

Well Name: NORTH ALAMITO UNIT	Well Location: T23N / R7W / SEC 19 / NENE / 36.217323 / -107.610489	County or Parish/State: SANDOVAL / NM
Well Number: 106H	Type of Well: OIL WELL	Allottee or Tribe Name:
Lease Number: NMNM81638	Unit or CA Name: /1/NORTH ALAMITO UNIT	Unit or CA Number: NMNM135229A
US Well Number: 3004321508	Operator: DJR OPERATING LLC	

Notice of Intent

Sundry ID: 2791499

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

Date Sundry Submitted: 05/20/2024 Time Sundry Submitted: 02:27

Date proposed operation will begin: 05/20/2024

Procedure Description: DJR respectfully requests approval to change the casing and cement design for the subject well. Attached please find a revised Drilling and Directional Plan; reflecting changes to the lateral length, intermediate/production liner casing size, set depth and cement slurry assumptions. Please note, effective December 21, 2023, Enduring Resources, LLC & DJR Operating, LLC are wholly owned subsidiaries of Enduring Resources, LLC. Leases, rights of way, wells, and other property interests will continue to be held in their current entity names.

NOI Attachments

- Procedure Description
- C102_NAU_106H_20240520142712.pdf
 - North_Alamito_Unit_106H_Drilling_Package_Rev2_20240520142712.pdf

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Operator: DJR OPERATING LLC

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: MAY 20, 2024 02:27 PM

Name: DJR OPERATING LLC

Title: Regulatory Specialist

Street Address: 1 ROAD 3263

City: AZTEC

State: NM

Phone: (505) 632-3476

Email address: SFORD@ENDURINGRESOURCES.COM

Field

Representative Name:

Street Address:

City:

State:

Zip:

Phone:

Email address:

BLM Point of Contact

BLM POC Name: KENNETH G RENNICK

BLM POC Title: Petroleum Engineer

BLM POC Phone: 5055647742

BLM POC Email Address: krennick@blm.gov

Disposition: Approved

Disposition Date: 05/21/2024

Signature: Kenneth Rennick

DISTRICT I1625 N. French Dr., Hobbs, N.M. 88240
Phone: (575) 393-6161 Fax: (575) 393-0720**DISTRICT II**811 S. First St., Artesia, N.M. 88210
Phone: (575) 748-1283 Fax: (575) 748-9720**DISTRICT III**1000 Rio Brazos Rd., Aztec, N.M. 87410
Phone: (505) 334-6178 Fax: (505) 334-6170**DISTRICT IV**1220 S. St. Francis Dr., Santa Fe, NM 87505
Phone: (505) 476-3460 Fax: (505) 476-3462State of New Mexico
Energy, Minerals & Natural Resources DepartmentForm C-102
Revised August 1, 2011Submit one copy to appropriate
District OfficeOIL CONSERVATION DIVISION
1220 South St. Francis Dr.
Santa Fe, NM 87505☐ AMENDED REPORT

WELL LOCATION AND ACREAGE DEDICATION PLAT

¹ API Number 30-043-21508	² Pool Code 98174	³ Pool Name NORTH ALAMITO UNIT MANCOS OIL POOL
⁴ Property Code 325267	⁵ Property Name NORTH ALAMITO UNIT	⁶ Well Number 106H
⁷ GRID No 371838	⁸ Operator Name DJR OPERATING, LLC	⁹ Elevation 6962'

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
A	19	23N	7W		897'	NORTH	1158'	EAST	SANDOVAL

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
K	28	23N	7W		1653'	SOUTH	1425'	WEST	SANDOVAL

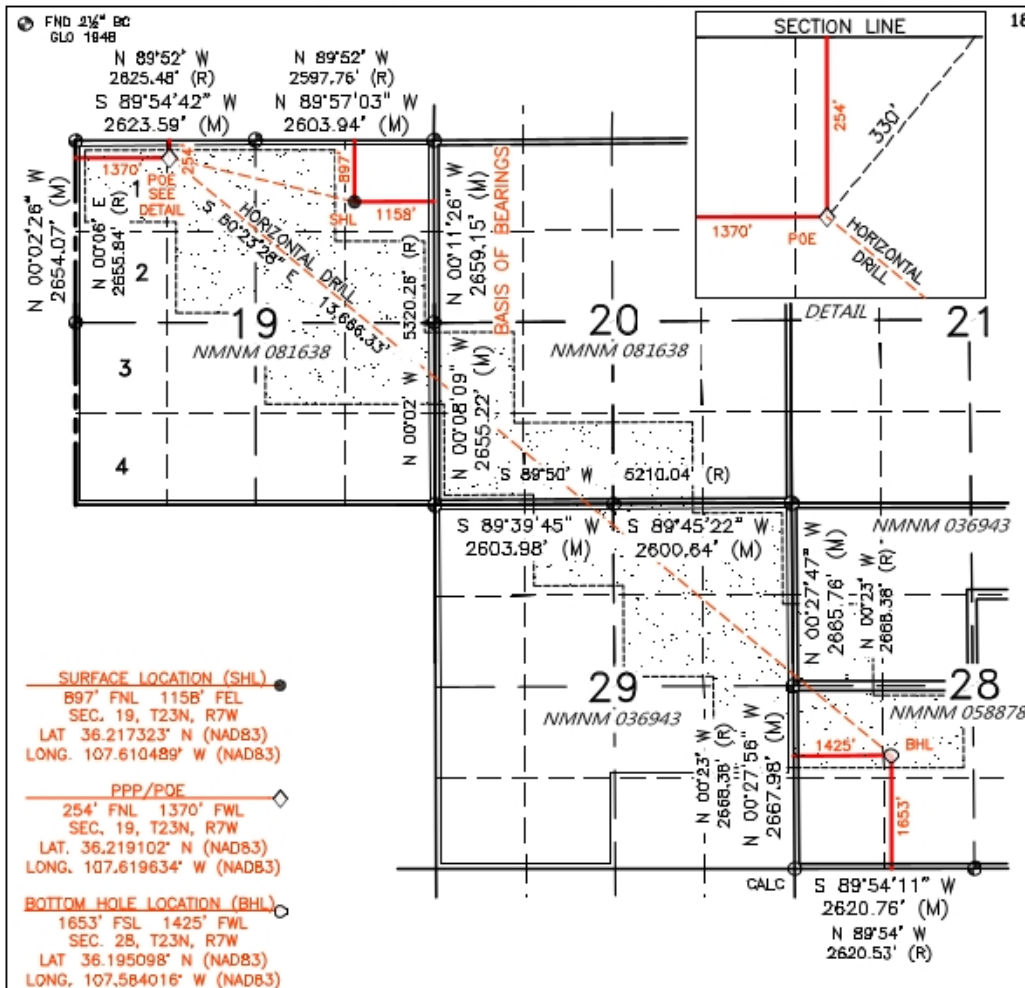
¹² Dedicated Acres PENETRATED SPACING UNIT:
SEC 19: LOT 1, NE/4, SE/4, NW/4, SW/4, SE/4, NW/4, SE/4 & NE/4 (320.82 AC.); SEC 20: NW/4, SW/4, SE/4, SW/4 & SW/4 (180 AC.); SEC 28: NE/4, NE/4 & NE/4 (240 AC.); SEC 28: SW/4, NW/4 & NE/4 (120 AC.) = 840.82 ACRES

¹³ Joint or Infill¹⁴ Consolidation Code¹⁵ Order No.

R-14081, R-14081A

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

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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 undivided 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 2/12/24
Signature Date

Shaw-Marie Ford
Printed Name
sford@djrlc.com

E-mail Address

SURVEYOR CERTIFICATION

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

AUGUST 11, 2020

Date of Survey

Signature and Seal of Professional Surveyor:



Certificate Number

11393



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

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

WELL INFORMATION:

Name: NORTH ALAMITO UNIT 106H

API Number: 30-043-21508

AFE Number: DV03212

ER Well Number: Not yet assigned

State: New Mexico

County: Sandoval

Surface Elevation: 6,962 ft ASL (GL) 6,986 ft ASL (KB)

Surface Location: 19-23N-07W Sec-Twn-Rng 897 ft FNL 1,158 ft FEL

36.217323 ° N latitude 107.610489 ° W longitude (NAD 83)

BH Location: 28-23N-07W Sec-Twn-Rng 1,653 ft FNL 1,425 ft FEL

36.195098 ° N latitude 107.584016 ° W longitude (NAD 83)

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

South on US Hwy 550 for 39.0 miles to MM 112.7, Right (South) on CR #7900 / IR #7061 for 5.1 miles to Y (just passed 4-way), Left (East) leaving CR #7900 for 4.0 miles to lease road; Left (NorthEast) for 1.8 miles to new access; Right (North) for 1.5 miles to NAU A19-2307 pad entrance on left (from South to North): N Alamito 102H, 106H wells).

GEOLOGIC AND RESERVOIR INFORMATION:

Prognosis:	Formation Tops	TVD (ft ASL)	TVD (ft KB)	MD (ft KB)	O / G / W	Pressure
	Ojo Alamo	5,915	1,071	1,080	W	normal
	Kirtland	5,800	1,186	1,202	W	normal
	Fruitland	5,630	1,356	1,388	G, W	sub
	Pictured Cliffs	5,294	1,692	1,774	G, W	sub
	Lewis	5,139	1,847	1,954	G, W	normal
	Chacra	4,889	2,097	2,243	G, W	normal
	Cliff House	3,802	3,184	3,500	G, W	sub
	Menefee	3,761	3,225	3,546	G, W	normal
	Point Lookout	2,930	4,056	4,507	G, W	normal
	Mancos	2,720	4,266	4,750	O,G	sub (~0.38)
	Gallup (MNCS_A)	2,381	4,605	5,130	O,G	sub (~0.38)
	MNCS_B	2,281	4,705	5,233	O,G	sub (~0.38)
	MNCS_C	2,194	4,792	5,321	O,G	sub (~0.38)
	MNCS_Cms	2,149	4,837	5,367	O,G	sub (~0.38)
	MNCS_D	2,024	4,962	5,500	O,G	sub (~0.38)
	MNCS_E	1,913	5,073	5,632	O,G	sub (~0.38)
	MNCS_F	1,859	5,127	5,702	O,G	sub (~0.38)
	MNCS_G	1,785	5,201	5,816	O,G	sub (~0.38)
	MNCS_H	1,725	5,261	5,940	O,G	sub (~0.38)
	MNCS_I	1,701	5,285	6,018	O,G	sub (~0.38)
	FTP TARGET	1,717	5,269	5,964	O,G	sub (~0.38)
	PROJECTED TD	1,721	5,265	18,437	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: 2,270 psi

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

Temperature: Maximum anticipated BHT is 125° F or less

H₂S INFORMATION:

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

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

LOGGING, CORING, AND TESTING:

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

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

Open Hole Logs: None planned

Testing: None planned

Coring: None planned

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

DRILLING RIG INFORMATION:

Contractor: Ensign

Rig No.: 140

Draw Works: Pacific Rim 1500AC (1,500 hp)

Mast: Process MFG Corp Swing Up Triple (136 ft, 750,000 lbs)

Top Drive: Tesco 400-EXI-600 (400 ton)

Prime Movers: 3 - CAT 3512C (1,350 hp)

Pumps: 2 - Gardner Denver PZ-11 (7,500 psi)

BOPE 1: T3 Annular & Shaffer double gate ram (11", 5,000 psi)

BOPE 2: T3 annular(11", 5,000 psi)

Choke 3", 5,000 psi

KB-GL (ft): 23.5

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

STATE AND FEDERAL NOTIFICATIONS

BLM

State

Construction and BLM is to be notified minimum of 48 hours prior to start of construction or reclamation.

