200.00	20.77	207.52	3,087.00	-584.11	-304.36	1,911,452.94	1,282,010.90	36.24708325	-107.46549618
3,300.00	20.77	207.52	3,180.50	-615.55	-320.75	1,911,421.50	1,281,994.52	36.24699633	-107.46555040
3,400.00	20.77	207.52	3,274.00	-647.00	-337.13	1,911,390.06	1,281,978.14	36.24690941	-107.46560461
3,500.00	20.77	207.52	3,367.51	-678.44	-353.51	1,911,358.62	1,281,961.75	36.24682249	-107.46565882



Planning Report - Geographic

Database:	DT_Jan1924v17	Local Co-ordinate Reference:	Well Haynes Canyon Unit 440H
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 440H	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	
3,600.00	20.77	207.52	3,461.01	-709.88	-369.90	1,911,327.17	1,281,945.37	36.24673557	-107.46571304	
3,660.12	20.77	207.52	3,517.22	-728.78	-379.75	1,911,308.27	1,281,935.52	36.24668332	-107.46574563	
Cliff House										
3,665.46	20.77	207.52	3,522.22	-730.46	-380.62	1,911,306.59	1,281,934.65	36.24667867	-107.46574853	
Menefee										
3,700.00	20.77	207.52	3,554.52	-741.32	-386.28	1,911,295.73	1,281,928.99	36.24664865	-107.46576725	
3,800.00	20.77	207.52	3,648.02	-772.76	-402.66	1,911,264.29	1,281,912.60	36.24656173	-107.46582146	
3,826.72	20.77	207.52	3,673.00	-781.16	-407.04	1,911,255.89	1,281,908.23	36.24653851	-107.46583595	
9 5/8" Csg										
3,900.00	20.77	207.52	3,741.52	-804.21	-419.05	1,911,232.85	1,281,896.22	36.24647481	-107.46587568	
4,000.00	20.77	207.52	3,835.03	-835.65	-435.43	1,911,201.41	1,281,879.84	36.24638789	-107.46592989	
4,100.00	20.77	207.52	3,928.53	-867.09	-451.81	1,911,169.96	1,281,863.45	36.24630097	-107.46598410	
4,200.00	20.77	207.52	4,022.04	-898.53	-468.20	1,911,138.52	1,281,847.07	36.24621405	-107.46603832	
4,230.89	20.77	207.52	4,050.92	-908.24	-473.26	1,911,128.81	1,281,842.01	36.24618720	-107.46605506	
Begin 3°/100' drop										
4,300.00	18.69	207.52	4,115.97	-928.93	-484.04	1,911,108.12	1,281,831.23	36.24613001	-107.46609073	
4,400.00	15.69	207.52	4,211.49	-955.14	-497.70	1,911,081.91	1,281,817.57	36.24605755	-107.46613593	
4,410.89	15.37	207.52	4,221.98	-957.73	-499.04	1,911,079.33	1,281,816.22	36.24605041	-107.46614038	
Point Lookout										
4,500.00	12.69	207.52	4,308.43	-976.88	-509.02	1,911,060.17	1,281,806.24	36.24599745	-107.46617341	
4,600.00	9.69	207.52	4,406.51	-994.09	-517.99	1,911,042.96	1,281,797.28	36.24594987	-107.46620309	
4,691.39	6.95	207.52	4,496.93	-1,005.82	-524.10	1,911,031.23	1,281,791.16	36.24591745	-107.46622331	
Mancos										
4,700.00	6.69	207.52	4,505.48	-1,006.73	-524.58	1,911,030.32	1,281,790.69	36.24591494	-107.46622487	
4,800.00	3.69	207.52	4,605.06	-1,014.75	-528.76	1,911,022.30	1,281,786.51	36.24589276	-107.46623871	
4,900.00	0.69	207.52	4,704.98	-1,018.15	-530.53	1,911,018.91	1,281,784.74	36.24588338	-107.46624456	
4,923.07	0.00	0.00	4,728.05	-1,018.27	-530.59	1,911,018.78	1,281,784.68	36.24588304	-107.46624477	
Begin vertical hold										
5,000.00	0.00	0.00	4,804.98	-1,018.27	-530.59	1,911,018.78	1,281,784.68	36.24588304	-107.46624477	
5,031.94	0.00	0.00	4,836.92	-1,018.27	-530.59	1,911,018.78	1,281,784.68	36.24588304	-107.46624477	
MNCS_A										
5,100.00	0.00	0.00	4,904.98	-1,018.27	-530.59	1,911,018.78	1,281,784.68	36.24588304	-107.46624477	
5,121.94	0.00	0.00	4,926.92	-1,018.27	-530.59	1,911,018.78	1,281,784.68	36.24588304	-107.46624477	
MNCS_B										
5,123.07	0.00	0.00	4,928.05	-1,018.27	-530.59	1,911,018.78	1,281,784.68	36.24588304	-107.46624477	
Begin 10°/100' build										
5,150.00	2.69	315.00	4,954.97	-1,017.82	-531.04	1,911,019.23	1,281,784.23	36.24588425	-107.46624631	
5,200.00	7.69	315.00	5,004.74	-1,014.62	-534.24	1,911,022.43	1,281,781.03	36.24589293	-107.46625729	
5,250.00	12.69	315.00	5,053.94	-1,008.37	-540.49	1,911,028.68	1,281,774.78	36.24590989	-107.46627876	
5,258.24	13.52	315.00	5,061.97	-1,007.05	-541.81	1,911,030.01	1,281,773.46	36.24591347	-107.46628330	
MNCS_C										
5,300.00	17.69	315.00	5,102.18	-999.11	-549.75	1,911,037.95	1,281,765.52	36.24593501	-107.46631056	
5,326.29	20.32	315.00	5,127.03	-993.05	-555.81	1,911,044.00	1,281,759.46	36.24595143	-107.46633134	
MNCS_Cms										
5,350.00	22.69	315.00	5,149.09	-986.91	-561.95	1,911,050.15	1,281,753.32	36.24596810	-107.46635245	
5,400.00	27.69	315.00	5,194.32	-971.86	-577.00	1,911,065.19	1,281,738.27	36.24600890	-107.46640410	
5,408.87	28.58	315.00	5,202.14	-968.91	-579.95	1,911,068.15	1,281,735.31	36.24601691	-107.46641424	
MNCS_D										
5,450.00	32.69	315.00	5,237.52	-954.09	-594.77	1,911,082.97	1,281,720.50	36.24605710	-107.46646512	
5,500.00	37.69	315.00	5,278.37	-933.72	-615.14	1,911,103.34	1,281,700.13	36.24611235	-107.46653506	
5,511.39	38.83	315.00	5,287.31	-928.73	-620.13	1,911,108.32	1,281,695.14	36.24612587	-107.46655218	
MNCS_E										
5,550.00	42.69	315.00	5,316.55	-910.91	-637.95	1,911,126.15	1,281,677.32	36.24617421	-107.46661337	



Planning Report - Geographic

Database:	DT_Jan1924v17	Local Co-ordinate Reference:	Well Haynes Canyon Unit 440H
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 440H	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	
5,572.01	44.89	315.00	5,332.44	-900.14	-648.72	1,911,136.92	1,281,666.54	36.24620342	-107.46665035	
MNCS_F										
5,600.00	47.69	315.00	5,351.78	-885.83	-663.03	1,911,151.22	1,281,652.24	36.24624221	-107.46669946	
5,650.00	52.69	315.00	5,383.78	-858.68	-690.18	1,911,178.37	1,281,625.09	36.24631585	-107.46679267	
5,700.00	57.69	315.00	5,412.31	-829.66	-719.20	1,911,207.39	1,281,596.07	36.24639455	-107.46689231	
5,710.39	58.73	315.00	5,417.78	-823.42	-725.44	1,911,213.64	1,281,589.82	36.24641149	-107.46691375	
MNCS_G										
5,750.00	62.69	315.00	5,437.16	-798.99	-749.87	1,911,238.06	1,281,565.40	36.24647772	-107.46699760	
5,799.75	67.67	315.00	5,458.03	-767.07	-781.79	1,911,269.98	1,281,533.48	36.24656429	-107.46710719	
MNCS_H @ 0VS										
5,800.00	67.69	315.00	5,458.13	-766.91	-781.95	1,911,270.14	1,281,533.32	36.24656473	-107.46710775	
5,823.07	70.00	315.00	5,466.45	-751.69	-797.17	1,911,285.36	1,281,518.10	36.24660600	-107.46715999	
FTP & 70° inc @ 5823.07 MD 5466.45 TVD										
5,850.00	72.69	315.00	5,475.07	-733.66	-815.20	1,911,303.40	1,281,500.07	36.24665491	-107.46722192	
5,900.00	77.69	315.00	5,487.84	-699.49	-849.37	1,911,337.57	1,281,465.90	36.24674758	-107.46733923	
5,950.00	82.69	315.00	5,496.35	-664.66	-884.20	1,911,372.39	1,281,431.07	36.24684204	-107.46745880	
6,000.00	87.69	315.00	5,500.54	-629.44	-919.42	1,911,407.61	1,281,395.85	36.24693755	-107.46757972	
6,021.26	89.82	315.00	5,501.01	-614.41	-934.45	1,911,422.64	1,281,380.82	36.24697831	-107.46763132	
Begin 89.82° lateral										
6,100.00	89.82	315.00	5,501.25	-558.73	-990.12	1,911,478.32	1,281,325.14	36.24712931	-107.46782247	
6,200.00	89.82	315.00	5,501.57	-488.02	-1,060.83	1,911,549.03	1,281,254.44	36.24732108	-107.46806524	
6,300.00	89.82	315.00	5,501.89	-417.31	-1,131.54	1,911,619.74	1,281,183.73	36.24751284	-107.46830801	
6,400.00	89.82	315.00	5,502.20	-346.60	-1,202.25	1,911,690.46	1,281,113.02	36.24770461	-107.46855078	
6,500.00	89.82	315.00	5,502.52	-275.89	-1,272.96	1,911,761.17	1,281,042.31	36.24789637	-107.46879355	
6,600.00	89.82	315.00	5,502.84	-205.18	-1,343.67	1,911,831.88	1,280,971.60	36.24808814	-107.46903633	
6,700.00	89.82	315.00	5,503.16	-134.46	-1,414.38	1,911,902.59	1,280,900.89	36.24827991	-107.46927910	
6,800.00	89.82	315.00	5,503.47	-63.75	-1,485.09	1,911,973.30	1,280,830.18	36.24847167	-107.46952188	
6,900.00	89.82	315.00	5,503.79	6.96	-1,555.80	1,912,044.01	1,280,759.47	36.24866343	-107.46976465	
7,000.00	89.82	315.00	5,504.11	77.67	-1,626.51	1,912,114.72	1,280,688.76	36.24885520	-107.47000743	
7,100.00	89.82	315.00	5,504.42	148.38	-1,697.22	1,912,185.43	1,280,618.05	36.24904696	-107.47025021	
7,200.00	89.82	315.00	5,504.74	219.09	-1,767.93	1,912,256.14	1,280,547.34	36.24923872	-107.47049299	
7,300.00	89.82	315.00	5,505.06	289.80	-1,838.64	1,912,326.86	1,280,476.63	36.24943048	-107.47073577	
7,400.00	89.82	315.00	5,505.37	360.52	-1,909.35	1,912,397.57	1,280,405.93	36.24962224	-107.47097856	
7,500.00	89.82	315.00	5,505.69	431.23	-1,980.05	1,912,468.28	1,280,335.22	36.24981400	-107.47122134	
7,600.00	89.82	315.00	5,506.01	501.94	-2,050.76	1,912,538.99	1,280,264.51	36.25000576	-107.47146412	
7,700.00	89.82	315.00	5,506.32	572.65	-2,121.47	1,912,609.70	1,280,193.80	36.25019752	-107.47170691	
7,800.00	89.82	315.00	5,506.64	643.36	-2,192.18	1,912,680.41	1,280,123.09	36.25038928	-107.47194970	
7,900.00	89.82	315.00	5,506.96	714.07	-2,262.89	1,912,751.12	1,280,052.38	36.25058104	-107.47219249	
8,000.00	89.82	315.00	5,507.27	784.78	-2,333.60	1,912,821.83	1,279,981.67	36.25077280	-107.47243528	
8,100.00	89.82	315.00	5,507.59	855.50	-2,404.31	1,912,892.55	1,279,910.96	36.25096456	-107.47267807	
8,200.00	89.82	315.00	5,507.91	926.21	-2,475.02	1,912,963.26	1,279,840.25	36.25115631	-107.47292086	
8,300.00	89.82	315.00	5,508.22	996.92	-2,545.73	1,913,033.97	1,279,769.54	36.25134807	-107.47316365	
8,400.00	89.82	315.00	5,508.54	1,067.63	-2,616.44	1,913,104.68	1,279,698.83	36.25153983	-107.47340645	
8,500.00	89.82	315.00	5,508.86	1,138.34	-2,687.15	1,913,175.39	1,279,628.12	36.25173158	-107.47364924	
8,600.00	89.82	315.00	5,509.18	1,209.05	-2,757.86	1,913,246.10	1,279,557.42	36.25192334	-107.47389204	
8,700.00	89.82	315.00	5,509.49	1,279.76	-2,828.57	1,913,316.81	1,279,486.71	36.25211509	-107.47413484	
8,800.00	89.82	315.00	5,509.81	1,350.47	-2,899.28	1,913,387.52	1,279,416.00	36.25230685	-107.47437764	
8,900.00	89.82	315.00	5,510.13	1,421.19	-2,969.98	1,913,458.24	1,279,345.29	36.25249860	-107.47462044	
9,000.00	89.82	315.00	5,510.44	1,491.90	-3,040.69	1,913,528.95	1,279,274.58	36.25269035	-107.47486324	
9,100.00	89.82	315.00	5,510.76	1,562.61	-3,111.40	1,913,599.66	1,279,203.87	36.25288210	-107.47510604	
9,200.00	89.82	315.00	5,511.08	1,633.32	-3,182.11	1,913,670.37	1,279,133.16	36.25307386	-107.47534884	
9,300.00	89.82	315.00	5,511.39	1,704.03	-3,252.82	1,913,741.08	1,279,062.45	36.25326561	-107.47559165	
9,400.00	89.82	315.00	5,511.71	1,774.74	-3,323.53	1,913,811.79	1,278,991.74	36.25345736	-107.47583446	
9,500.00	89.82	315.00	5,512.03	1,845.45	-3,394.24	1,913,882.50	1,278,921.03	36.25364911	-107.47607726	