Reclamation: Grazing permittee is to be notified 10 days in advance.

(505) 564-7600

Spud BLM and state are to be notified minimum of 24 hours prior to spud.

(505) 564-7750

(505) 334-6178

BOP BLM is to be notified minimum of 24 hours prior to BOPE testing.

(505) 564-7750

see note

Casing / cementing BLM and state are to be notified minimum of 24 hours prior to running casing and cementing.

(505) 564-7750

(505) 334-6178

Plugging BLM and state are to be notified minimum of 24 hours prior to plugging ops.

(505) 564-7750

see note

All notifications are to be recorded in the WellView report with time, date, name or number that notifications were made to.

Note: Monica Keuhling with the OCD requests state notifications 24 hrs in advance for spud, BOP tests, casing & cementing and any plugging be given to her in both phone message and email: (505) 320-0243, monica.keuhling@emnrd.nm.gov

BOPE REQUIREMENTS:

See attached diagram for details regarding BOPE specifications and configuration.

- 1) Rig will be equipped with upper and lower kelly cocks with handles available.
- 2) Inside BOP and TIW valves will be available to use on all sizes and threads of drill pipe used while drilling the well.
- 2) BOP accumulator will have enough capacity to open the HCR valve, close all rams and annular preventer, and retain minimum of 200 psi above precharge on the closing manifold without the use of closing pumps. The fluid reservoir capacity shall be at least double the usable fluid volume of the accumulator system capacity, and the fluid level shall be maintained at manufacturer's recommendation. There will be two additional sources of power for the closing pumps (electric and air). Sufficient nitrogen bottles will be available and will be recharged when pressure falls below manufacturer's recommended minimum.

- 3) BOP testing shall be conducted (a) when initially installed, (b) whenever any seal is broken or repaired, (c) if the time since the previous test exceeds 30 days. Tests will be conducted using a test plug. BOP ram preventers will be tested to 3,000 psig for 10 minutes, and the annular preventer will be tested to 1,500 psi for 10 minutes. Ram and annular preventers will be tested to 250 psi for 5 minutes. Additionally, BOP and casing strings will be tested to .22 psi/ft or 1,500 psi, whichever is greater but not exceeding 70% of yield strength of the casing, for 30 minutes, prior to drilling out 13-3/8" and 9-5/8" casing. Rams and hydraulically operated remote choke line valve will be function tested daily at a minimum.
- 4) Remote valve for BOP rams, HCR, and choke shall be placed in a location that is readily available to the driller. The remote BOP valve shall be capable of closing and opening the rams.
- 5) Manual locking devices (hand wheels) shall be intalled on rams. A valve will be installed on the annular preventer's closing line as close as possible to the preventer to act as a locking device. The valve will be maintained in the open position and shall only be closed when there is no power to the accumulator.

FLUIDS AND SOLIDS CONTROL PROGRAM:

Fluid Measurement:

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

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

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

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

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

DETAILED DRILLING PLAN:

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

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

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

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

Hole Size: 12-1/4"

Bit / Motor: Mill Tooth or PDC, no motor

MWD / Survey: No MWD, deviation survey

Logging: None

Procedure: Drill to TD. After reaching TD, run gyro survey in 100' stations from TD to surface. Wiper trip. Condition hole and fluid for casing running. TOH. Run casing. Pump cement as detailed below. Monitor returns during cement job and note cement volume to surface. Install cellar and wellhead.

Cement Volume to Surface: Install Seal and Weirhead:									
Casing Specs:		Wt (lb/ft)	Grade	Conn.	Collapse (psi)	Burst (psi)	Tens. Body (lbs)	Tens. Conn (lbs)	
	Specs	9.625	36.0	K-55	STC	2,020	3,520	564,000	423,000
	Loading					153	1,132	110,988	110,988
	Min. S.F.					13.21	3.11	5.08	3.81

Assumptions: Collapse: fully evacuated casing with 8.4 ppg equivalent external pressure gradient
 Burst: maximum anticipated surface pressure with 9.5 ppg fluid inside casing while drilling intermediate hole and 8.4 ppg equivalent external pressure gradient
 Tension: buoyed weight in 8.4 ppg fluid with 100,000 lbs over-pull

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

Casing Summary: Float shoe, 1 jt casing, float collar, casing to surface

Centralizers: 2 centralizers per jt stop-banded 10' from each collar on bottom 3 jts, 1 centralizer per 2 jts to surface

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

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

Csg ID 8.921

Mesa Ready Mix or first available

Shoe Track L 44

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

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

350 ft (MD)	to	6,064 ft (MD)	Hole Section Length:	5,714 ft
350 ft (TVD)	to	5,295 ft (TVD)	Casing Required:	6,064 ft

Fluid:	Type	MW (ppg)	FL (mL/30 min)	PV (cp)	YP (lb/100 sqft)	pH	Comments
	LSND (KCI)	8.8 - 9.2	15	8 - 14	6 - 12	10.8 - 11.2	No OBM

Procedure: Mud system is to have a 7% KCI base and 3% blown asphalt type product added for additional hole stability. Bulk KCI is to be used. When mixing mud, all safety equipment is to be used including face shields. Fluid loss control should be moderate and in the 15 ml range. Control GPM (350 to 400 if possible) from BSC to ±2,000' MD in order to minimize washout in the less consolidated surface formations.

Hole Size: 8.75

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

Bit / Motor: MOTOR: NOV 087840 - 7/8, 4.0, stage, 0.16 rev/gal, 1.83 DEG, 600 GPM, 950 DIFF PSIG

BIT: 5-BLADE PDC w/16 mm or 19 mm cutters, TFA = 1.2 sq-in (range 1.00 - 1.50 max), jet with 5 - 18's

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

Logging: None

Pressure Test: NU BOPE and test (as noted above); pressure test 13-3/8" casing to 1,500 psi for 30 minutes.

Procedure: Drill to TD following directional plan (20' rat-hole past casing setting depth). Steer as needed to keep well on plan. Keep DLS < 3 deg/100' and keep slide length < 10', when possible during back build and hold section. Build is planned at 10°/100' and landing is to be at ±80° inclination. Take surveys every stand, at a minimum. Target flow-rates of 400 to 600 GPM after 2,000' MD. Minimum desired flow-rate is 450 GPM. At TD, condition hole and fluid for casing running but keep to a minimum due to uphole instability problems that are possible. Confirm landing target, planned BUR for curve, and KOP with Geology and Engineering. Drill curve following directional plan and updated landing target. Take survey every joint during curve. Land curve. TOOH. Run casing using a CRT and washing / circulating as required. Land casing. ND BOPE. Walk rig to next well. Perform off-line cement job if possible. Pump cement as detailed below. Monitor returns during cement job and note cement volume to surface.

Casing Specs:		Wt (lb/ft)	Grade	Conn.	Collapse (psi)	Burst (psi)	Tens. Body (lbs)	Tens. Conn (lbs)
Specs	7	26.0	K-55	LTC	4,320	4,980	415,000	367,000
Loading					2,313	1,423	237,491	237,491
Min. S.F.					1.87	3.50	1.75	1.55

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

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

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

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

Casing Summary: Float shoe, 1 jt casing, float collar, casing to surface (**FLOAT EQUIPMENT FROM WEATHERFORD**) (all casing must be drifted as OD of liner hanger system is 5.818")

Centralizers: 1 per joint in non-vertical hole; 1 per 2-joints in vertical hole

Centralizers: 1 centralizers jt stop-banded 10' from float shoe on bottom 1 jt & 1 centralizer floating on bottom joint, 1 centralizer per jt (floating) to KOP ; 1 centralizer per 3 jts to surface (**Centralizers from Scepter Supply - SLIP'N'SLIDE 9-5/8" x 12" SOLID BODY POLYMER**)

Cement:	Type	Weight (ppg)	Yield (cuft/sk)	Water (gal/sk)	% Excess	Planned TOC (ft MD)	Total Cmt (sx)	Total Cmt (cu ft)
Lead	III:POZ Blend	12.5	2.140	12.05	70%	0	541	1,157
Tail	Type III	14.6	1.380	6.64	20%	4,650	192	265
Annular Capacity	0.16681	cuft/ft	7" casing x 9-5/8" casing annulus				Shoe Track L	44
	0.1503	cuft/ft	9-5/8" casing x 12-1/4" hole annulus				Casing ID	6.276
	0.2148	cuft/ft	7" casing casing volume					

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

Drake Intermediate Cementing Program

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

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

6,064 ft (MD)	to	18,437 ft (MD)	Hole Section Length:	12,373 ft
5,295 ft (TVD)	to	5,265 ft (TVD)	Casing Required:	12,523 ft
Estimated KOP:		4,961 ft (MD)	4,448 ft (TVD)	
Estimated Liner Top:		5,914 ft (MD)	5,250 ft (TVD)	
Estimated Landing Point (FTP):		5,964 ft (MD)	5,269 ft (TVD)	
Estimated Lateral Length:		12,473 ft (MD)		

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

Fluids / Solids Notes: Drilling fluid will be production water and Newpark lubricant NDFT 487 (1.5 to 2% by retort). Corrosion inhibitor is to be used. As a contingency only: Newpark OptiDrill OBM system. Ensure that drying shakers are rigged up after the rig (2nd set) of shakers. Solids control will burn retorts on cuttings samples one per tour to check % ROC. Add diesel and products as required to maintain mud in program specs. Reference Newpark's mud program for additional details. No asphalt products are to be added to the OBM system. **Any changes to the mud systems are to be discussed with engineering prior to application.**

Hole Size: 6.125

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

Bit / Motor (Detail): MOTOR: NOV 500ERT6764 - 6/7, 6.4, stage, 0.79 rev/gal, 1.83 DEG, 250-400 GPM, 1,710 DIFF PSIG (or similar); on demand friction breaking device(s) as required, bottom tool spaced ~3,000' behind the bit.

BIT: 5-BLADE Long Guage PDC w/13 mm - 16 mm cutters, matrix body, target TFA = 1.0 - 1.5 sq-in

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

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

Pressure Test: NU BOPE and test (as noted above); pressure test 9-5/8" casing to 1,500 psi for 30 minutes.

Procedure: Target flow-rate is 250 - 400 GPM. Target differential is pressure is 700 - 1,000 psig. Target ROP 300 - 600 ft/hr. Steer as needed to keep well on plan. Keep DLS < 1 deg/100' and keep slide length < 10', when feasible. Take surveys every stand, at a minimum. After reaching TD, perform clean-up cycle to condition hole for casing running. Spot lube as needed and TOO (ROOH, if required; should NOT be required with OBM system). Run liner as described below. Verify make up torque when running casing. Space out liner getting the toe sleeve as close to LTP as possible while maintaining $\pm 150'$ of liner lap. Follow liner setting procedure. Circulate as required. Perform cement job. Pump cement as detailed below. Note cement volume circulated to surface.

Liner/Casing Specs:	Size (in)	Wt (lb/ft)	Grade	Conn.	Collapse (psi)	Burst (psi)	Tens. Body (lbs)	Tens. Conn (lbs)
Specs	4.500	11.6	P-110	BTC	7,560	10,690	367,000	385,000
Loading					2,601	8,801	284,550	284,550
Min. S.F.					2.91	1.21	1.29	1.35

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

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

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

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

Liner Summary: Float shoe, 1 jt casing, double float -float collar (Weatherford float equipment), landing collar, 1 joint csg, toe-initiation sleeve (**Weatherford (WFT) RD 8,500 psi**), casing to shoe of 7" and overlap to liner top at 65° inclination or 150' MD from base of intermediate casing to top of liner hanger / packer / liner tie back sleeve per plan with 20' marker joints spaced evenly in lateral every ~2,000'. Run liner dry, do not use a floatation sub but have one on location as a back up (**NCS Air-Lock 2,500 psi from WFT**), drill pipe to surface. The toe-initiation sleeve shall be placed no closer to the unit boundary than 330' measured perpendicular to the East or West lease lines for a East-West azimuth drilled wellbore. Wellbore path must be no closer than 330' from the parallel lease lines. **Note: the LTP is the maximum depth of the toe sleeve and is noted on the Well Plan. Drill past the LTP as required for necessary rat-hole and shoe-track length to place the toe sleeve as close to (but not past) the planned LTP as possible.**

Liner Procedure Prior to TD, record pump rate and pressure, torque and RPM, PU, SO and static weights with and w/o pumps. Plan TD and liner tally to ensure liner hanger is not placed across any 7" casing connection. Rabbit drill pipe on last trip and ensure recovery of drift. Run liner as above, PU last joint and record PU/SO weights. PU hanger assembly and install liner wiper plug system. MU joint of DP and circulate liner volume. TIH to set depth. Break circ slowly, C&C. On depth drop setting ball, pump <2 bpm. With ball on seat, increase pressure to 20% higher than pinned press, hold 3 minutes. Slack off to check liner hanger has been set. If not set, increase pressure 200 psi and repeat process. Once set, slack off liner weight plus 5 k#'s. Rotate 20 rounds to right to release from hanger. PU no more than 3' to ensure liner release. Slack off 20 k#'s. Increase pump pressure to $\pm 2,500$ psi to shear ball and regain circulation. Record pressures. Increase SO weight to 40 k#'s for cement job. Pump cement, launch DP wiper plug, engage with liner wiper plug and record shear pressure. Bump plug, RD cement head. PU DP to expose liner packer dogs above PBR. Lower DP, mark DP when dogs are on PBR. Slack off to shear packer pins and energize packing element and slips. Pull PBR packoff out of PBR while slowly engaging pumps to ensure cement does not fall into PBR. Clear PBR, pump ± 10 bbls to clear cement, pressure test hanger seals to 2,000 psi. Release, check for flow and circulate BU and record cement volume to surface.

Centralizers: Centralizer count and placement may be adjusted based on well conditions and as-drilled surveys.

Lateral: 1 centralizer per 3 joints (purchase centralizers from Scepter Supply)

90° inclination to liner hanger: 1 centralizer per joint

Cement:	Type	Weight (ppg)	Yield (cuft/sk)	Water (gal/sk)	% Excess	Planned TOC (ft MD)	Total Cmt (sx)	Total Cmt (cu ft)
Spacer	IntegraGuard Star	11		31.6		0	60 bbls	
Tail	G:POZ blend	13.3	1.560	7.70	30%	5,914	1,014	1,582
Displacement	253	est bbls						

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

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

American Cementing Liner & Production Blend

	S-8 Silica Flour	Avis 616 viscosifier	FP24 Defoamer .5	IntegraGuard Star Plus 3K LCM 15	SS201 Surfactant 1		
Spacer	163.7 lbs/bbl	11.6 lb/bbl	lb/bbl	lb/bbl	gal/bbl		
			Bentonite		IntegraGuard	FP24 Defoamer	
	BA90 Bonding	Viscosifier 8%	FL24 Fluid Loss .5%	GW86 Viscosifier	R7C Retarder .2%	0.3% BWOB, Anti-	
Lead	ASTM Type I/II	Agent 5.0 lb/sx	BWOB	.1% BWOB	BWOB	Static .01 lb/sx	
			Bentonite		IntegraGuard		FP24 Defoamer
	Pozzolan Fly Ash	BA90 Bonding	Viscosifier 4%	FL24 Fluid Loss .4%	GW86 Viscosifier	R3 Retarder .5%	.3% BWOB,
Tail	Type G 50%	Extender 50%	Agent 3.0 lb/sx	BWOB	.1% BWOB	BWOB	IntegraSeal 0.25
							lb/sx

LCM will be added to spacer. LCM may be added lead slurry and tail slurry depending on drilling observations and observations during cementing on initial wells on pad.

Notify NMOCD & BLM if cement is not circulated to surface.

Note: This well will not be considered an unorthodox well location as defined by NMAC 19.15.16.15.C.5. As defined in NMAC 19.15.16.15.C.1.a and 19.15.16.15.C.1.b, no point in the completed interval shall be closer to the unit boundary than 100' measured along the azimuth of the well or 330' measured perpendicular to the azimuth well. The boundaries of the completed interval, as defined by NMAC 19.15.16.7.B, are the last take point and first take point, as defined by NMAC 19.15.16.7.E and NMAC 19.15.16.7.J, respectively. In the case of this well, the last take point will be the bottom toe-initiation sleeve, and the first take point will be the top perforation. **Neither the toe-initiation sleeve nor the top perforation shall be closer to the unit boundary than 100' measured along the azimuth of the well or 330' measured perpendicular to the azimuth of the well.**

FINISH WELL: ND BOP, cap well, RDMO.

Procedure: After off-line cement job, cap and cover well. Continue drilling operations on subsequent wells on pad.

COMPLETION AND PRODUCTION PLAN:

Est Lateral Length: 12,373

Est Frac Inform: 52 Frac Stages 198,000 bbls slick water 16,090,000 lbs proppant

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

Flowback: Flow back through production tubing as pressures allow

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

ESTIMATED START DATES:

Drilling: 2/16/2024

Completion: 4/16/2024

Production: 5/31/2024

Prepared by: Greg Olson 1/25/2024

Updated: 4/18/2024

WELL NAME: NORTH ALAMITO UNIT 106H

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

API Number: 30-043-21508

AFE Number: DV03212

ER Well Number: Not yet assigned

State: New Mexico

County: Sandoval

Surface Elev.: 6,962 ft ASL (GL) 6,986 ft ASL (KB)

Surface Location: 19-23N-07W Sec-Twn- Rng 897 ft FNL 1,158 ft FEL

BH Location: 28-23N-07W Sec-Twn- Rng 1653 ft FNL 1425 ft FEL

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

South on US Hwy 550 for 39.0 miles to MM 112.7, Right (South) on CR #7900 / IR #7061 for 5.1 miles to Y (just passed 4-way), Left (East) leaving CR #7900 for 4.0 miles to lease road; Left (NorthEast) for 1.8 miles to new access; Right (North) for 1.5 miles to NAU A19-2307 pad entrance on left (from South to North): N Alamito 102H, 106H wells).

QUICK REFERENCE	
Sur TD (MD)	350 ft
Int TD (MD)	6,064 ft
KOP (MD)	4,961 ft
KOP (TVD)	4,448 ft
Target (TVD)	5,269 ft
Curve BUR	10 °/100 ft
POE (MD)	5,964 ft
TD (MD)	18,437 ft
Lat Len (ft)	12,473 ft

Tops	TVD (ft KB)	MD (ft KB)
Ojo Alamo	1,071	1,080
Kirtland	1,186	1,202
Fruitland	1,356	1,388
Pictured Cliffs	1,692	1,774
Lewis	1,847	1,954
Chacra	2,097	2,243
Cliff House	3,184	3,500
Menefee	3,225	3,546
Point Lookout	4,056	4,507
Mancos	4,266	4,750
Gallup (MNCS_A)	4,605	5,130
MNCS_B	4,705	5,233
MNCS_C	4,792	5,321
MNCS_Cms	4,837	5,367
MNCS_D	4,962	5,500
MNCS_E	5,073	5,632
MNCS_F	5,127	5,702
MNCS_G	5,201	5,816
MNCS_H	5,261	5,940
MNCS_I	5,285	6,018
FTP TARGET	5,269	5,964
PROJECTED TD	5,265	18,437

WELL CONSTRUCTION SUMMARY:

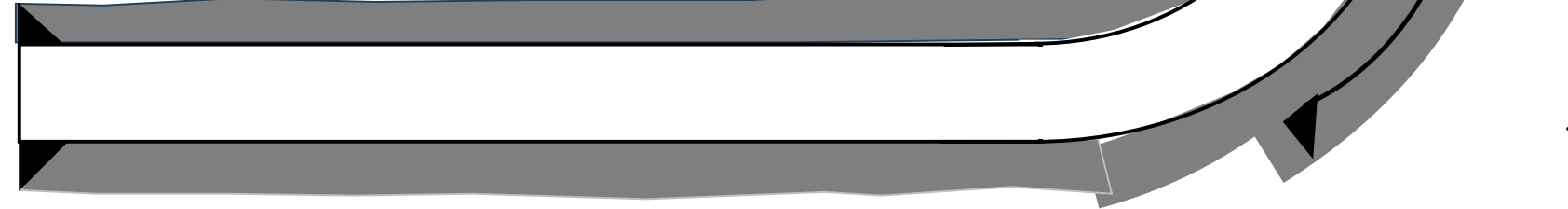
	Hole (in)	TD MD (ft)	Csg (in)	Csg (lb/ft)	Csg (grade)	Csg (conn)	Csg Top (ft)	Csg Bot (ft)
Surface	12.250	350	9.625	36	K-55	STC	0	350
Intermediate	8.750	6,064	7	26.0	K-55	LTC	0	6,064
Production	6.125	18,437	4.500	11.6	P-110	BTC	5,914	18,437

CEMENT PROPERTIES SUMMARY:

	Type	Wt (ppg)	Yd (cuft/sk)	Wtr (gal/sk)	Hole Cap. (cuft/ft)	% Excess	TOC (ft MD)	Total (sx)
Surface	TYPE I-II	14.5	1.61	7.41	0.3132	50%	0	114
Inter. (Lead)	III:POZ Blend	12.5	2.14	12.05	0.1668	70%	0	541
Inter. (Tail)	Type III	14.6	1.38	6.64	0.1503	20%	4,650	192
Prod. (Lead)	0	0	0.000	0	0.1044	0%	0	0
Prod. (Tail)	G:POZ blend	13.3	1.560	7.7	0.0873	30%	5,914	1,014

COMPLETION / PRODUCTION SUMMARY:

Frac: 39 plug-and-perf stages with 150,000 bbls slickwater fluid and 12,100,000 lbs of proppant (estimated)
Flowback: Flow back through production tubing as pressures allow
Production: Produce through production tubing via gas-lift into permanent production and storage facilities





Well: North Alamito Unit 106 H
Site: North Alamito Unit (102 & 106)
Project: Sandoval County, New Mexico NAD83 NM C
Design: rev3
Rig: Ensign 140

DESIGN TARGET DETAILS

name	TVD	+N/-S	+E/-W	Northing	Easting	Latitude	Longitude
North Alamito 106 BHL 1653 FSL 1425 FWL	5264.50	-8199.42	7698.09	1892987.79	1246801.46	36.19509800	-107.58401600
North Alamito 106 POE 254 FNL 1370 FWL	5317.50	685.62	-2688.58	1901872.81	1236414.81	36.21910200	-107.61963400
North Alamito 106 vs=0	5299.50	-844.66	-899.67	1900342.53	1238203.72	36.21496855	-107.61349792

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=6962+23.5 @ 6985.50ft (Ensign 140)

Surface location:
Northing 1901187.19 Easting 1239103.39 Latitude 36.21732300 Longitude -107.61048900

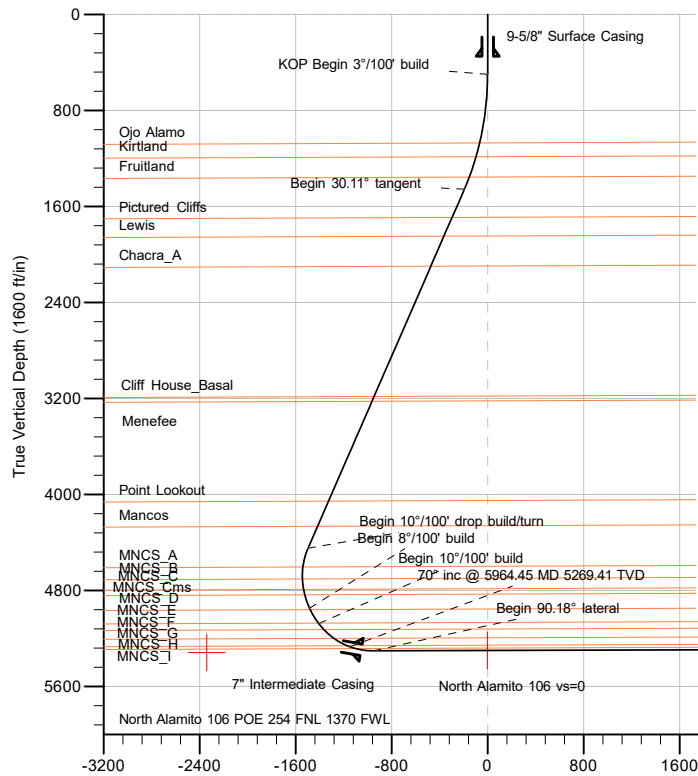
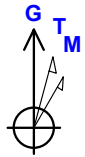
Total Corr (M=>G): To convert a Magnetic Direction to a Grid Direction, Add 9.24°

CASING DETAILS

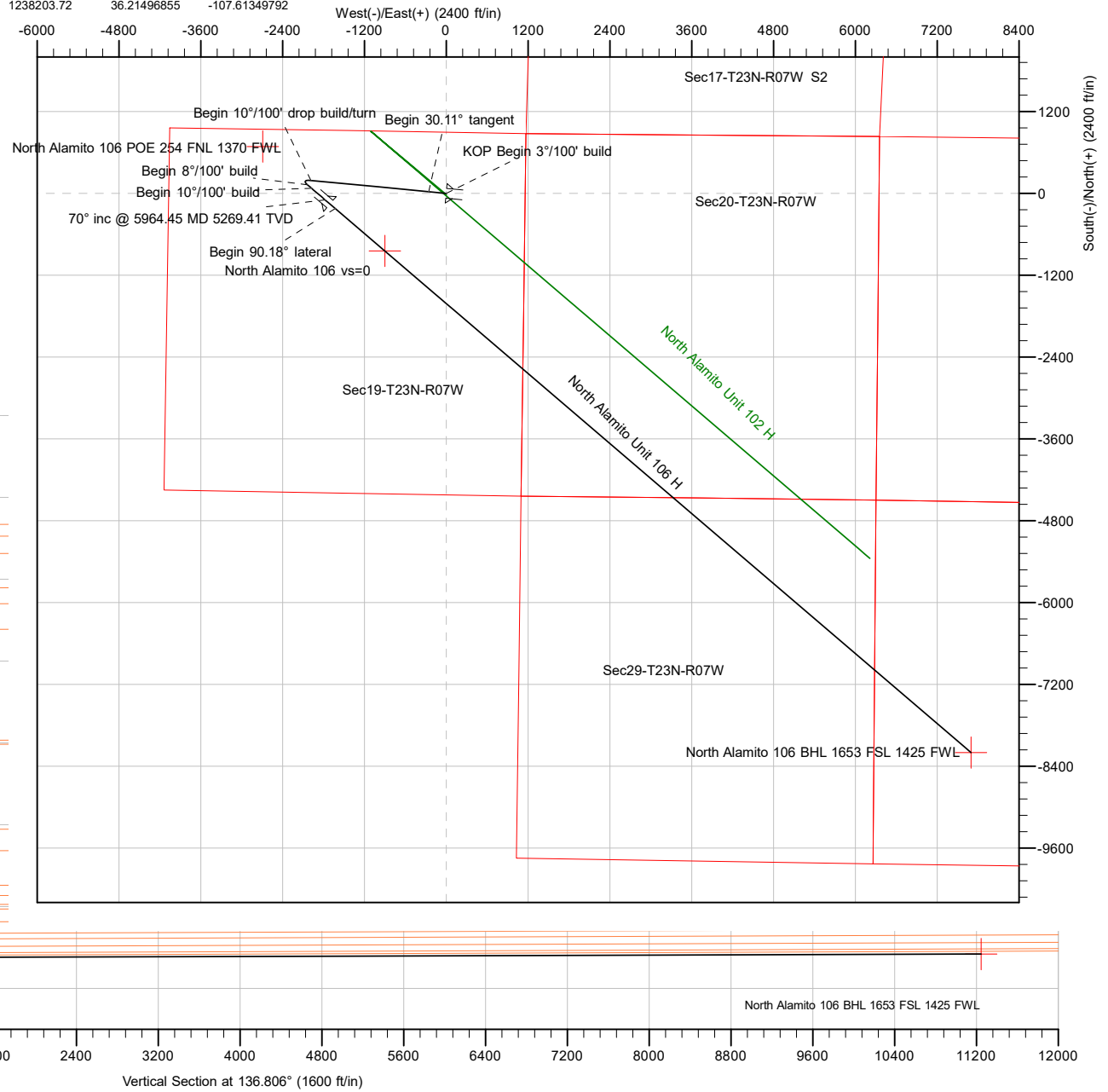
TVD	MD	Name
348.50	348.50	9-5/8" Surface Casing
5295.26	6064.45	7" Intermediate Casing

Azimuths to Grid North
True North: 0.80°
Magnetic North: 9.24°

Magnetic Field
Strength: 49028.2nT
Dip Angle: 62.70°
Date: 4/17/2024
Model: IGRF2020