Planning Report - Geographic

Database:	DT_Jan1924v17	Local Co-ordinate Reference:	Well Haynes Canyon Unit 440H
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 440H	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	
9,600.00	89.82	315.00	5,512.34	1,916.17	-3,464.95	1,913,953.21	1,278,850.32	36.25384086	-107.47632007	
9,700.00	89.82	315.00	5,512.66	1,986.88	-3,535.66	1,914,023.93	1,278,779.61	36.25403261	-107.47656288	
9,800.00	89.82	315.00	5,512.98	2,057.59	-3,606.37	1,914,094.64	1,278,708.91	36.25422436	-107.47680569	
9,900.00	89.82	315.00	5,513.29	2,128.30	-3,677.08	1,914,165.35	1,278,638.20	36.25441610	-107.47704850	
10,000.00	89.82	315.00	5,513.61	2,199.01	-3,747.79	1,914,236.06	1,278,567.49	36.25460785	-107.47729132	
10,100.00	89.82	315.00	5,513.93	2,269.72	-3,818.50	1,914,306.77	1,278,496.78	36.25479960	-107.47753413	
10,200.00	89.82	315.00	5,514.24	2,340.43	-3,889.21	1,914,377.48	1,278,426.07	36.25499135	-107.47777695	
10,300.00	89.82	315.00	5,514.56	2,411.15	-3,959.92	1,914,448.19	1,278,355.36	36.25518309	-107.47801976	
10,400.00	89.82	315.00	5,514.88	2,481.86	-4,030.62	1,914,518.90	1,278,284.65	36.25537484	-107.47826258	
10,500.00	89.82	315.00	5,515.19	2,552.57	-4,101.33	1,914,589.61	1,278,213.94	36.25556658	-107.47850540	
10,600.00	89.82	315.00	5,515.51	2,623.28	-4,172.04	1,914,660.33	1,278,143.23	36.25575833	-107.47874822	
10,700.00	89.82	315.00	5,515.83	2,693.99	-4,242.75	1,914,731.04	1,278,072.52	36.25595007	-107.47899104	
10,800.00	89.82	315.00	5,516.15	2,764.70	-4,313.46	1,914,801.75	1,278,001.81	36.25614181	-107.47923387	
10,900.00	89.82	315.00	5,516.46	2,835.41	-4,384.17	1,914,872.46	1,277,931.10	36.25633356	-107.47947669	
11,000.00	89.82	315.00	5,516.78	2,906.12	-4,454.88	1,914,943.17	1,277,860.40	36.25652530	-107.47971952	
11,100.00	89.82	315.00	5,517.10	2,976.84	-4,525.59	1,915,013.88	1,277,789.69	36.25671704	-107.47996234	
11,200.00	89.82	315.00	5,517.41	3,047.55	-4,596.30	1,915,084.59	1,277,718.98	36.25690878	-107.48020517	
11,300.00	89.82	315.00	5,517.73	3,118.26	-4,667.01	1,915,155.30	1,277,648.27	36.25710052	-107.48044800	
11,400.00	89.82	315.00	5,518.05	3,188.97	-4,737.72	1,915,226.02	1,277,577.56	36.25729226	-107.48069083	
11,500.00	89.82	315.00	5,518.36	3,259.68	-4,808.43	1,915,296.73	1,277,506.85	36.25748400	-107.48093366	
11,600.00	89.82	315.00	5,518.68	3,330.39	-4,879.14	1,915,367.44	1,277,436.14	36.25767574	-107.48117649	
11,700.00	89.82	315.00	5,519.00	3,401.10	-4,949.85	1,915,438.15	1,277,365.43	36.25786748	-107.48141933	
11,800.00	89.82	315.00	5,519.31	3,471.82	-5,020.55	1,915,508.86	1,277,294.72	36.25805922	-107.48166216	
11,900.00	89.82	315.00	5,519.63	3,542.53	-5,091.26	1,915,579.57	1,277,224.01	36.25825096	-107.48190500	
12,000.00	89.82	315.00	5,519.95	3,613.24	-5,161.97	1,915,650.28	1,277,153.30	36.25844269	-107.48214783	
12,100.00	89.82	315.00	5,520.26	3,683.95	-5,232.68	1,915,720.99	1,277,082.60	36.25863443	-107.48239067	
12,200.00	89.82	315.00	5,520.58	3,754.66	-5,303.39	1,915,791.71	1,277,011.89	36.25882617	-107.48263351	
12,300.00	89.82	315.00	5,520.90	3,825.37	-5,374.10	1,915,862.42	1,276,941.18	36.25901790	-107.48287635	
12,332.39	89.82	315.00	5,521.00	3,848.27	-5,397.00	1,915,885.32	1,276,918.28	36.25908000	-107.48295500	
PBHL @ 12332.39 MD 5521.00 TVD										

Design Targets										
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude	
Haynes 440 FTP 160 FS	0.00	360.00	5,501.00	-751.69	-797.17	1,911,285.36	1,281,518.10	36.24660600	-107.46716000	
- plan misses target center by 32.58ft at 5834.13ft MD (5470.13 TVD, -744.32 N, -804.54 E)										
- Point										
Haynes 440 LTP 556 FN	0.00	0.00	5,521.00	3,848.27	-5,397.00	1,915,885.32	1,276,918.28	36.25908000	-107.48295500	
- plan hits target center										
- Point										

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	
3,826.72	3,673.00	9 5/8" Csg	9-5/8	12-1/4	



Planning Report - Geographic

Database:	DT_Jan1924v17	Local Co-ordinate Reference:	Well Haynes Canyon Unit 440H
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 440H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev1		

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,406.01	1,402.96	Ojo Alamo		0.18	315.00	
1,508.94	1,502.94	Kirtland		0.18	315.00	
1,746.44	1,727.86	Fruitland		0.18	315.00	
1,997.68	1,962.78	Pictured Cliffs		0.18	315.00	
2,158.04	2,112.73	Lewis		0.18	315.00	
2,473.43	2,407.62	Chacra		0.18	315.00	
3,660.12	3,517.22	Cliff House		0.18	315.00	
3,665.46	3,522.22	Menefee		0.18	315.00	
4,410.89	4,221.98	Point Lookout		0.18	315.00	
4,691.39	4,496.93	Mancos		0.18	315.00	
5,031.94	4,836.92	MNCS_A		0.18	315.00	
5,121.94	4,926.92	MNCS_B		0.18	315.00	
5,258.24	5,061.97	MNCS_C		0.18	315.00	
5,326.29	5,127.03	MNCS_Cms		0.18	315.00	
5,408.87	5,202.14	MNCS_D		0.18	315.00	
5,511.39	5,287.31	MNCS_E		0.18	315.00	
5,572.01	5,332.44	MNCS_F		0.18	315.00	
5,710.39	5,417.78	MNCS_G		0.18	315.00	
5,799.75	5,458.03	MNCS_H @ 0VS		0.18	315.00	

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates			
		+N/-S (ft)	+E/-W (ft)	Comment	
1,000.00	1,000.00	0.00	0.00	KOP Begin 3°/100' build	
1,692.18	1,677.13	-110.03	-57.33	Begin 20.77° tangent	
4,230.89	4,050.92	-908.24	-473.26	Begin 3°/100' drop	
4,923.07	4,728.05	-1,018.27	-530.59	Begin vertical hold	
5,123.07	4,928.05	-1,018.27	-530.59	Begin 10°/100' build	
5,823.07	5,466.45	-751.69	-797.17	FTP & 70° inc @ 5823.07 MD 5466.45 TVD	
6,021.26	5,501.01	-614.41	-934.45	Begin 89.82° lateral	
12,332.39	5,521.00	3,848.27	-5,397.00	PBHL @ 12332.39 MD 5521.00 TVD	



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Haynes Canyon Unit 440H
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 440H	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 1,433.24ft	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	12,331.75	rev1 (Orignal Hole)	MWD	OWSG MWD - Standard	

Summary						
Site Name	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	5,789.63	11,556.35	1,230.35	1,080.15	8.192	CC
Haynes Canyon Unit 426 H - Original Hole - rev0	11,300.00	6,066.91	1,231.79	1,076.28	7.921	ES
Haynes Canyon Unit 426 H - Original Hole - rev0	11,600.00	5,832.77	1,245.54	1,084.95	7.756	SF
Haynes Canyon Unit (428,430,440 & 442)						
Haynes Canyon Unit 428H - Original Hole - rev1	5,765.44	5,798.41	0.25	-28.80	0.008	Level 3<2.00, CC, ES, SF
Haynes Canyon Unit 430H - Original Hole - rev0	1,149.07	1,150.74	59.17	51.27	7.494	CC, ES
Haynes Canyon Unit 430H - Original Hole - rev0	1,200.00	1,201.26	59.83	51.58	7.256	SF
Haynes Canyon Unit 442H - Original Hole - rev0	1,000.00	1,000.00	20.32	13.46	2.963	CC
Haynes Canyon Unit 442H - Original Hole - rev0	1,100.00	1,099.95	20.94	13.38	2.771	ES, SF
Section 06-T23N-R06W						
NE Lybrook Com 262 H - Original Hole - rev3	12,332.39	16,601.26	376.59	218.38	2.380	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												Offset Well Error:	0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Offset Measured Depth (ft)	Offset Vertical Depth (ft)	Reference (ft)	Semi Major Axis Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Distance Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
5,000.00	4,804.98	11,905.80	5,514.16	25.80	137.70	-135.16	-1,890.73	-1,398.11	1,390.19	1,249.88	140.31	9.908		
5,100.00	4,904.98	11,905.25	5,514.16	26.02	137.69	-135.14	-1,890.35	-1,398.49	1,346.55	1,202.01	144.54	9.316		
5,200.00	5,004.74	11,899.55	5,514.20	26.23	137.56	-92.90	-1,886.32	-1,402.52	1,309.19	1,160.85	148.34	8.826		
5,300.00	5,102.18	11,877.08	5,514.32	26.40	137.05	-95.03	-1,870.43	-1,418.41	1,279.21	1,128.03	151.18	8.462		
5,400.00	5,194.32	11,838.05	5,514.53	26.51	136.17	-95.63	-1,842.83	-1,446.01	1,257.15	1,104.30	152.85	8.225		
5,500.00	5,278.37	11,783.65	5,514.83	26.56	134.94	-94.99	-1,804.36	-1,484.47	1,242.66	1,089.30	153.35	8.103		
5,600.00	5,351.78	11,715.53	5,515.20	26.58	133.40	-93.51	-1,756.20	-1,532.64	1,234.52	1,081.68	152.84	8.077		
5,700.00	5,412.31	11,635.77	5,515.63	26.56	131.60	-91.63	-1,699.79	-1,589.04	1,231.04	1,079.42	151.62	8.119		
5,789.63	5,454.11	11,556.35	5,516.06	26.54	129.80	-90.00	-1,643.64	-1,645.19	1,230.35	1,080.15	150.19	8.192	CC	
5,800.00	5,458.13	11,546.78	5,516.11	26.54	129.59	-89.83	-1,636.87	-1,651.96	1,230.35	1,080.34	150.01	8.202		
5,900.00	5,487.84	11,451.26	5,516.63	26.54	127.43	-88.49	-1,569.33	-1,719.50	1,230.79	1,082.47	148.32	8.298		
6,000.00	5,500.54	11,352.13	5,517.17	26.62	125.20	-87.89	-1,499.23	-1,789.59	1,231.18	1,084.43	146.75	8.390		
6,100.00	5,501.25	11,252.14	5,517.71	26.85	122.94	-87.88	-1,428.53	-1,860.30	1,231.19	1,085.80	145.38	8.469		
6,200.00	5,501.57	11,152.14	5,518.26	27.29	120.69	-87.89	-1,357.82	-1,931.01	1,231.18	1,086.97	144.21	8.538		
6,300.00	5,501.89	11,052.14	5,518.80	28.01	118.44	-87.90	-1,287.11	-2,001.71	1,231.17	1,087.98	143.19	8.598		
6,400.00	5,502.20	10,952.14	5,519.34	29.02	116.19	-87.91	-1,216.40	-2,072.42	1,231.16	1,088.84	142.32	8.651		

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



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Haynes Canyon Unit 440H
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 440H	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	Offset	Rule Assigned:											
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	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
6,500.00	5,502.52	10,852.14	5,519.89	30.27	113.95	-87.92	-1,145.68	-2,143.13	1,231.15	1,089.58	141.57	8.696	
6,600.00	5,502.84	10,752.14	5,520.43	31.70	111.70	-87.93	-1,074.97	-2,213.84	1,231.14	1,090.22	140.92	8.736	
6,700.00	5,503.16	10,652.14	5,520.98	33.26	109.46	-87.94	-1,004.26	-2,284.55	1,231.14	1,090.77	140.37	8.771	
6,800.00	5,503.47	10,552.14	5,521.52	34.92	107.22	-87.95	-933.55	-2,355.26	1,231.13	1,091.24	139.88	8.801	
6,900.00	5,503.79	10,452.14	5,522.06	36.66	104.99	-87.96	-862.84	-2,425.96	1,231.12	1,091.65	139.47	8.827	
7,000.00	5,504.11	10,352.14	5,522.61	38.47	102.75	-87.98	-792.13	-2,496.67	1,231.11	1,092.00	139.11	8.850	
7,100.00	5,504.42	10,252.14	5,523.15	40.33	100.52	-87.99	-721.42	-2,567.38	1,231.10	1,092.31	138.80	8.870	
7,200.00	5,504.74	10,152.14	5,523.69	42.24	98.30	-88.00	-650.71	-2,638.09	1,231.09	1,092.57	138.53	8.887	
7,300.00	5,505.06	10,052.14	5,524.24	44.19	96.07	-88.01	-580.00	-2,708.80	1,231.09	1,092.79	138.29	8.902	
7,400.00	5,505.37	9,952.14	5,524.78	46.17	93.85	-88.02	-509.29	-2,779.51	1,231.08	1,092.98	138.09	8.915	
7,500.00	5,505.69	9,852.14	5,525.32	48.18	91.64	-88.03	-438.58	-2,850.21	1,231.07	1,093.15	137.92	8.926	
7,600.00	5,506.01	9,752.14	5,525.87	50.22	89.43	-88.04	-367.87	-2,920.92	1,231.06	1,093.28	137.78	8.935	
7,700.00	5,506.32	9,652.14	5,526.41	52.28	87.22	-88.05	-297.16	-2,991.63	1,231.05	1,093.39	137.66	8.943	
7,800.00	5,506.64	9,552.14	5,526.95	54.35	85.02	-88.06	-226.45	-3,062.34	1,231.05	1,093.48	137.57	8.949	
7,900.00	5,506.96	9,452.14	5,527.50	56.45	82.82	-88.07	-155.74	-3,133.05	1,231.04	1,093.55	137.49	8.954	
8,000.00	5,507.27	9,352.14	5,528.04	58.56	80.63	-88.08	-85.03	-3,203.76	1,231.03	1,093.60	137.43	8.957	
8,100.00	5,507.59	9,252.14	5,528.58	60.69	78.45	-88.09	-14.32	-3,274.46	1,231.02	1,093.63	137.39	8.960	
8,200.00	5,507.91	9,152.14	5,529.13	62.83	76.27	-88.10	56.40	-3,345.17	1,231.02	1,093.64	137.37	8.961	
8,300.00	5,508.22	9,052.14	5,529.67	64.97	74.10	-88.11	127.11	-3,415.88	1,231.01	1,093.64	137.37	8.961	
8,400.00	5,508.54	8,952.14	5,530.22	67.13	71.94	-88.12	197.82	-3,486.59	1,231.00	1,093.62	137.38	8.960	
8,500.00	5,508.86	8,852.14	5,530.76	69.30	69.78	-88.13	268.53	-3,557.30	1,230.99	1,093.58	137.41	8.958	
8,600.00	5,509.18	8,752.15	5,531.30	71.48	67.64	-88.14	339.24	-3,628.01	1,230.99	1,093.53	137.46	8.955	
8,700.00	5,509.49	8,652.15	5,531.85	73.67	65.50	-88.15	409.95	-3,698.71	1,230.98	1,093.45	137.52	8.951	
8,800.00	5,509.81	8,552.15	5,532.39	75.86	63.38	-88.16	480.66	-3,769.42	1,230.97	1,093.37	137.61	8.946	
8,900.00	5,510.13	8,452.15	5,532.93	78.06	61.27	-88.18	551.37	-3,840.13	1,230.96	1,093.26	137.71	8.939	
9,000.00	5,510.44	8,352.15	5,533.48	80.26	59.17	-88.19	622.08	-3,910.84	1,230.96	1,093.13	137.83	8.931	
9,100.00	5,510.76	8,252.15	5,534.02	82.47	57.09	-88.20	692.79	-3,981.55	1,230.95	1,092.98	137.97	8.922	
9,200.00	5,511.08	8,152.15	5,534.56	84.68	55.02	-88.21	763.50	-4,052.26	1,230.94	1,092.81	138.13	8.912	
9,300.00	5,511.39	8,052.15	5,535.11	86.90	52.97	-88.22	834.21	-4,122.96	1,230.93	1,092.62	138.31	8.900	
9,400.00	5,511.71	7,952.15	5,535.65	89.13	50.94	-88.23	904.92	-4,193.67	1,230.93	1,092.40	138.53	8.886	
9,500.00	5,512.03	7,852.15	5,536.19	91.35	48.93	-88.24	975.63	-4,264.38	1,230.92	1,092.15	138.77	8.870	
9,600.00	5,512.34	7,752.15	5,536.74	93.59	46.95	-88.25	1,046.34	-4,335.09	1,230.91	1,091.87	139.04	8.853	
9,700.00	5,512.66	7,652.15	5,537.28	95.82	45.00	-88.26	1,117.05	-4,405.80	1,230.91	1,091.56	139.35	8.833	
9,800.00	5,512.98	7,552.15	5,537.82	98.06	43.07	-88.27	1,187.76	-4,476.51	1,230.90	1,091.21	139.69	8.812	
9,900.00	5,513.29	7,452.15	5,538.37	100.30	41.18	-88.28	1,258.48	-4,547.21	1,230.89	1,090.81	140.08	8.787	
10,000.00	5,513.61	7,352.15	5,538.91	102.54	39.33	-88.29	1,329.19	-4,617.92	1,230.88	1,090.36	140.52	8.759	
10,100.00	5,513.93	7,252.15	5,539.46	104.79	37.53	-88.30	1,399.90	-4,688.63	1,230.88	1,089.86	141.02	8.728	
10,200.00	5,514.24	7,152.15	5,540.00	107.04	35.77	-88.31	1,470.61	-4,759.34	1,230.87	1,089.29	141.58	8.694	
10,300.00	5,514.56	7,052.15	5,540.54	109.29	34.07	-88.32	1,541.32	-4,830.05	1,230.86	1,088.65	142.21	8.655	
10,400.00	5,514.88	6,952.15	5,541.09	111.54	32.44	-88.33	1,612.03	-4,900.76	1,230.86	1,087.93	142.93	8.611	
10,500.00	5,515.19	6,852.15	5,541.63	113.80	30.87	-88.34	1,682.74	-4,971.46	1,230.85	1,087.11	143.74	8.563	
10,600.00	5,515.51	6,752.15	5,542.17	116.05	29.28	-88.35	1,753.45	-5,042.17	1,230.84	1,086.34	144.51	8.517	
10,700.00	5,515.83	6,652.15	5,542.72	118.31	28.81	-88.37	1,824.16	-5,112.88	1,230.84	1,084.98	145.86	8.439	
10,800.00	5,516.15	6,552.15	5,543.26	120.57	29.04	-88.38	1,894.87	-5,183.59	1,230.83	1,083.84	146.99	8.374	
10,900.00	5,516.46	6,452.15	5,543.80	122.83	29.25	-88.39	1,965.58	-5,254.30	1,230.82	1,082.48	148.34	8.297	
11,000.00	5,516.78	6,352.15	5,544.35	125.10	29.49	-88.40	2,036.29	-5,325.01	1,230.82	1,080.93	149.89	8.212	
11,100.00	5,517.10	6,252.15	5,544.89	127.36	29.76	-88.41	2,107.00	-5,395.71	1,230.81	1,079.21	151.61	8.119	
11,121.40	5,517.16	6,230.83	5,545.01	127.85	29.82	-88.41	2,122.08	-5,410.79	1,230.81	1,078.82	151.99	8.098	
11,200.00	5,517.41	6,157.06	5,540.49	129.63	30.04	-88.19	2,174.11	-5,462.82	1,230.96	1,077.43	153.53	8.018	
11,300.00	5,517.73	6,066.91	5,522.22	131.90	30.32	-87.33	2,236.47	-5,525.18	1,231.79	1,076.28	155.52	7.921 ES	
11,400.00	5,518.05	5,984.34	5,493.54	134.17	30.57	-85.98	2,291.17	-5,579.87	1,234.00	1,076.56	157.44	7.838	
11,500.00	5,518.36	5,906.96	5,457.20	136.44	30.80	-84.29	2,339.44	-5,628.14	1,238.53	1,079.38	159.15	7.782	