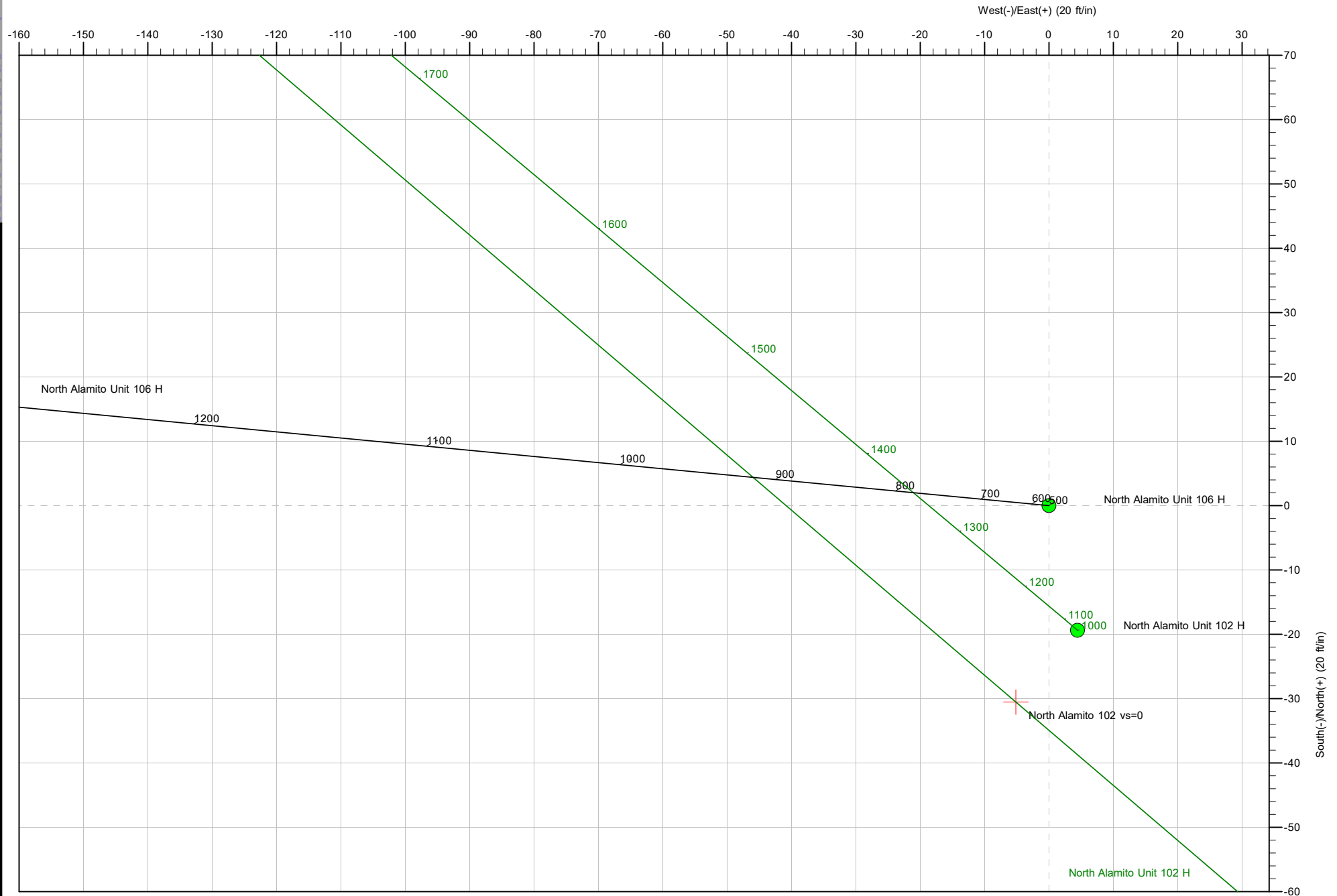


Sec	MD	Inc	Azi	TVD	+N/-S	+E/-W	Dleg	TFace	VSec	Annotation
1	0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	
2	498.50	0.00	0.000	498.50	0.00	0.00	0.00	0.00	0.00	KOP Begin 3"/100' build
3	1502.27	30.11	275.462	1456.69	24.53	-256.59	3.00	275.46	-193.51	Begin 30.11° tangent
4	4960.69	30.11	275.462	4448.35	189.68	-1983.83	0.00	0.00	-1496.16	Begin 10°/100' drop build/turn
5	5484.45	25.00	130.545	4947.48	125.73	-2034.07	10.00	-162.14	-1483.92	Begin 8°/100' build
6	5634.45	37.00	130.545	5075.82	75.60	-1975.47	8.00	0.00	-1407.26	Begin 10°/100' build
7	5964.45	70.00	130.545	5269.41	-94.46	-1776.66	10.00	0.00	-1147.20	70° inc @ 5964.45 MD 5269.41 TVD
8	6166.29	90.18	130.545	5303.96	-223.05	-1626.35	10.00	0.00	-950.58	Begin 90.18° lateral
9	18436.95	90.18	130.545	5264.50	-8199.42	7698.09	0.00	0.00	11246.82	PBHL/TD @ 18436.95 MD 5264.50 TVD





Well: North Alamito Unit 106 H
Site: North Alamito Unit (102 & 106)
Project: Sandoval County, New Mexico NAD83 NM C
Design: rev3
Rig: Ensign 140





Planning Report

Database:	DT_Mar1724_v17	Local Co-ordinate Reference:	Well North Alamito Unit 106 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Project:	Sandoval County, New Mexico NAD83 NM C	MD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Site:	North Alamito Unit (102 & 106)	North Reference:	Grid
Well:	North Alamito Unit 106 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev3		

Project	Sandoval 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	North Alamito Unit (102 & 106)			
Site Position:		Northing:	1,901,167.83 usft	Latitude: 36.21727000
From:	Lat/Long	Easting:	1,239,107.83 usft	Longitude: -107.61047300
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "	

Well	North Alamito Unit 106 H, Surf loc: 897 FNL 1158 FEL Section 19-T23N-R07W			
Well Position	+N/-S	0.00 ft	Northing:	1,901,187.20 usft
	+E/-W	0.00 ft	Easting:	1,239,103.38 usft
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft
Grid Convergence:		-0.80 °	Ground Level:	6,962.00 ft

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	4/17/2024	8.44	62.70	49,028.15053347

Design	rev3				
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	136.806	

Plan Survey Tool Program	Date	5/8/2024			
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks	
1	0.00	18,436.24 rev3 (Original Hole)	MWD		
			OWSG MWD - Standard		



Planning Report

Database:	DT_Mar1724_v17	Local Co-ordinate Reference:	Well North Alamito Unit 106 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Project:	Sandoval County, New Mexico NAD83 NM C	MD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Site:	North Alamito Unit (102 & 106)	North Reference:	Grid
Well:	North Alamito Unit 106 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev3		

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
498.50	0.00	0.000	498.50	0.00	0.00	0.00	0.00	0.00	0.00	
1,502.27	30.11	275.462	1,456.69	24.53	-256.59	3.00	3.00	0.00	275.46	
4,960.69	30.11	275.462	4,448.35	189.68	-1,983.83	0.00	0.00	0.00	0.00	
5,484.45	25.00	130.545	4,947.48	125.73	-2,034.07	10.00	-0.98	-27.67	-162.14	
5,634.45	37.00	130.545	5,075.82	75.60	-1,975.47	8.00	8.00	0.00	0.00	
5,964.45	70.00	130.545	5,269.41	-94.46	-1,776.66	10.00	10.00	0.00	0.00	
6,166.29	90.18	130.545	5,303.96	-223.05	-1,626.35	10.00	10.00	0.00	0.00	
18,436.95	90.18	130.545	5,264.50	-8,199.42	7,698.09	0.00	0.00	0.00	0.00	North Alamito 106 BH



Planning Report

Database:	DT_Mar1724_v17	Local Co-ordinate Reference:	Well North Alamito Unit 106 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Project:	Sandoval County, New Mexico NAD83 NM C	MD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Site:	North Alamito Unit (102 & 106)	North Reference:	Grid
Well:	North Alamito Unit 106 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev3		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00
50.00	0.00	0.000	50.00	0.00	0.00	0.00	0.00	0.00	0.00
100.00	0.00	0.000	100.00	0.00	0.00	0.00	0.00	0.00	0.00
150.00	0.00	0.000	150.00	0.00	0.00	0.00	0.00	0.00	0.00
200.00	0.00	0.000	200.00	0.00	0.00	0.00	0.00	0.00	0.00
250.00	0.00	0.000	250.00	0.00	0.00	0.00	0.00	0.00	0.00
300.00	0.00	0.000	300.00	0.00	0.00	0.00	0.00	0.00	0.00
348.50	0.00	0.000	348.50	0.00	0.00	0.00	0.00	0.00	0.00
9-5/8" Surface Casing									
350.00	0.00	0.000	350.00	0.00	0.00	0.00	0.00	0.00	0.00
400.00	0.00	0.000	400.00	0.00	0.00	0.00	0.00	0.00	0.00
450.00	0.00	0.000	450.00	0.00	0.00	0.00	0.00	0.00	0.00
498.50	0.00	0.000	498.50	0.00	0.00	0.00	0.00	0.00	0.00
KOP Begin 3°/100' build									
500.00	0.05	275.462	500.00	0.00	0.00	0.00	3.00	3.00	0.00
550.00	1.55	275.462	549.99	0.07	-0.69	-0.52	3.00	3.00	0.00
600.00	3.05	275.462	599.95	0.26	-2.68	-2.02	3.00	3.00	0.00
650.00	4.55	275.462	649.84	0.57	-5.98	-4.51	3.00	3.00	0.00
700.00	6.05	275.462	699.63	1.01	-10.57	-7.97	3.00	3.00	0.00
750.00	7.55	275.462	749.27	1.57	-16.46	-12.41	3.00	3.00	0.00
800.00	9.05	275.462	798.75	2.26	-23.64	-17.83	3.00	3.00	0.00
850.00	10.55	275.462	848.02	3.07	-32.11	-24.22	3.00	3.00	0.00
900.00	12.05	275.462	897.05	4.00	-41.86	-31.57	3.00	3.00	0.00
950.00	13.55	275.462	945.81	5.06	-52.88	-39.88	3.00	3.00	0.00
1,000.00	15.05	275.462	994.26	6.23	-65.17	-49.15	3.00	3.00	0.00
1,050.00	16.55	275.462	1,042.37	7.53	-78.72	-59.37	3.00	3.00	0.00
1,079.71	17.44	275.462	1,070.78	8.35	-87.36	-65.88	3.00	3.00	0.00
Ojo Alamo									
1,100.00	18.05	275.462	1,090.11	8.94	-93.51	-70.52	3.00	3.00	0.00
1,150.00	19.55	275.462	1,137.44	10.47	-109.55	-82.62	3.00	3.00	0.00
1,200.00	21.05	275.462	1,184.33	12.12	-126.81	-95.64	3.00	3.00	0.00
1,201.68	21.10	275.462	1,185.90	12.18	-127.41	-96.09	3.00	3.00	0.00
Kirtland									
1,250.00	22.55	275.462	1,230.76	13.89	-145.29	-109.58	3.00	3.00	0.00
1,300.00	24.05	275.462	1,276.68	15.77	-164.97	-124.42	3.00	3.00	0.00
1,350.00	25.55	275.462	1,322.07	17.77	-185.85	-140.16	3.00	3.00	0.00
1,387.94	26.68	275.462	1,356.14	19.36	-202.47	-152.70	3.00	3.00	0.00
Fruitland									
1,400.00	27.05	275.462	1,366.89	19.88	-207.90	-156.79	3.00	3.00	0.00
1,450.00	28.55	275.462	1,411.12	22.10	-231.10	-174.29	3.00	3.00	0.00
1,500.00	30.05	275.462	1,454.73	24.43	-255.46	-192.66	3.00	3.00	0.00
1,502.27	30.11	275.462	1,456.69	24.53	-256.59	-193.51	3.00	3.00	0.00
Begin 30.11° tangent									
1,550.00	30.11	275.462	1,497.98	26.81	-280.43	-211.49	0.00	0.00	0.00
1,600.00	30.11	275.462	1,541.23	29.20	-305.40	-230.32	0.00	0.00	0.00
1,650.00	30.11	275.462	1,584.48	31.59	-330.37	-249.16	0.00	0.00	0.00
1,700.00	30.11	275.462	1,627.74	33.98	-355.34	-267.99	0.00	0.00	0.00
1,750.00	30.11	275.462	1,670.99	36.36	-380.31	-286.82	0.00	0.00	0.00
1,773.99	30.11	275.462	1,691.74	37.51	-392.29	-295.86	0.00	0.00	0.00
Pictured Cliffs									
1,800.00	30.11	275.462	1,714.24	38.75	-405.29	-305.66	0.00	0.00	0.00
1,850.00	30.11	275.462	1,757.49	41.14	-430.26	-324.49	0.00	0.00	0.00
1,900.00	30.11	275.462	1,800.74	43.53	-455.23	-343.32	0.00	0.00	0.00



Planning Report

Database:	DT_Mar1724_v17	Local Co-ordinate Reference:	Well North Alamito Unit 106 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Project:	Sandoval County, New Mexico NAD83 NM C	MD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Site:	North Alamito Unit (102 & 106)	North Reference:	Grid
Well:	North Alamito Unit 106 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev3		