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



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Haynes Canyon Unit 440H
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 440H	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		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Rule Assigned:		Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor		
11,600.00	5,518.68	5,832.77	5,419.12	138.71	31.03	-82.53	2,384.45	-5,673.15	1,245.54	1,084.95	160.59	7.756 SF		
11,700.00	5,519.00	5,775.10	5,384.82	140.98	31.19	-80.96	2,417.22	-5,705.92	1,256.25	1,094.64	161.61	7.774		
11,800.00	5,519.31	5,725.63	5,351.82	143.25	31.32	-79.47	2,443.26	-5,731.96	1,271.49	1,109.42	162.07	7.845		
11,900.00	5,519.63	5,683.33	5,321.16	145.53	31.42	-78.09	2,463.86	-5,752.56	1,291.77	1,129.81	161.96	7.976		
12,000.00	5,519.95	5,650.00	5,295.55	147.80	31.49	-76.95	2,478.93	-5,767.63	1,317.38	1,156.07	161.32	8.166		
12,100.00	5,520.26	5,616.00	5,268.18	150.08	31.55	-75.74	2,493.19	-5,781.89	1,348.40	1,188.24	160.16	8.419		
12,200.00	5,520.58	5,600.00	5,254.90	152.36	31.57	-75.16	2,499.50	-5,788.20	1,384.86	1,226.19	158.67	8.728		
12,300.00	5,520.90	5,565.78	5,225.69	154.63	31.62	-73.90	2,512.10	-5,800.80	1,426.31	1,269.55	156.75	9.099		

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



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Haynes Canyon Unit 440H
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 440H	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 428H - Original Hole - rev1												Offset Site Error:	0.00 ft
Survey Program: 0-MWD												Offset Well Error:	0.00 ft
Reference		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)			
0.00	0.00	0.00	0.00	0.00	0.00	107.00	-11.77	38.49	40.25				
100.00	100.00	100.00	100.00	0.27	0.27	107.00	-11.77	38.49	40.25	39.71	0.54	74.848	
200.00	200.00	200.00	200.00	0.63	0.63	107.00	-11.77	38.49	40.25	38.99	1.25	32.078	
300.00	300.00	300.00	300.00	0.99	0.99	107.00	-11.77	38.49	40.25	38.27	1.97	20.413	
400.00	400.00	400.00	400.00	1.34	1.34	107.00	-11.77	38.49	40.25	37.56	2.69	14.970	
500.00	500.00	500.00	500.00	1.70	1.70	107.00	-11.77	38.49	40.25	36.84	3.41	11.818	
600.00	600.00	600.00	600.00	2.06	2.06	107.00	-11.77	38.49	40.25	36.12	4.12	9.763	
700.00	700.00	700.00	700.00	2.42	2.42	107.00	-11.77	38.49	40.25	35.41	4.84	8.316	
800.00	800.00	800.00	800.00	2.78	2.78	107.00	-11.77	38.49	40.25	34.69	5.56	7.243	
900.00	900.00	900.00	900.00	3.14	3.14	107.00	-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	107.00	-11.77	38.49	40.25	33.26	6.99	5.758	
1,100.00	1,099.95	1,099.95	1,099.95	3.84	3.85	-104.12	-11.77	38.49	40.81	33.12	7.69	5.307	
1,200.00	1,199.63	1,199.63	1,199.63	4.17	4.21	-114.11	-11.77	38.49	43.39	35.02	8.38	5.180	
1,300.00	1,298.77	1,298.77	1,298.77	4.51	4.57	-127.61	-11.77	38.49	50.18	41.11	9.07	5.531	
1,400.00	1,397.08	1,400.29	1,400.25	4.87	4.92	-140.72	-13.00	36.16	60.50	50.74	9.76	6.200	
1,500.00	1,494.31	1,502.27	1,501.90	5.27	5.26	-152.17	-16.76	29.02	72.29	61.88	10.42	6.941	
1,600.00	1,590.18	1,604.53	1,603.24	5.70	5.62	-162.34	-23.07	17.06	85.91	74.85	11.06	7.766	
1,700.00	1,684.44	1,706.91	1,703.84	6.19	6.00	-171.40	-31.91	0.29	101.67	89.96	11.72	8.677	
1,800.00	1,777.94	1,809.78	1,803.75	6.72	6.40	-179.46	-43.31	-21.34	116.91	104.51	12.40	9.430	
1,900.00	1,871.45	1,913.05	1,902.57	7.27	6.85	-172.89	-57.26	-47.81	129.68	116.52	13.15	9.858	
2,000.00	1,964.95	2,016.11	1,999.44	7.85	7.35	-165.11	-73.65	-78.89	140.55	126.51	14.04	10.012	
2,100.00	2,058.45	2,117.54	2,092.84	8.44	7.90	-157.02	-92.10	-113.89	150.49	135.38	15.11	9.962	
2,200.00	2,151.96	2,214.82	2,181.71	9.05	8.48	-149.77	-110.55	-148.88	162.11	145.78	16.33	9.927	
2,300.00	2,245.46	2,312.10	2,270.58	9.67	9.09	-143.53	-129.00	-183.88	176.03	158.42	17.62	9.992	
2,400.00	2,338.97	2,409.38	2,359.45	10.30	9.72	-138.24	-147.45	-218.88	191.75	172.81	18.94	10.122	
2,500.00	2,432.47	2,506.66	2,448.32	10.94	10.38	-133.76	-165.90	-253.87	208.86	188.57	20.29	10.293	
2,600.00	2,525.97	2,603.94	2,537.19	11.58	11.05	-129.96	-184.35	-288.87	227.05	205.39	21.65	10.486	
2,700.00	2,619.48	2,701.22	2,626.06	12.22	11.73	-126.72	-202.80	-323.87	246.07	223.05	23.02	10.690	
2,800.00	2,712.98	2,798.50	2,714.93	12.88	12.43	-123.95	-221.25	-358.87	265.75	241.36	24.39	10.896	
2,900.00	2,806.49	2,895.78	2,803.80	13.53	13.13	-121.56	-239.70	-393.86	285.96	260.19	25.76	11.099	
3,000.00	2,899.99	2,993.06	2,892.68	14.19	13.85	-119.49	-258.15	-428.86	306.58	279.45	27.14	11.297	
3,100.00	2,993.49	3,090.34	2,981.55	14.85	14.57	-117.67	-276.61	-463.86	327.55	299.03	28.51	11.488	
3,200.00	3,087.00	3,187.62	3,070.42	15.52	15.30	-116.08	-295.06	-498.85	348.79	318.90	29.89	11.670	
3,300.00	3,180.50	3,284.90	3,159.29	16.19	16.03	-114.66	-313.51	-533.85	370.27	339.00	31.26	11.843	
3,400.00	3,274.00	3,382.18	3,248.16	16.85	16.76	-113.40	-331.96	-568.85	391.93	359.29	32.64	12.008	
3,500.00	3,367.51	3,479.45	3,337.03	17.52	17.50	-112.28	-350.41	-603.85	413.76	379.75	34.02	12.163	
3,600.00	3,461.01	3,576.73	3,425.90	18.20	18.25	-111.26	-368.86	-638.84	435.73	400.34	35.39	12.311	
3,700.00	3,554.52	3,674.01	3,514.77	18.87	19.00	-110.34	-387.31	-673.84	457.82	421.05	36.77	12.451	
3,800.00	3,648.02	3,771.29	3,603.64	19.55	19.75	-109.51	-405.76	-708.84	480.00	441.86	38.15	12.583	
3,900.00	3,741.52	3,868.57	3,692.51	20.22	20.50	-108.75	-424.21	-743.84	502.28	462.76	39.53	12.708	
4,000.00	3,835.03	3,965.85	3,781.39	20.90	21.25	-108.06	-442.66	-778.83	524.63	483.73	40.90	12.826	
4,100.00	3,928.53	4,063.13	3,870.26	21.58	22.01	-107.42	-461.11	-813.83	547.06	504.77	42.28	12.938	
4,200.00	4,022.04	4,160.87	3,959.56	22.25	22.77	-106.83	-479.65	-848.99	569.54	525.87	43.67	13.042	
4,300.00	4,115.97	4,267.39	4,058.15	22.92	23.55	-106.84	-498.43	-884.63	590.88	545.75	45.13	13.092	
4,400.00	4,211.49	4,375.12	4,159.98	23.52	24.26	-107.05	-514.80	-915.67	609.31	562.83	46.47	13.111	
4,500.00	4,308.43	4,483.91	4,264.67	24.06	24.89	-107.22	-528.58	-941.82	624.66	576.98	47.68	13.102	
4,600.00	4,406.51	4,593.60	4,371.74	24.54	25.45	-107.35	-539.64	-962.80	636.85	588.12	48.74	13.068	
4,700.00	4,505.48	4,703.99	4,480.70	24.95	25.92	-107.44	-547.86	-978.39	645.84	596.20	49.64	13.010	
4,800.00	4,605.06	4,814.88	4,590.99	25.30	26.30	-107.49	-553.15	-988.41	651.58	601.19	50.39	12.930	
4,900.00	4,704.98	4,926.05	4,702.04	25.58	26.61	-107.50	-555.45	-992.77	654.04	603.04	51.00	12.825	
5,000.00	4,804.98	5,028.99	4,804.98	25.80	26.84	-44.98	-555.55	-992.96	654.14	602.69	51.45	12.713	
5,100.00	4,904.98	6,133.98	5,497.48	26.02	27.51	-131.24	-1,020.74	-527.78	592.52	572.83	19.69	30.096	

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



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Haynes Canyon Unit 440H
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 440H	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 428H - Original Hole - rev1													Offset Site Error: 0.00 ft	
Survey Program: 0-MWD									Rule Assigned:				Offset Well Error: 0.00 ft	
Reference		Offset		Semi Major Axis		Offset Wellbore Centre			Distance					
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning	
5,200.00	5,004.74	6,128.19	5,497.52	26.23	27.51	179.80	-1,016.65	-531.87	492.79	473.04	19.74	24.959		
5,300.00	5,102.18	6,105.64	5,497.66	26.40	27.53	179.89	-1,000.70	-547.82	395.49	375.81	19.68	20.093		
5,400.00	5,194.32	6,066.53	5,497.91	26.51	27.55	179.90	-973.04	-575.47	303.60	284.08	19.52	15.555		
5,500.00	5,278.37	5,987.05	5,494.66	26.56	27.60	179.88	-916.93	-631.59	217.56	197.85	19.71	11.038		
5,600.00	5,351.78	5,909.42	5,481.07	26.58	27.64	179.81	-862.92	-685.59	133.24	112.48	20.76	6.419		
5,700.00	5,412.31	5,840.59	5,460.50	26.56	27.67	179.55	-816.51	-732.00	51.57	31.12	20.44	2.522		
5,765.44	5,444.05	5,798.41	5,444.05	26.54	27.68	89.50	-789.05	-759.46	0.25	-28.80	29.04	0.008	Level 3<2.00, CC, ES, SF	
5,800.00	5,458.13	5,776.78	5,434.52	26.54	27.69	0.82	-775.33	-773.19	26.55	6.63	19.92	1.333	Level 3<2.00	
5,900.00	5,487.84	5,716.09	5,403.95	26.54	27.69	0.20	-738.28	-810.24	100.37	72.97	27.40	3.663		
6,000.00	5,500.54	5,657.45	5,369.31	26.62	27.68	0.11	-704.84	-843.67	169.25	136.06	33.19	5.099		
6,100.00	5,501.25	5,600.00	5,330.86	26.85	27.66	0.08	-674.68	-873.83	236.65	199.40	37.25	6.353		
6,200.00	5,501.57	5,550.00	5,294.06	27.29	27.64	0.07	-650.76	-897.75	310.07	269.80	40.27	7.701		
6,300.00	5,501.89	5,517.91	5,268.94	28.01	27.62	0.06	-636.64	-911.87	388.10	344.69	43.41	8.940		
6,400.00	5,502.20	5,485.06	5,242.12	29.02	27.59	0.05	-623.24	-925.27	469.99	424.74	45.25	10.386		
6,500.00	5,502.52	5,450.00	5,212.34	30.27	27.56	0.05	-610.16	-938.35	554.89	508.55	46.35	11.973		
6,600.00	5,502.84	5,433.04	5,197.54	31.70	27.55	0.05	-604.30	-944.21	641.93	594.16	47.77	13.439		
6,700.00	5,503.16	5,400.00	5,168.04	33.26	27.51	0.04	-593.79	-954.72	731.14	682.86	48.28	15.145		
6,800.00	5,503.47	5,400.00	5,168.04	34.92	27.51	0.04	-593.79	-954.72	821.43	771.94	49.48	16.600		
6,900.00	5,503.79	5,378.27	5,148.19	36.66	27.49	0.04	-587.54	-960.98	913.07	863.15	49.91	18.293		
7,000.00	5,504.11	5,350.00	5,121.90	38.47	27.45	0.04	-580.21	-968.30	1,006.04	955.91	50.14	20.066		
7,100.00	5,504.42	5,350.00	5,121.90	40.33	27.45	0.04	-580.21	-968.30	1,099.31	1,048.56	50.75	21.660		
7,200.00	5,504.74	5,350.00	5,121.90	42.24	27.45	0.04	-580.21	-968.30	1,193.67	1,142.44	51.23	23.299		
7,300.00	5,505.06	5,330.62	5,103.59	44.19	27.42	0.04	-575.72	-972.79	1,288.41	1,237.02	51.39	25.069		
7,400.00	5,505.37	5,321.58	5,094.98	46.17	27.41	0.03	-573.78	-974.74	1,383.77	1,332.14	51.64	26.799		

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



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Haynes Canyon Unit 440H
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 440H	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	Offset	Semi Major Axis	Highside	Offset Wellbore Centre		Distance		Minimum	Separation	Warning			
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)	Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Separation (ft)	Factor	
0.00	0.00	0.00	0.00	0.00	0.00	106.88	-17.47	57.58	60.18				
100.00	100.00	100.00	100.00	0.27	0.13	106.88	-17.47	57.58	60.18	59.77	0.40	149.218	
200.00	200.00	200.00	200.00	0.63	0.49	106.88	-17.47	57.58	60.18	59.06	1.12	53.718	
300.00	300.00	300.00	300.00	0.99	0.85	106.88	-17.47	57.58	60.18	58.34	1.84	32.755	
400.00	400.00	400.00	400.00	1.34	1.21	106.88	-17.47	57.58	60.18	57.62	2.55	23.561	
500.00	500.00	500.00	500.00	1.70	1.57	106.88	-17.47	57.58	60.18	56.91	3.27	18.397	
600.00	600.00	600.00	600.00	2.06	1.93	106.88	-17.47	57.58	60.18	56.19	3.99	15.089	
700.00	700.00	700.00	700.00	2.42	2.29	106.88	-17.47	57.58	60.18	55.47	4.70	12.790	
800.00	800.00	800.00	800.00	2.78	2.64	106.88	-17.47	57.58	60.18	54.75	5.42	11.099	
900.00	900.00	900.00	900.00	3.14	3.00	106.88	-17.47	57.58	60.18	54.04	6.14	9.803	
1,000.00	1,000.00	1,000.00	1,000.00	3.50	3.36	106.88	-17.47	57.58	60.18	53.32	6.86	8.778	
1,100.00	1,099.95	1,101.42	1,101.38	3.84	3.72	-105.39	-14.86	56.91	59.47	51.92	7.56	7.869	
1,149.07	1,148.92	1,150.74	1,150.59	4.00	3.90	-111.22	-11.71	56.09	59.17	51.27	7.90	7.494 CC, ES	
1,200.00	1,199.63	1,201.26	1,200.89	4.17	4.09	-119.39	-7.30	54.95	59.83	51.58	8.24	7.256 SF	
1,300.00	1,298.77	1,299.01	1,298.20	4.51	4.44	-136.72	1.76	52.60	67.37	58.43	8.94	7.534	
1,400.00	1,397.08	1,395.58	1,394.32	4.87	4.79	-151.25	10.70	50.28	84.40	74.76	9.64	8.754	
1,500.00	1,494.31	1,490.70	1,489.01	5.27	5.14	-161.39	19.51	47.99	109.94	99.60	10.33	10.640	
1,600.00	1,590.18	1,584.11	1,581.99	5.70	5.49	-168.05	28.17	45.75	142.52	131.51	11.02	12.937	
1,700.00	1,684.44	1,675.57	1,673.03	6.19	5.83	-172.45	36.64	43.55	181.12	169.42	11.70	15.478	
1,800.00	1,777.94	1,766.12	1,763.17	6.72	6.17	-175.50	45.03	41.37	222.40	210.04	12.36	17.989	
1,900.00	1,871.45	1,856.68	1,853.31	7.27	6.51	-177.59	53.42	39.20	264.05	251.01	13.03	20.259	
2,000.00	1,964.95	1,947.23	1,943.45	7.85	6.85	-179.12	61.81	37.02	305.90	292.19	13.71	22.311	
2,100.00	2,058.45	2,037.79	2,033.59	8.44	7.20	-179.72	70.19	34.84	347.90	333.50	14.40	24.168	
2,200.00	2,151.96	2,128.35	2,123.73	9.05	7.54	-178.81	78.58	32.67	389.99	374.90	15.08	25.853	
2,300.00	2,245.46	2,218.90	2,213.87	9.67	7.88	-178.08	86.97	30.49	432.14	416.36	15.78	27.385	
2,400.00	2,338.97	2,309.46	2,304.01	10.30	8.23	-177.47	95.36	28.32	474.34	457.86	16.48	28.784	
2,500.00	2,432.47	2,400.01	2,394.15	10.94	8.57	-176.97	103.75	26.14	516.58	499.40	17.18	30.064	
2,600.00	2,525.97	2,490.57	2,484.29	11.58	8.92	-176.54	112.14	23.96	558.84	540.95	17.89	31.238	
2,700.00	2,619.48	2,581.13	2,574.43	12.22	9.27	-176.17	120.53	21.79	601.13	582.53	18.60	32.320	
2,800.00	2,712.98	2,671.68	2,664.57	12.88	9.61	-175.85	128.91	19.61	643.44	624.12	19.31	33.318	
2,900.00	2,806.49	2,762.24	2,754.71	13.53	9.96	-175.57	137.30	17.44	685.76	665.73	20.03	34.241	
3,000.00	2,899.99	2,852.79	2,844.85	14.19	10.31	-175.32	145.69	15.26	728.09	707.34	20.74	35.098	
3,100.00	2,993.49	2,943.35	2,934.99	14.85	10.65	-175.10	154.08	13.08	770.43	748.96	21.46	35.894	
3,200.00	3,087.00	3,033.90	3,025.13	15.52	11.00	-174.90	162.47	10.91	812.78	790.59	22.18	36.637	
3,300.00	3,180.50	3,124.46	3,115.27	16.19	11.35	-174.73	170.86	8.73	855.14	832.23	22.91	37.330	
3,400.00	3,274.00	3,215.02	3,205.41	16.85	11.70	-174.56	179.25	6.56	897.50	873.87	23.63	37.979	
3,500.00	3,367.51	3,305.57	3,295.55	17.52	12.04	-174.42	187.64	4.38	939.87	915.51	24.36	38.587	
3,600.00	3,461.01	3,396.13	3,385.69	18.20	12.39	-174.28	196.02	2.20	982.24	957.16	25.08	39.158	
3,700.00	3,554.52	3,486.68	3,475.83	18.87	12.74	-174.16	204.41	0.03	1,024.62	998.81	25.81	39.695	
3,800.00	3,648.02	3,577.24	3,565.97	19.55	13.09	-174.05	212.80	-2.15	1,067.00	1,040.46	26.54	40.202	
3,900.00	3,741.52	3,667.79	3,656.11	20.22	13.44	-173.94	221.19	-4.32	1,109.38	1,082.11	27.27	40.680	
4,000.00	3,835.03	3,758.35	3,746.25	20.90	13.79	-173.84	229.58	-6.50	1,151.77	1,123.77	28.00	41.132	
4,100.00	3,928.53	3,868.48	3,855.91	21.58	14.21	-173.75	239.40	-9.05	1,194.00	1,165.12	28.88	41.340	
4,200.00	4,022.04	4,034.74	4,022.04	22.25	14.80	-173.91	244.67	-10.42	1,231.45	1,201.34	30.11	40.900	
4,300.00	4,115.97	4,128.68	4,115.97	22.92	15.12	-174.15	244.67	-10.42	1,265.57	1,234.73	30.84	41.040	
4,400.00	4,211.49	4,224.20	4,211.49	23.52	15.45	-174.37	244.67	-10.42	1,294.99	1,263.42	31.56	41.029	
4,500.00	4,308.43	4,321.14	4,308.43	24.06	15.78	-174.55	244.67	-10.42	1,319.39	1,287.11	32.28	40.868	
4,600.00	4,406.51	4,419.22	4,406.51	24.54	16.12	-174.68	244.67	-10.42	1,338.72	1,305.72	33.00	40.570	
4,700.00	4,505.48	4,518.19	4,505.48	24.95	16.46	-174.78	244.67	-10.42	1,352.91	1,319.21	33.70	40.143	
4,800.00	4,605.06	4,617.77	4,605.06	25.30	16.81	-174.84	244.67	-10.42	1,361.92	1,327.53	34.39	39.599	
4,900.00	4,704.98	4,717.68	4,704.98	25.58	17.15	-174.86	244.67	-10.42	1,365.73	1,330.66	35.07	38.945	
5,000.00	4,804.98	4,817.68	4,804.98	25.80	17.50	-174.86	244.67	-10.42	1,365.87	1,330.15	35.72	38.240	