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)	
1,950.00	30.11	275.462	1,844.00	45.91	-480.20	-362.16	0.00	0.00	0.00	
1,953.50	30.11	275.462	1,847.02	46.08	-481.95	-363.47	0.00	0.00	0.00	
Lewis										
2,000.00	30.11	275.462	1,887.25	48.30	-505.17	-380.99	0.00	0.00	0.00	
2,050.00	30.11	275.462	1,930.50	50.69	-530.14	-399.82	0.00	0.00	0.00	
2,100.00	30.11	275.462	1,973.75	53.08	-555.12	-418.65	0.00	0.00	0.00	
2,150.00	30.11	275.462	2,017.00	55.46	-580.09	-437.49	0.00	0.00	0.00	
2,200.00	30.11	275.462	2,060.25	57.85	-605.06	-456.32	0.00	0.00	0.00	
2,243.03	30.11	275.462	2,097.48	59.91	-626.55	-472.53	0.00	0.00	0.00	
Chacra_A										
2,250.00	30.11	275.462	2,103.51	60.24	-630.03	-475.15	0.00	0.00	0.00	
2,300.00	30.11	275.462	2,146.76	62.63	-655.00	-493.99	0.00	0.00	0.00	
2,350.00	30.11	275.462	2,190.01	65.01	-679.97	-512.82	0.00	0.00	0.00	
2,400.00	30.11	275.462	2,233.26	67.40	-704.95	-531.65	0.00	0.00	0.00	
2,450.00	30.11	275.462	2,276.51	69.79	-729.92	-550.48	0.00	0.00	0.00	
2,500.00	30.11	275.462	2,319.77	72.18	-754.89	-569.32	0.00	0.00	0.00	
2,550.00	30.11	275.462	2,363.02	74.57	-779.86	-588.15	0.00	0.00	0.00	
2,600.00	30.11	275.462	2,406.27	76.95	-804.83	-606.98	0.00	0.00	0.00	
2,650.00	30.11	275.462	2,449.52	79.34	-829.80	-625.82	0.00	0.00	0.00	
2,700.00	30.11	275.462	2,492.77	81.73	-854.77	-644.65	0.00	0.00	0.00	
2,750.00	30.11	275.462	2,536.02	84.12	-879.75	-663.48	0.00	0.00	0.00	
2,800.00	30.11	275.462	2,579.28	86.50	-904.72	-682.31	0.00	0.00	0.00	
2,850.00	30.11	275.462	2,622.53	88.89	-929.69	-701.15	0.00	0.00	0.00	
2,900.00	30.11	275.462	2,665.78	91.28	-954.66	-719.98	0.00	0.00	0.00	
2,950.00	30.11	275.462	2,709.03	93.67	-979.63	-738.81	0.00	0.00	0.00	
3,000.00	30.11	275.462	2,752.28	96.05	-1,004.60	-757.65	0.00	0.00	0.00	
3,050.00	30.11	275.462	2,795.54	98.44	-1,029.58	-776.48	0.00	0.00	0.00	
3,100.00	30.11	275.462	2,838.79	100.83	-1,054.55	-795.31	0.00	0.00	0.00	
3,150.00	30.11	275.462	2,882.04	103.22	-1,079.52	-814.15	0.00	0.00	0.00	
3,200.00	30.11	275.462	2,925.29	105.60	-1,104.49	-832.98	0.00	0.00	0.00	
3,250.00	30.11	275.462	2,968.54	107.99	-1,129.46	-851.81	0.00	0.00	0.00	
3,300.00	30.11	275.462	3,011.79	110.38	-1,154.43	-870.64	0.00	0.00	0.00	
3,350.00	30.11	275.462	3,055.05	112.77	-1,179.40	-889.48	0.00	0.00	0.00	
3,400.00	30.11	275.462	3,098.30	115.16	-1,204.38	-908.31	0.00	0.00	0.00	
3,450.00	30.11	275.462	3,141.55	117.54	-1,229.35	-927.14	0.00	0.00	0.00	
3,499.60	30.11	275.462	3,184.46	119.91	-1,254.12	-945.83	0.00	0.00	0.00	
Cliff House_Basal										
3,500.00	30.11	275.462	3,184.80	119.93	-1,254.32	-945.98	0.00	0.00	0.00	
3,545.93	30.11	275.462	3,224.53	122.12	-1,277.26	-963.27	0.00	0.00	0.00	
Menefee										
3,550.00	30.11	275.462	3,228.05	122.32	-1,279.29	-964.81	0.00	0.00	0.00	
3,600.00	30.11	275.462	3,271.31	124.71	-1,304.26	-983.64	0.00	0.00	0.00	
3,650.00	30.11	275.462	3,314.56	127.09	-1,329.23	-1,002.47	0.00	0.00	0.00	
3,700.00	30.11	275.462	3,357.81	129.48	-1,354.21	-1,021.31	0.00	0.00	0.00	
3,750.00	30.11	275.462	3,401.06	131.87	-1,379.18	-1,040.14	0.00	0.00	0.00	
3,800.00	30.11	275.462	3,444.31	134.26	-1,404.15	-1,058.97	0.00	0.00	0.00	
3,850.00	30.11	275.462	3,487.56	136.64	-1,429.12	-1,077.81	0.00	0.00	0.00	
3,900.00	30.11	275.462	3,530.82	139.03	-1,454.09	-1,096.64	0.00	0.00	0.00	
3,950.00	30.11	275.462	3,574.07	141.42	-1,479.06	-1,115.47	0.00	0.00	0.00	
4,000.00	30.11	275.462	3,617.32	143.81	-1,504.04	-1,134.30	0.00	0.00	0.00	
4,050.00	30.11	275.462	3,660.57	146.19	-1,529.01	-1,153.14	0.00	0.00	0.00	
4,100.00	30.11	275.462	3,703.82	148.58	-1,553.98	-1,171.97	0.00	0.00	0.00	
4,150.00	30.11	275.462	3,747.08	150.97	-1,578.95	-1,190.80	0.00	0.00	0.00	



Planning Report

Database:	DT_Mar1724_v17	Local Co-ordinate Reference:	Well North Alamito Unit 106 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Project:	Sandoval County, New Mexico NAD83 NM C	MD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Site:	North Alamito Unit (102 & 106)	North Reference:	Grid
Well:	North Alamito Unit 106 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev3		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Vertical Section (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)
4,200.00	30.11	275.462	3,790.33	153.36	-1,603.92	-1,209.64	0.00	0.00	0.00
4,250.00	30.11	275.462	3,833.58	155.74	-1,628.89	-1,228.47	0.00	0.00	0.00
4,300.00	30.11	275.462	3,876.83	158.13	-1,653.86	-1,247.30	0.00	0.00	0.00
4,350.00	30.11	275.462	3,920.08	160.52	-1,678.84	-1,266.14	0.00	0.00	0.00
4,400.00	30.11	275.462	3,963.33	162.91	-1,703.81	-1,284.97	0.00	0.00	0.00
4,450.00	30.11	275.462	4,006.59	165.30	-1,728.78	-1,303.80	0.00	0.00	0.00
4,500.00	30.11	275.462	4,049.84	167.68	-1,753.75	-1,322.63	0.00	0.00	0.00
4,507.18	30.11	275.462	4,056.05	168.03	-1,757.34	-1,325.34	0.00	0.00	0.00
Point Lookout									
4,550.00	30.11	275.462	4,093.09	170.07	-1,778.72	-1,341.47	0.00	0.00	0.00
4,600.00	30.11	275.462	4,136.34	172.46	-1,803.69	-1,360.30	0.00	0.00	0.00
4,650.00	30.11	275.462	4,179.59	174.85	-1,828.67	-1,379.13	0.00	0.00	0.00
4,700.00	30.11	275.462	4,222.85	177.23	-1,853.64	-1,397.97	0.00	0.00	0.00
4,750.00	30.11	275.462	4,266.10	179.62	-1,878.61	-1,416.80	0.00	0.00	0.00
4,750.38	30.11	275.462	4,266.43	179.64	-1,878.80	-1,416.94	0.00	0.00	0.00
Mancos									
4,800.00	30.11	275.462	4,309.35	182.01	-1,903.58	-1,435.63	0.00	0.00	0.00
4,850.00	30.11	275.462	4,352.60	184.40	-1,928.55	-1,454.46	0.00	0.00	0.00
4,900.00	30.11	275.462	4,395.85	186.78	-1,953.52	-1,473.30	0.00	0.00	0.00
4,950.00	30.11	275.462	4,439.11	189.17	-1,978.49	-1,492.13	0.00	0.00	0.00
4,960.69	30.11	275.462	4,448.35	189.68	-1,983.83	-1,496.16	0.00	0.00	0.00
Begin 10°/100' drop build/turn									
5,000.00	26.40	272.751	4,482.97	191.04	-2,002.39	-1,509.85	10.00	-9.45	-6.90
5,050.00	21.77	268.086	4,528.61	191.26	-2,022.77	-1,523.96	10.00	-9.25	-9.33
5,100.00	17.34	261.117	4,575.72	189.80	-2,039.40	-1,534.28	10.00	-8.86	-13.94
5,130.41	14.82	254.968	4,604.94	188.09	-2,047.64	-1,538.67	10.00	-8.30	-20.22
MNCS_A									
5,150.00	13.30	249.838	4,623.95	186.67	-2,052.17	-1,540.74	10.00	-7.73	-26.18
5,200.00	10.14	230.506	4,672.92	181.88	-2,060.98	-1,543.27	10.00	-6.32	-38.66
5,232.50	9.02	212.076	4,704.97	177.91	-2,064.54	-1,542.81	10.00	-3.46	-56.71
MNCS_B									
5,250.00	8.85	200.835	4,722.26	175.48	-2,065.74	-1,541.87	10.00	-0.94	-64.22
5,300.00	10.17	171.261	4,771.60	167.52	-2,066.44	-1,536.54	10.00	2.64	-59.15
5,320.70	11.33	162.044	4,791.94	163.78	-2,065.54	-1,533.20	10.00	5.60	-44.54
MNCS_C									
5,350.00	13.35	152.056	4,820.57	158.05	-2,063.06	-1,527.33	10.00	6.89	-34.08
5,366.83	14.64	147.614	4,836.90	154.54	-2,061.01	-1,523.36	10.00	7.71	-26.38
MNCS_Cms									
5,400.00	17.39	140.849	4,868.78	147.15	-2,055.64	-1,514.30	10.00	8.28	-20.40
5,450.00	21.83	133.918	4,915.87	134.90	-2,044.22	-1,497.55	10.00	8.87	-13.86
5,484.45	25.00	130.545	4,947.48	125.73	-2,034.07	-1,483.92	10.00	9.22	-9.79
Begin 8°/100' build									
5,500.00	26.24	130.545	4,961.50	121.36	-2,028.96	-1,477.23	8.00	8.00	0.00
5,500.24	26.24	130.545	4,961.72	121.29	-2,028.88	-1,477.12	0.00	0.00	0.00
MNCS_D									
5,550.00	30.24	130.545	5,005.54	105.98	-2,010.98	-1,453.71	8.04	8.04	0.00
5,600.00	34.24	130.545	5,047.82	88.64	-1,990.71	-1,427.20	8.00	8.00	0.00
5,631.50	36.76	130.545	5,073.46	76.75	-1,976.82	-1,409.02	8.00	8.00	0.00
MNCS_E									
5,634.45	37.00	130.545	5,075.82	75.60	-1,975.47	-1,407.26	8.00	8.00	0.00
Begin 10°/100' build									
5,650.00	38.56	130.545	5,088.11	69.41	-1,968.23	-1,397.79	10.00	10.00	0.00
5,700.00	43.56	130.545	5,125.81	48.07	-1,943.28	-1,365.16	10.00	10.00	0.00



Planning Report

Database:	DT_Mar1724_v17	Local Co-ordinate Reference:	Well North Alamito Unit 106 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Project:	Sandoval County, New Mexico NAD83 NM C	MD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Site:	North Alamito Unit (102 & 106)	North Reference:	Grid
Well:	North Alamito Unit 106 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev3		

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)
5,702.05	43.76	130.545	5,127.28	47.15	-1,942.21	-1,363.75	10.00	10.00	0.00
MNCS_F									
5,750.00	48.56	130.545	5,160.49	24.67	-1,915.93	-1,329.38	10.00	10.00	0.00
5,800.00	53.56	130.545	5,191.91	-0.60	-1,886.39	-1,290.74	10.00	10.00	0.00
5,815.51	55.11	130.545	5,200.95	-8.79	-1,876.82	-1,278.21	10.00	10.00	0.00
MNCS_G									
5,850.00	58.56	130.545	5,219.82	-27.55	-1,854.88	-1,249.52	10.00	10.00	0.00
5,900.00	63.56	130.545	5,244.01	-55.99	-1,821.65	-1,206.04	10.00	10.00	0.00
5,939.93	67.55	130.545	5,260.54	-79.61	-1,794.03	-1,169.91	10.00	10.00	0.00
MNCS_H									
5,950.00	68.56	130.545	5,264.30	-85.68	-1,786.93	-1,160.63	10.00	10.00	0.00
5,964.45	70.00	130.545	5,269.41	-94.46	-1,776.66	-1,147.20	10.00	10.00	0.00
70° inc @ 5964.45 MD 5269.41 TVD									
6,000.00	73.56	130.545	5,280.53	-116.41	-1,751.01	-1,113.64	10.00	10.00	0.00
6,017.62	75.32	130.545	5,285.25	-127.45	-1,738.11	-1,096.76	10.00	10.00	0.00
MNCS_I									
6,050.00	78.56	130.545	5,292.57	-147.95	-1,714.14	-1,065.42	10.00	10.00	0.00
6,064.45	80.00	130.545	5,295.26	-157.18	-1,703.35	-1,051.30	10.00	10.00	0.00
7" Intermediate Casing									
6,100.00	83.56	130.545	5,300.34	-180.04	-1,676.62	-1,016.33	10.00	10.00	0.00
6,150.00	88.56	130.545	5,303.78	-212.46	-1,638.73	-966.77	10.00	10.00	0.00
6,166.29	90.18	130.545	5,303.96	-223.05	-1,626.35	-950.58	10.00	10.00	0.00
Begin 90.18° lateral									
6,200.00	90.18	130.545	5,303.85	-244.96	-1,600.73	-917.07	0.00	0.00	0.00
6,250.00	90.18	130.545	5,303.69	-277.46	-1,562.74	-867.36	0.00	0.00	0.00
6,300.00	90.18	130.545	5,303.53	-309.96	-1,524.74	-817.66	0.00	0.00	0.00
6,350.00	90.18	130.545	5,303.37	-342.46	-1,486.75	-767.96	0.00	0.00	0.00
6,400.00	90.18	130.545	5,303.21	-374.97	-1,448.75	-718.26	0.00	0.00	0.00
6,450.00	90.18	130.545	5,303.05	-407.47	-1,410.76	-668.56	0.00	0.00	0.00
6,500.00	90.18	130.545	5,302.89	-439.97	-1,372.77	-618.86	0.00	0.00	0.00
6,550.00	90.18	130.545	5,302.73	-472.47	-1,334.77	-569.15	0.00	0.00	0.00
6,600.00	90.18	130.545	5,302.57	-504.97	-1,296.78	-519.45	0.00	0.00	0.00
6,650.00	90.18	130.545	5,302.40	-537.48	-1,258.78	-469.75	0.00	0.00	0.00
6,700.00	90.18	130.545	5,302.24	-569.98	-1,220.79	-420.05	0.00	0.00	0.00
6,750.00	90.18	130.545	5,302.08	-602.48	-1,182.79	-370.35	0.00	0.00	0.00
6,800.00	90.18	130.545	5,301.92	-634.98	-1,144.80	-320.65	0.00	0.00	0.00
6,850.00	90.18	130.545	5,301.76	-667.48	-1,106.80	-270.95	0.00	0.00	0.00
6,900.00	90.18	130.545	5,301.60	-699.98	-1,068.81	-221.24	0.00	0.00	0.00
6,950.00	90.18	130.545	5,301.44	-732.49	-1,030.81	-171.54	0.00	0.00	0.00
7,000.00	90.18	130.545	5,301.28	-764.99	-992.82	-121.84	0.00	0.00	0.00
7,050.00	90.18	130.545	5,301.12	-797.49	-954.82	-72.14	0.00	0.00	0.00
7,100.00	90.18	130.545	5,300.96	-829.99	-916.83	-22.44	0.00	0.00	0.00
7,150.00	90.18	130.545	5,300.80	-862.49	-878.83	27.26	0.00	0.00	0.00
7,200.00	90.18	130.545	5,300.64	-895.00	-840.84	76.96	0.00	0.00	0.00
7,250.00	90.18	130.545	5,300.48	-927.50	-802.84	126.67	0.00	0.00	0.00
7,300.00	90.18	130.545	5,300.31	-960.00	-764.85	176.37	0.00	0.00	0.00
7,350.00	90.18	130.545	5,300.15	-992.50	-726.85	226.07	0.00	0.00	0.00
7,400.00	90.18	130.545	5,299.99	-1,025.00	-688.86	275.77	0.00	0.00	0.00
7,450.00	90.18	130.545	5,299.83	-1,057.50	-650.86	325.47	0.00	0.00	0.00
7,500.00	90.18	130.545	5,299.67	-1,090.01	-612.87	375.17	0.00	0.00	0.00
7,550.00	90.18	130.545	5,299.51	-1,122.51	-574.87	424.87	0.00	0.00	0.00
7,600.00	90.18	130.545	5,299.35	-1,155.01	-536.88	474.58	0.00	0.00	0.00
7,650.00	90.18	130.545	5,299.19	-1,187.51	-498.88	524.28	0.00	0.00	0.00



Planning Report

Database:	DT_Mar1724_v17	Local Co-ordinate Reference:	Well North Alamito Unit 106 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Project:	Sandoval County, New Mexico NAD83 NM C	MD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Site:	North Alamito Unit (102 & 106)	North Reference:	Grid
Well:	North Alamito Unit 106 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev3		

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)
7,700.00	90.18	130.545	5,299.03	-1,220.01	-460.89	573.98	0.00	0.00	0.00
7,750.00	90.18	130.545	5,298.87	-1,252.51	-422.89	623.68	0.00	0.00	0.00
7,800.00	90.18	130.545	5,298.71	-1,285.02	-384.90	673.38	0.00	0.00	0.00
7,850.00	90.18	130.545	5,298.55	-1,317.52	-346.90	723.08	0.00	0.00	0.00
7,900.00	90.18	130.545	5,298.39	-1,350.02	-308.91	772.78	0.00	0.00	0.00
7,950.00	90.18	130.545	5,298.22	-1,382.52	-270.91	822.49	0.00	0.00	0.00
8,000.00	90.18	130.545	5,298.06	-1,415.02	-232.92	872.19	0.00	0.00	0.00
8,050.00	90.18	130.545	5,297.90	-1,447.53	-194.93	921.89	0.00	0.00	0.00
8,100.00	90.18	130.545	5,297.74	-1,480.03	-156.93	971.59	0.00	0.00	0.00
8,150.00	90.18	130.545	5,297.58	-1,512.53	-118.94	1,021.29	0.00	0.00	0.00
8,200.00	90.18	130.545	5,297.42	-1,545.03	-80.94	1,070.99	0.00	0.00	0.00
8,250.00	90.18	130.545	5,297.26	-1,577.53	-42.95	1,120.69	0.00	0.00	0.00
8,300.00	90.18	130.545	5,297.10	-1,610.03	-4.95	1,170.40	0.00	0.00	0.00
8,350.00	90.18	130.545	5,296.94	-1,642.54	33.04	1,220.10	0.00	0.00	0.00
8,400.00	90.18	130.545	5,296.78	-1,675.04	71.04	1,269.80	0.00	0.00	0.00
8,450.00	90.18	130.545	5,296.62	-1,707.54	109.03	1,319.50	0.00	0.00	0.00
8,500.00	90.18	130.545	5,296.46	-1,740.04	147.03	1,369.20	0.00	0.00	0.00
8,550.00	90.18	130.545	5,296.29	-1,772.54	185.02	1,418.90	0.00	0.00	0.00
8,600.00	90.18	130.545	5,296.13	-1,805.05	223.02	1,468.60	0.00	0.00	0.00
8,650.00	90.18	130.545	5,295.97	-1,837.55	261.01	1,518.31	0.00	0.00	0.00
8,700.00	90.18	130.545	5,295.81	-1,870.05	299.01	1,568.01	0.00	0.00	0.00
8,750.00	90.18	130.545	5,295.65	-1,902.55	337.00	1,617.71	0.00	0.00	0.00
8,800.00	90.18	130.545	5,295.49	-1,935.05	375.00	1,667.41	0.00	0.00	0.00
8,850.00	90.18	130.545	5,295.33	-1,967.55	412.99	1,717.11	0.00	0.00	0.00
8,900.00	90.18	130.545	5,295.17	-2,000.06	450.99	1,766.81	0.00	0.00	0.00
8,950.00	90.18	130.545	5,295.01	-2,032.56	488.98	1,816.51	0.00	0.00	0.00
9,000.00	90.18	130.545	5,294.85	-2,065.06	526.98	1,866.22	0.00	0.00	0.00
9,050.00	90.18	130.545	5,294.69	-2,097.56	564.97	1,915.92	0.00	0.00	0.00
9,100.00	90.18	130.545	5,294.53	-2,130.06	602.97	1,965.62	0.00	0.00	0.00
9,150.00	90.18	130.545	5,294.37	-2,162.56	640.96	2,015.32	0.00	0.00	0.00
9,200.00	90.18	130.545	5,294.20	-2,195.07	678.96	2,065.02	0.00	0.00	0.00
9,250.00	90.18	130.545	5,294.04	-2,227.57	716.95	2,114.72	0.00	0.00	0.00
9,300.00	90.18	130.545	5,293.88	-2,260.07	754.95	2,164.42	0.00	0.00	0.00
9,350.00	90.18	130.545	5,293.72	-2,292.57	792.94	2,214.13	0.00	0.00	0.00
9,400.00	90.18	130.545	5,293.56	-2,325.07	830.94	2,263.83	0.00	0.00	0.00
9,450.00	90.18	130.545	5,293.40	-2,357.58	868.93	2,313.53	0.00	0.00	0.00
9,500.00	90.18	130.545	5,293.24	-2,390.08	906.93	2,363.23	0.00	0.00	0.00
9,550.00	90.18	130.545	5,293.08	-2,422.58	944.92	2,412.93	0.00	0.00	0.00
9,600.00	90.18	130.545	5,292.92	-2,455.08	982.91	2,462.63	0.00	0.00	0.00
9,650.00	90.18	130.545	5,292.76	-2,487.58	1,020.91	2,512.33	0.00	0.00	0.00
9,700.00	90.18	130.545	5,292.60	-2,520.08	1,058.90	2,562.04	0.00	0.00	0.00
9,750.00	90.18	130.545	5,292.44	-2,552.59	1,096.90	2,611.74	0.00	0.00	0.00
9,800.00	90.18	130.545	5,292.27	-2,585.09	1,134.89	2,661.44	0.00	0.00	0.00
9,850.00	90.18	130.545	5,292.11	-2,617.59	1,172.89	2,711.14	0.00	0.00	0.00
9,900.00	90.18	130.545	5,291.95	-2,650.09	1,210.88	2,760.84	0.00	0.00	0.00
9,950.00	90.18	130.545	5,291.79	-2,682.59	1,248.88	2,810.54	0.00	0.00	0.00
10,000.00	90.18	130.545	5,291.63	-2,715.10	1,286.87	2,860.25	0.00	0.00	0.00
10,050.00	90.18	130.545	5,291.47	-2,747.60	1,324.87	2,909.95	0.00	0.00	0.00
10,100.00	90.18	130.545	5,291.31	-2,780.10	1,362.86	2,959.65	0.00	0.00	0.00
10,150.00	90.18	130.545	5,291.15	-2,812.60	1,400.86	3,009.35	0.00	0.00	0.00
10,200.00	90.18	130.545	5,290.99	-2,845.10	1,438.85	3,059.05	0.00	0.00	0.00
10,250.00	90.18	130.545	5,290.83	-2,877.60	1,476.85	3,108.75	0.00	0.00	0.00
10,300.00	90.18	130.545	5,290.67	-2,910.11	1,514.84	3,158.45	0.00	0.00	0.00
10,350.00	90.18	130.545	5,290.51	-2,942.61	1,552.84	3,208.16	0.00	0.00	0.00