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



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Haynes Canyon Unit 440H
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 440H	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		Offset		Semi Major Axis		Highside Toolface (°)	Offset Wellbore Centre		Distance		Minimum Separation (ft)	Separation Factor	Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference (ft)	Offset (ft)		+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)				
5,100.00	4,904.98	5,562.39	5,431.57	26.02	19.66	35.16	9.18	193.14	1,362.62	1,325.29	37.34	36.494		
5,200.00	5,004.74	5,739.97	5,503.50	26.23	20.82	90.88	-113.14	298.88	1,324.95	1,285.82	39.13	33.856		
5,300.00	5,102.18	5,757.43	5,507.87	26.40	20.97	95.32	-125.93	309.93	1,290.77	1,250.60	40.17	32.132		
5,400.00	5,194.32	5,722.24	5,498.53	26.51	20.68	96.37	-100.27	287.75	1,264.91	1,224.34	40.57	31.177		
5,500.00	5,278.37	5,678.84	5,484.18	26.56	20.36	96.14	-69.29	260.97	1,247.86	1,207.16	40.71	30.655		
5,600.00	5,351.78	5,632.63	5,465.53	26.58	20.06	94.95	-37.32	233.33	1,239.51	1,198.84	40.67	30.481		
5,652.30	5,385.17	5,607.91	5,454.17	26.56	19.91	94.01	-20.70	218.97	1,238.43	1,197.82	40.61	30.495		
5,700.00	5,412.31	5,585.67	5,443.21	26.56	19.78	92.99	-6.07	206.32	1,239.29	1,198.76	40.53	30.575		
5,800.00	5,458.13	5,532.07	5,416.40	26.54	19.51	90.22	29.05	175.97	1,246.15	1,205.79	40.36	30.876		
5,900.00	5,487.84	5,476.75	5,386.34	26.54	19.28	87.04	64.16	145.62	1,258.36	1,218.07	40.29	31.234		
6,000.00	5,500.54	5,422.44	5,352.60	26.62	19.09	83.64	96.34	117.80	1,274.55	1,234.17	40.38	31.567		
6,100.00	5,501.25	5,371.38	5,317.35	26.85	18.95	81.67	124.26	93.66	1,294.18	1,253.55	40.63	31.853		
6,200.00	5,501.57	5,328.23	5,285.09	27.29	18.85	80.24	145.94	74.93	1,318.61	1,277.59	41.01	32.150		
6,300.00	5,501.89	5,300.00	5,262.86	28.01	18.79	79.26	159.09	63.56	1,348.20	1,306.65	41.55	32.446		
6,400.00	5,502.20	5,250.00	5,221.48	29.02	18.69	77.46	180.31	45.22	1,382.98	1,341.05	41.93	32.985		
6,500.00	5,502.52	5,234.35	5,208.04	30.27	18.65	76.88	186.38	39.97	1,422.75	1,380.18	42.57	33.422		

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



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Haynes Canyon Unit 440H
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 440H	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
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
0.00	0.00	0.00	0.00	0.00	0.00	107.38	-6.07	19.39	20.32				
100.00	100.00	100.00	100.00	0.27	0.13	107.38	-6.07	19.39	20.32	19.91	0.40	50.377	
200.00	200.00	200.00	200.00	0.63	0.49	107.38	-6.07	19.39	20.32	19.20	1.12	18.136	
300.00	300.00	300.00	300.00	0.99	0.85	107.38	-6.07	19.39	20.32	18.48	1.84	11.058	
400.00	400.00	400.00	400.00	1.34	1.21	107.38	-6.07	19.39	20.32	17.76	2.55	7.954	
500.00	500.00	500.00	500.00	1.70	1.57	107.38	-6.07	19.39	20.32	17.05	3.27	6.211	
600.00	600.00	600.00	600.00	2.06	1.93	107.38	-6.07	19.39	20.32	16.33	3.99	5.094	
700.00	700.00	700.00	700.00	2.42	2.29	107.38	-6.07	19.39	20.32	15.61	4.70	4.318	
800.00	800.00	800.00	800.00	2.78	2.64	107.38	-6.07	19.39	20.32	14.89	5.42	3.747	
900.00	900.00	900.00	900.00	3.14	3.00	107.38	-6.07	19.39	20.32	14.18	6.14	3.309	
1,000.00	1,000.00	1,000.00	1,000.00	3.50	3.36	107.38	-6.07	19.39	20.32	13.46	6.86	2.963 CC	
1,100.00	1,099.95	1,099.95	1,099.95	3.84	3.72	-107.19	-6.07	19.39	20.94	13.38	7.56	2.771 ES, SF	
1,200.00	1,199.63	1,199.63	1,199.63	4.17	4.08	-124.92	-6.07	19.39	24.43	16.19	8.24	2.964	
1,300.00	1,298.77	1,298.77	1,298.77	4.51	4.43	-143.23	-6.07	19.39	33.67	24.73	8.94	3.767	
1,400.00	1,397.08	1,397.08	1,397.08	4.87	4.78	-155.71	-6.07	19.39	49.53	39.89	9.64	5.140	
1,500.00	1,494.31	1,493.98	1,493.94	5.27	5.12	-161.30	-7.54	21.17	71.71	61.39	10.32	6.950	
1,600.00	1,590.18	1,589.63	1,589.32	5.70	5.44	-162.06	-12.07	26.63	99.46	88.47	10.99	9.047	
1,700.00	1,684.44	1,683.50	1,682.46	6.19	5.76	-160.91	-19.47	35.56	132.38	120.70	11.69	11.329	
1,800.00	1,777.94	1,776.09	1,773.67	6.72	6.09	-159.03	-29.61	47.81	167.83	155.46	12.38	13.560	
1,900.00	1,871.45	1,869.27	1,865.08	7.27	6.44	-157.18	-41.12	61.70	203.71	190.61	13.10	15.545	
2,000.00	1,964.95	1,962.44	1,956.49	7.85	6.80	-155.88	-52.62	75.60	239.72	225.86	13.86	17.300	
2,100.00	2,058.45	2,055.62	2,047.90	8.44	7.17	-154.92	-64.13	89.49	275.81	261.18	14.63	18.852	
2,200.00	2,151.96	2,148.79	2,139.32	9.05	7.55	-154.19	-75.64	103.38	311.95	296.53	15.42	20.229	
2,300.00	2,245.46	2,241.97	2,230.73	9.67	7.94	-153.60	-87.15	117.28	348.12	331.89	16.23	21.454	
2,400.00	2,338.97	2,335.14	2,322.14	10.30	8.33	-153.13	-98.65	131.17	384.32	367.28	17.04	22.547	
2,500.00	2,432.47	2,428.32	2,413.55	10.94	8.73	-152.74	-110.16	145.06	420.54	402.67	17.87	23.527	
2,600.00	2,525.97	2,521.49	2,504.96	11.58	9.13	-152.41	-121.67	158.96	456.77	438.06	18.71	24.408	
2,700.00	2,619.48	2,614.67	2,596.37	12.22	9.54	-152.13	-133.17	172.85	493.02	473.46	19.56	25.203	
2,800.00	2,712.98	2,707.84	2,687.79	12.88	9.95	-151.88	-144.68	186.74	529.27	508.86	20.42	25.923	
2,900.00	2,806.49	2,801.02	2,779.20	13.53	10.37	-151.67	-156.19	200.63	565.53	544.26	21.28	26.578	
3,000.00	2,899.99	2,894.19	2,870.61	14.19	10.79	-151.48	-167.69	214.53	601.80	579.66	22.15	27.174	
3,100.00	2,993.49	2,987.37	2,962.02	14.85	11.21	-151.32	-179.20	228.42	638.07	615.06	23.02	27.720	
3,200.00	3,087.00	3,080.54	3,053.43	15.52	11.63	-151.17	-190.71	242.31	674.35	650.45	23.90	28.221	
3,300.00	3,180.50	3,173.72	3,144.85	16.19	12.06	-151.04	-202.22	256.21	710.63	685.85	24.78	28.682	
3,400.00	3,274.00	3,266.89	3,236.26	16.85	12.48	-150.92	-213.72	270.10	746.91	721.25	25.66	29.107	
3,500.00	3,367.51	3,360.07	3,327.67	17.52	12.91	-150.81	-225.23	283.99	783.20	756.65	26.55	29.500	
3,600.00	3,461.01	3,453.24	3,419.08	18.20	13.34	-150.71	-236.74	297.88	819.49	792.05	27.44	29.865	
3,700.00	3,554.52	3,546.42	3,510.49	18.87	13.77	-150.62	-248.24	311.78	855.77	827.44	28.33	30.204	
3,800.00	3,648.02	3,639.59	3,601.91	19.55	14.20	-150.54	-259.75	325.67	892.07	862.84	29.23	30.520	
3,900.00	3,741.52	3,732.77	3,693.32	20.22	14.64	-150.46	-271.26	339.56	928.36	898.23	30.13	30.814	
4,000.00	3,835.03	3,825.94	3,784.73	20.90	15.07	-150.39	-282.76	353.46	964.65	933.62	31.03	31.090	
4,100.00	3,928.53	3,919.12	3,876.14	21.58	15.51	-150.32	-294.27	367.35	1,000.95	969.02	31.93	31.348	
4,200.00	4,022.04	4,012.29	3,967.55	22.25	15.94	-150.26	-305.78	381.24	1,037.24	1,004.41	32.83	31.590	
4,300.00	4,115.97	4,105.84	4,059.33	22.92	16.38	-150.55	-317.33	395.19	1,072.52	1,038.79	33.74	31.790	
4,400.00	4,211.49	4,200.75	4,152.45	23.52	16.83	-150.81	-329.05	409.34	1,103.72	1,069.08	34.64	31.865	
4,500.00	4,308.43	4,296.85	4,246.73	24.06	17.28	-150.88	-340.92	423.67	1,130.56	1,095.03	35.53	31.819	
4,600.00	4,406.51	4,393.87	4,341.91	24.54	17.74	-150.75	-352.90	438.14	1,153.03	1,116.62	36.42	31.664	
4,700.00	4,505.48	4,493.26	4,439.43	24.95	18.21	-150.45	-365.16	452.94	1,171.12	1,133.81	37.30	31.395	
4,800.00	4,605.06	4,614.58	4,559.21	25.30	18.74	-150.01	-377.35	467.65	1,183.73	1,145.42	38.32	30.894	
4,900.00	4,704.98	4,737.91	4,681.97	25.58	19.21	-149.68	-384.74	476.58	1,189.95	1,150.74	39.21	30.346	
5,000.00	4,804.98	4,862.21	4,806.20	25.80	19.62	58.00	-387.06	479.38	1,190.99	1,151.02	39.97	29.795	
5,031.75	4,836.72	4,892.73	4,836.72	25.87	19.71	58.00	-387.07	479.39	1,191.00	1,150.85	40.14	29.668	

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



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Haynes Canyon Unit 440H
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 440H	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
Rule Assigned:												Warning	
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Reference	Offset	Highside Toolface (°)	+N/-S (ft)	+E/-W (ft)	Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	
5,100.00	4,904.98	4,960.99	4,904.98	26.02	19.91	58.00	-387.07	479.39	1,191.00	1,150.47	40.53	29.387	
5,200.00	5,004.74	5,099.18	5,042.30	26.23	20.25	102.77	-377.58	471.17	1,190.83	1,149.68	41.15	28.939	
5,295.12	5,097.53	5,235.46	5,170.98	26.39	20.43	102.04	-344.41	442.46	1,190.72	1,149.29	41.43	28.741	
5,300.00	5,102.18	5,242.30	5,177.13	26.40	20.44	101.99	-342.15	440.50	1,190.72	1,149.28	41.44	28.734	
5,400.00	5,194.32	5,378.76	5,291.11	26.51	20.56	100.74	-285.87	391.77	1,191.00	1,149.48	41.52	28.687	
5,500.00	5,278.37	5,506.94	5,379.35	26.56	20.72	99.15	-215.86	331.16	1,192.06	1,150.47	41.59	28.661	
5,600.00	5,351.78	5,618.24	5,438.83	26.58	20.99	97.49	-144.82	269.66	1,194.39	1,152.56	41.84	28.548	
5,700.00	5,412.31	5,730.46	5,488.45	26.56	21.45	96.03	-68.85	203.89	1,198.63	1,156.25	42.38	28.285	
5,800.00	5,458.13	5,841.88	5,517.78	26.54	22.12	94.38	12.28	133.65	1,203.75	1,160.49	43.26	27.828	
5,900.00	5,487.84	5,964.85	5,526.07	26.54	23.09	92.48	104.76	53.32	1,209.60	1,164.98	44.62	27.112	
6,000.00	5,500.54	6,133.49	5,526.51	26.62	24.87	91.23	226.20	-63.65	1,210.43	1,163.37	47.06	25.721	
6,090.40	5,502.67	6,223.87	5,526.74	26.82	26.01	91.14	290.11	-127.56	1,210.39	1,161.38	49.01	24.696	
6,100.00	5,501.25	6,233.49	5,526.77	26.85	26.14	91.21	296.91	-134.36	1,210.42	1,161.19	49.23	24.587	
6,200.00	5,501.57	6,333.49	5,527.03	27.29	27.55	91.21	367.62	-205.07	1,210.42	1,158.69	51.72	23.401	
6,300.00	5,501.89	6,433.49	5,527.29	28.01	29.07	91.20	438.33	-275.78	1,210.42	1,155.92	54.49	22.212	
6,400.00	5,502.20	6,533.49	5,527.55	29.02	30.69	91.20	509.05	-346.49	1,210.41	1,152.91	57.50	21.050	
6,500.00	5,502.52	6,633.49	5,527.81	30.27	32.40	91.20	579.76	-417.20	1,210.41	1,149.70	60.71	19.937	
6,600.00	5,502.84	6,733.49	5,528.07	31.70	34.17	91.19	650.47	-487.90	1,210.41	1,146.32	64.10	18.885	
6,700.00	5,503.16	6,833.49	5,528.33	33.26	36.00	91.19	721.18	-558.61	1,210.41	1,142.79	67.62	17.899	
6,800.00	5,503.47	6,933.49	5,528.59	34.92	37.89	91.19	791.89	-629.32	1,210.41	1,139.13	71.28	16.982	
6,900.00	5,503.79	7,033.49	5,528.85	36.66	39.82	91.19	862.60	-700.03	1,210.41	1,135.37	75.04	16.131	
7,000.00	5,504.11	7,133.49	5,529.11	38.47	41.79	91.18	933.32	-770.74	1,210.41	1,131.52	78.89	15.344	
7,100.00	5,504.42	7,233.49	5,529.37	40.33	43.79	91.18	1,004.03	-841.45	1,210.41	1,127.59	82.81	14.616	
7,200.00	5,504.74	7,333.49	5,529.63	42.24	45.81	91.18	1,074.74	-912.16	1,210.41	1,123.60	86.81	13.943	
7,300.00	5,505.06	7,433.49	5,529.89	44.19	47.87	91.18	1,145.45	-982.87	1,210.41	1,119.54	90.86	13.321	
7,400.00	5,505.37	7,533.49	5,530.15	46.17	49.94	91.17	1,216.16	-1,053.58	1,210.41	1,115.44	94.97	12.745	
7,500.00	5,505.69	7,633.49	5,530.41	48.18	52.04	91.17	1,286.87	-1,124.29	1,210.40	1,111.29	99.12	12.212	
7,600.00	5,506.01	7,733.49	5,530.67	50.22	54.15	91.17	1,357.59	-1,195.00	1,210.40	1,107.10	103.31	11.717	
7,700.00	5,506.32	7,833.49	5,530.93	52.28	56.28	91.16	1,428.30	-1,265.71	1,210.40	1,102.87	107.53	11.257	
7,800.00	5,506.64	7,933.49	5,531.19	54.35	58.42	91.16	1,499.01	-1,336.42	1,210.40	1,098.62	111.78	10.828	
7,900.00	5,506.96	8,033.49	5,531.45	56.45	60.57	91.16	1,569.72	-1,407.13	1,210.40	1,094.34	116.06	10.429	
8,000.00	5,507.27	8,133.49	5,531.71	58.56	62.73	91.16	1,640.43	-1,477.83	1,210.40	1,090.03	120.37	10.056	
8,100.00	5,507.59	8,233.49	5,531.97	60.69	64.91	91.15	1,711.14	-1,548.54	1,210.40	1,085.71	124.69	9.707	
8,200.00	5,507.91	8,333.49	5,532.23	62.83	67.09	91.15	1,781.86	-1,619.25	1,210.40	1,081.36	129.04	9.380	
8,300.00	5,508.22	8,433.49	5,532.49	64.97	69.28	91.15	1,852.57	-1,689.96	1,210.40	1,077.00	133.40	9.073	
8,400.00	5,508.54	8,533.49	5,532.75	67.13	71.47	91.15	1,923.28	-1,760.67	1,210.40	1,072.62	137.78	8.785	
8,500.00	5,508.86	8,633.49	5,533.01	69.30	73.68	91.14	1,993.99	-1,831.38	1,210.40	1,068.22	142.17	8.513	
8,600.00	5,509.18	8,733.49	5,533.27	71.48	75.89	91.14	2,064.70	-1,902.09	1,210.39	1,063.81	146.58	8.257	
8,700.00	5,509.49	8,833.49	5,533.53	73.67	78.10	91.14	2,135.41	-1,972.80	1,210.39	1,059.39	151.00	8.016	
8,800.00	5,509.81	8,933.49	5,533.79	75.86	80.32	91.14	2,206.13	-2,043.51	1,210.39	1,054.96	155.43	7.787	
8,900.00	5,510.13	9,033.49	5,534.05	78.06	82.55	91.13	2,276.84	-2,114.22	1,210.39	1,050.52	159.87	7.571	
9,000.00	5,510.44	9,133.49	5,534.31	80.26	84.78	91.13	2,347.55	-2,184.93	1,210.39	1,046.07	164.32	7.366	
9,100.00	5,510.76	9,233.49	5,534.57	82.47	87.01	91.13	2,418.26	-2,255.64	1,210.39	1,041.61	168.78	7.171	
9,200.00	5,511.08	9,333.49	5,534.83	84.68	89.24	91.12	2,488.97	-2,326.35	1,210.39	1,037.14	173.24	6.987	
9,300.00	5,511.39	9,433.49	5,535.09	86.90	91.48	91.12	2,559.68	-2,397.05	1,210.39	1,032.67	177.72	6.811	
9,400.00	5,511.71	9,533.49	5,535.35	89.13	93.73	91.12	2,630.39	-2,467.76	1,210.39	1,028.19	182.20	6.643	
9,500.00	5,512.03	9,633.49	5,535.61	91.35	95.97	91.12	2,701.11	-2,538.47	1,210.39	1,023.70	186.68	6.484	
9,600.00	5,512.34	9,733.49	5,535.88	93.59	98.22	91.11	2,771.82	-2,609.18	1,210.39	1,019.21	191.18	6.331	
9,700.00	5,512.66	9,833.49	5,536.14	95.82	100.47	91.11	2,842.53	-2,679.89	1,210.38	1,014.71	195.67	6.186	
9,800.00	5,512.98	9,933.49	5,536.40	98.06	102.73	91.11	2,913.24	-2,750.60	1,210.38	1,010.21	200.18	6.047	
9,900.00	5,513.29	10,033.49	5,536.66	100.30	104.98	91.11	2,983.95	-2,821.31	1,210.38	1,005.70	204.68	5.913	
10,000.00	5,513.61	10,133.49	5,536.92	102.54	107.24	91.10	3,054.66	-2,892.02	1,210.38	1,001.19	209.19	5.786	

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



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Haynes Canyon Unit 440H
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 440H	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
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Semi Major Axis Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
10,100.00	5,513.93	10,233.49	5,537.18	104.79	109.50	91.10	3,125.38	-2,962.73	1,210.38	996.67	213.71	5.664	
10,200.00	5,514.24	10,333.49	5,537.44	107.04	111.76	91.10	3,196.09	-3,033.44	1,210.38	992.15	218.23	5.546	
10,300.00	5,514.56	10,433.49	5,537.70	109.29	114.02	91.10	3,266.80	-3,104.15	1,210.38	987.63	222.75	5.434	
10,400.00	5,514.88	10,533.49	5,537.96	111.54	116.29	91.09	3,337.51	-3,174.86	1,210.38	983.10	227.28	5.326	
10,500.00	5,515.19	10,633.49	5,538.22	113.80	118.55	91.09	3,408.22	-3,245.57	1,210.38	978.57	231.81	5.221	
10,600.00	5,515.51	10,733.49	5,538.48	116.05	120.82	91.09	3,478.93	-3,316.27	1,210.38	974.04	236.34	5.121	
10,700.00	5,515.83	10,833.49	5,538.74	118.31	123.09	91.08	3,549.65	-3,386.98	1,210.38	969.50	240.88	5.025	
10,800.00	5,516.15	10,933.49	5,539.00	120.57	125.36	91.08	3,620.36	-3,457.69	1,210.38	964.96	245.41	4.932	
10,900.00	5,516.46	11,033.49	5,539.26	122.83	127.63	91.08	3,691.07	-3,528.40	1,210.37	960.42	249.95	4.842	
11,000.00	5,516.78	11,133.49	5,539.52	125.10	129.91	91.08	3,761.78	-3,599.11	1,210.37	955.88	254.50	4.756	
11,100.00	5,517.10	11,233.49	5,539.78	127.36	132.18	91.07	3,832.49	-3,669.82	1,210.37	951.33	259.04	4.672	
11,200.00	5,517.41	11,333.49	5,540.04	129.63	134.46	91.07	3,903.20	-3,740.53	1,210.37	946.78	263.59	4.592	
11,300.00	5,517.73	11,433.49	5,540.30	131.90	136.73	91.07	3,973.92	-3,811.24	1,210.37	942.23	268.14	4.514	
11,400.00	5,518.05	11,533.49	5,540.56	134.17	139.01	91.07	4,044.63	-3,881.95	1,210.37	937.68	272.69	4.439	
11,500.00	5,518.36	11,633.49	5,540.82	136.44	141.29	91.06	4,115.34	-3,952.66	1,210.37	933.13	277.24	4.366	
11,567.01	5,518.58	11,700.50	5,540.99	137.96	142.81	91.06	4,162.73	-4,000.04	1,210.37	930.07	280.30	4.318	
11,600.00	5,518.68	11,702.91	5,541.00	138.71	142.87	91.06	4,164.43	-4,001.75	1,210.76	930.07	280.69	4.314	
11,700.00	5,519.00	11,702.91	5,541.00	140.98	142.87	91.06	4,164.43	-4,001.75	1,217.39	937.36	280.03	4.347	
11,800.00	5,519.31	11,702.91	5,541.00	143.25	142.87	91.06	4,164.43	-4,001.75	1,232.13	955.04	277.09	4.447	
11,900.00	5,519.63	11,702.91	5,541.00	145.53	142.87	91.06	4,164.43	-4,001.75	1,254.70	982.55	272.15	4.610	
12,000.00	5,519.95	11,702.91	5,541.00	147.80	142.87	91.06	4,164.43	-4,001.75	1,284.67	1,019.10	265.57	4.837	
12,100.00	5,520.26	11,702.91	5,541.00	150.08	142.87	91.06	4,164.43	-4,001.75	1,321.55	1,063.75	257.80	5.126	
12,200.00	5,520.58	11,702.91	5,541.00	152.36	142.87	91.06	4,164.43	-4,001.75	1,364.77	1,115.54	249.23	5.476	
12,300.00	5,520.90	11,702.91	5,541.00	154.63	142.87	91.06	4,164.43	-4,001.75	1,413.76	1,173.52	240.24	5.885	
12,332.39	5,521.00	11,702.91	5,541.00	155.37	142.87	91.06	4,164.43	-4,001.75	1,430.77	1,193.47	237.29	6.030	

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



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Haynes Canyon Unit 440H
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 440H	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: Section 06-T23N-R06W - NE Lybrook Com 262 H - Original Hole - rev3													Offset Site Error: 0.00 ft
Survey Program: 0-MWD													Offset Well Error: 0.00 ft
Measured Depth (ft)	Vertical Depth (ft)	Measured Depth (ft)	Vertical Depth (ft)	Semi Major Axis Reference (ft)	Offset (ft)	Highside Toolface (°)	Offset Wellbore Centre +N/-S (ft)	+E/-W (ft)	Distance Between Centres (ft)	Between Ellipses (ft)	Minimum Separation (ft)	Separation Factor	Warning
11,300.00	5,517.73	16,601.26	5,770.00	131.90	273.54	-74.81	4,026.89	-5,727.35	1,396.62	1,202.58	194.04	7.198	
11,400.00	5,518.05	16,601.26	5,770.00	134.17	273.54	-74.81	4,026.89	-5,727.35	1,296.96	1,104.27	192.69	6.731	
11,500.00	5,518.36	16,601.26	5,770.00	136.44	273.54	-74.81	4,026.89	-5,727.35	1,197.36	1,006.15	191.21	6.262	
11,600.00	5,518.68	16,601.26	5,770.00	138.71	273.54	-74.81	4,026.89	-5,727.35	1,097.83	908.27	189.56	5.791	
11,700.00	5,519.00	16,601.26	5,770.00	140.98	273.54	-74.81	4,026.89	-5,727.35	998.40	810.70	187.70	5.319	
11,800.00	5,519.31	16,601.26	5,770.00	143.25	273.54	-74.81	4,026.89	-5,727.35	899.09	713.55	185.54	4.846	
11,900.00	5,519.63	16,601.26	5,770.00	145.53	273.54	-74.81	4,026.89	-5,727.35	799.95	616.97	182.98	4.372	
12,000.00	5,519.95	16,601.26	5,770.00	147.80	273.54	-74.81	4,026.89	-5,727.35	701.06	521.22	179.84	3.898	
12,100.00	5,520.26	16,601.26	5,770.00	150.08	273.54	-74.81	4,026.89	-5,727.35	602.53	426.76	175.77	3.428	
12,200.00	5,520.58	16,601.26	5,770.00	152.36	273.54	-74.81	4,026.89	-5,727.35	504.59	334.47	170.12	2.966	
12,300.00	5,520.90	16,601.26	5,770.00	154.63	273.54	-74.81	4,026.89	-5,727.35	407.64	245.93	161.72	2.521	
12,332.39	5,521.00	16,601.26	5,770.00	155.37	273.54	-74.81	4,026.89	-5,727.35	376.59	218.38	158.21	2.380 CC, ES, SF	

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



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Haynes Canyon Unit 440H
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 440H	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

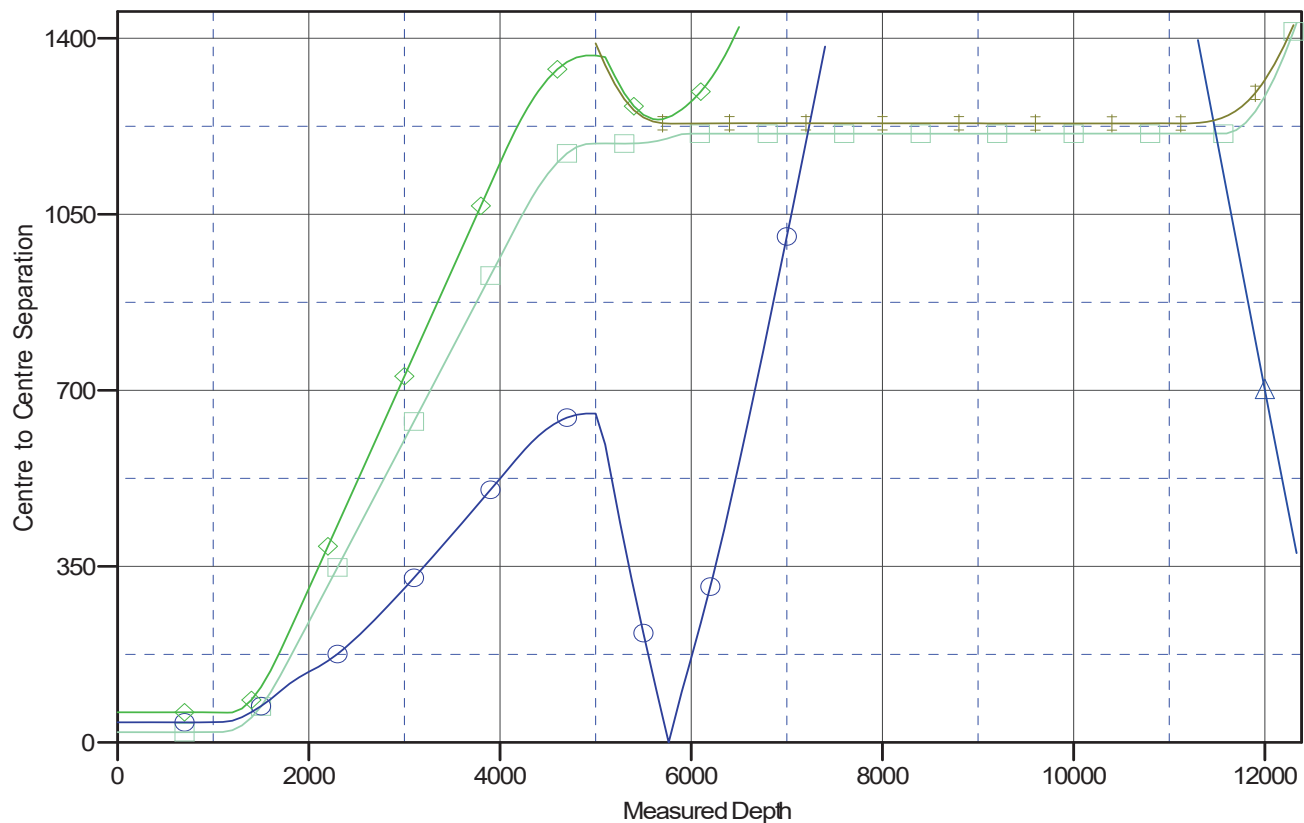
Central Meridian is -106.25000000

Coordinates are relative to: Haynes Canyon Unit 440H

Coordinate System is US State Plane 1983, New Mexico Central Zone

Grid Convergence at Surface is: -0.72°

Ladder Plot



LEGEND



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



Anticollision Report

Company:	Enduring Resources LLC	Local Co-ordinate Reference:	Well Haynes Canyon Unit 440H
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 440H	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

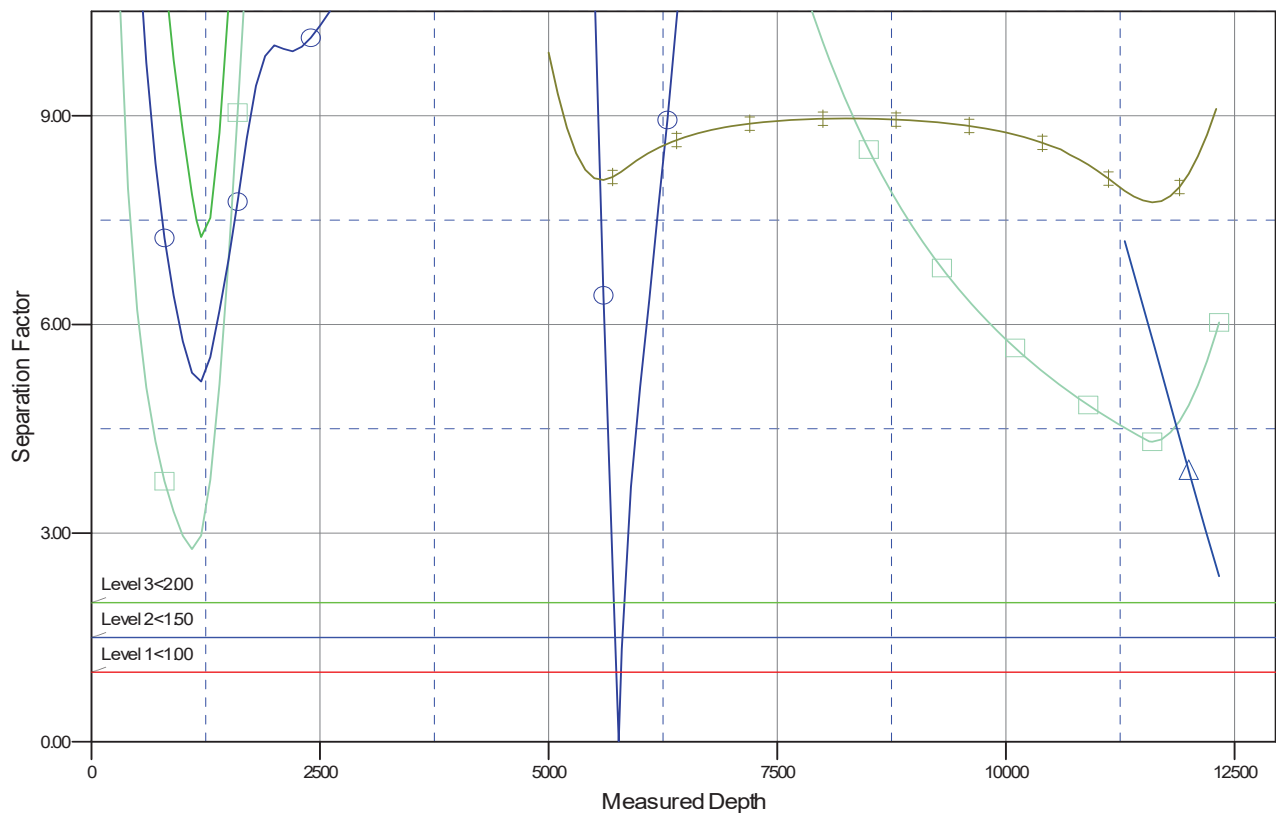
Central Meridian is -106.25000000

Coordinates are relative to: Haynes Canyon Unit 440H

Coordinate System is US State Plane 1983, New Mexico Central Zone

Grid Convergence at Surface is: -0.72°

Separation Factor Plot



LEGEND



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

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 314341

CONDITIONS

Operator: ENDURING RESOURCES, LLC 6300 S Syracuse Way, Suite 525 Centennial, CO 80111	OGRID: 372286
	Action Number: 314341
	Action Type: [C-103] NOI Change of Plans (C-103A)

CONDITIONS

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