Planning Report

Database:	DT_Mar1724_v17	Local Co-ordinate Reference:	Well North Alamito Unit 106 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Project:	Sandoval County, New Mexico NAD83 NM C	MD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Site:	North Alamito Unit (102 & 106)	North Reference:	Grid
Well:	North Alamito Unit 106 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev3		

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)
10,400.00	90.18	130.545	5,290.35	-2,975.11	1,590.83	3,257.86	0.00	0.00	0.00
10,450.00	90.18	130.545	5,290.18	-3,007.61	1,628.83	3,307.56	0.00	0.00	0.00
10,500.00	90.18	130.545	5,290.02	-3,040.11	1,666.82	3,357.26	0.00	0.00	0.00
10,550.00	90.18	130.545	5,289.86	-3,072.62	1,704.82	3,406.96	0.00	0.00	0.00
10,600.00	90.18	130.545	5,289.70	-3,105.12	1,742.81	3,456.66	0.00	0.00	0.00
10,650.00	90.18	130.545	5,289.54	-3,137.62	1,780.81	3,506.36	0.00	0.00	0.00
10,700.00	90.18	130.545	5,289.38	-3,170.12	1,818.80	3,556.07	0.00	0.00	0.00
10,750.00	90.18	130.545	5,289.22	-3,202.62	1,856.80	3,605.77	0.00	0.00	0.00
10,800.00	90.18	130.545	5,289.06	-3,235.12	1,894.79	3,655.47	0.00	0.00	0.00
10,850.00	90.18	130.545	5,288.90	-3,267.63	1,932.79	3,705.17	0.00	0.00	0.00
10,900.00	90.18	130.545	5,288.74	-3,300.13	1,970.78	3,754.87	0.00	0.00	0.00
10,950.00	90.18	130.545	5,288.58	-3,332.63	2,008.78	3,804.57	0.00	0.00	0.00
11,000.00	90.18	130.545	5,288.42	-3,365.13	2,046.77	3,854.27	0.00	0.00	0.00
11,050.00	90.18	130.545	5,288.26	-3,397.63	2,084.77	3,903.98	0.00	0.00	0.00
11,100.00	90.18	130.545	5,288.09	-3,430.13	2,122.76	3,953.68	0.00	0.00	0.00
11,150.00	90.18	130.545	5,287.93	-3,462.64	2,160.75	4,003.38	0.00	0.00	0.00
11,200.00	90.18	130.545	5,287.77	-3,495.14	2,198.75	4,053.08	0.00	0.00	0.00
11,250.00	90.18	130.545	5,287.61	-3,527.64	2,236.74	4,102.78	0.00	0.00	0.00
11,300.00	90.18	130.545	5,287.45	-3,560.14	2,274.74	4,152.48	0.00	0.00	0.00
11,350.00	90.18	130.545	5,287.29	-3,592.64	2,312.73	4,202.18	0.00	0.00	0.00
11,400.00	90.18	130.545	5,287.13	-3,625.15	2,350.73	4,251.89	0.00	0.00	0.00
11,450.00	90.18	130.545	5,286.97	-3,657.65	2,388.72	4,301.59	0.00	0.00	0.00
11,500.00	90.18	130.545	5,286.81	-3,690.15	2,426.72	4,351.29	0.00	0.00	0.00
11,550.00	90.18	130.545	5,286.65	-3,722.65	2,464.71	4,400.99	0.00	0.00	0.00
11,600.00	90.18	130.545	5,286.49	-3,755.15	2,502.71	4,450.69	0.00	0.00	0.00
11,650.00	90.18	130.545	5,286.33	-3,787.65	2,540.70	4,500.39	0.00	0.00	0.00
11,700.00	90.18	130.545	5,286.16	-3,820.16	2,578.70	4,550.09	0.00	0.00	0.00
11,750.00	90.18	130.545	5,286.00	-3,852.66	2,616.69	4,599.80	0.00	0.00	0.00
11,800.00	90.18	130.545	5,285.84	-3,885.16	2,654.69	4,649.50	0.00	0.00	0.00
11,850.00	90.18	130.545	5,285.68	-3,917.66	2,692.68	4,699.20	0.00	0.00	0.00
11,900.00	90.18	130.545	5,285.52	-3,950.16	2,730.68	4,748.90	0.00	0.00	0.00
11,950.00	90.18	130.545	5,285.36	-3,982.67	2,768.67	4,798.60	0.00	0.00	0.00
12,000.00	90.18	130.545	5,285.20	-4,015.17	2,806.67	4,848.30	0.00	0.00	0.00
12,050.00	90.18	130.545	5,285.04	-4,047.67	2,844.66	4,898.00	0.00	0.00	0.00
12,100.00	90.18	130.545	5,284.88	-4,080.17	2,882.66	4,947.71	0.00	0.00	0.00
12,150.00	90.18	130.545	5,284.72	-4,112.67	2,920.65	4,997.41	0.00	0.00	0.00
12,200.00	90.18	130.545	5,284.56	-4,145.17	2,958.65	5,047.11	0.00	0.00	0.00
12,250.00	90.18	130.545	5,284.40	-4,177.68	2,996.64	5,096.81	0.00	0.00	0.00
12,300.00	90.18	130.545	5,284.24	-4,210.18	3,034.64	5,146.51	0.00	0.00	0.00
12,350.00	90.18	130.545	5,284.07	-4,242.68	3,072.63	5,196.21	0.00	0.00	0.00
12,400.00	90.18	130.545	5,283.91	-4,275.18	3,110.63	5,245.91	0.00	0.00	0.00
12,450.00	90.18	130.545	5,283.75	-4,307.68	3,148.62	5,295.62	0.00	0.00	0.00
12,500.00	90.18	130.545	5,283.59	-4,340.19	3,186.62	5,345.32	0.00	0.00	0.00
12,550.00	90.18	130.545	5,283.43	-4,372.69	3,224.61	5,395.02	0.00	0.00	0.00
12,600.00	90.18	130.545	5,283.27	-4,405.19	3,262.61	5,444.72	0.00	0.00	0.00
12,650.00	90.18	130.545	5,283.11	-4,437.69	3,300.60	5,494.42	0.00	0.00	0.00
12,700.00	90.18	130.545	5,282.95	-4,470.19	3,338.59	5,544.12	0.00	0.00	0.00
12,750.00	90.18	130.545	5,282.79	-4,502.69	3,376.59	5,593.82	0.00	0.00	0.00
12,800.00	90.18	130.545	5,282.63	-4,535.20	3,414.58	5,643.53	0.00	0.00	0.00
12,850.00	90.18	130.545	5,282.47	-4,567.70	3,452.58	5,693.23	0.00	0.00	0.00
12,900.00	90.18	130.545	5,282.31	-4,600.20	3,490.57	5,742.93	0.00	0.00	0.00
12,950.00	90.18	130.545	5,282.15	-4,632.70	3,528.57	5,792.63	0.00	0.00	0.00
13,000.00	90.18	130.545	5,281.98	-4,665.20	3,566.56	5,842.33	0.00	0.00	0.00
13,050.00	90.18	130.545	5,281.82	-4,697.70	3,604.56	5,892.03	0.00	0.00	0.00



Planning Report

Database:	DT_Mar1724_v17	Local Co-ordinate Reference:	Well North Alamito Unit 106 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Project:	Sandoval County, New Mexico NAD83 NM C	MD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Site:	North Alamito Unit (102 & 106)	North Reference:	Grid
Well:	North Alamito Unit 106 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev3		

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)
13,100.00	90.18	130.545	5,281.66	-4,730.21	3,642.55	5,941.74	0.00	0.00	0.00
13,150.00	90.18	130.545	5,281.50	-4,762.71	3,680.55	5,991.44	0.00	0.00	0.00
13,200.00	90.18	130.545	5,281.34	-4,795.21	3,718.54	6,041.14	0.00	0.00	0.00
13,250.00	90.18	130.545	5,281.18	-4,827.71	3,756.54	6,090.84	0.00	0.00	0.00
13,300.00	90.18	130.545	5,281.02	-4,860.21	3,794.53	6,140.54	0.00	0.00	0.00
13,350.00	90.18	130.545	5,280.86	-4,892.72	3,832.53	6,190.24	0.00	0.00	0.00
13,400.00	90.18	130.545	5,280.70	-4,925.22	3,870.52	6,239.94	0.00	0.00	0.00
13,450.00	90.18	130.545	5,280.54	-4,957.72	3,908.52	6,289.65	0.00	0.00	0.00
13,500.00	90.18	130.545	5,280.38	-4,990.22	3,946.51	6,339.35	0.00	0.00	0.00
13,550.00	90.18	130.545	5,280.22	-5,022.72	3,984.51	6,389.05	0.00	0.00	0.00
13,600.00	90.18	130.545	5,280.05	-5,055.22	4,022.50	6,438.75	0.00	0.00	0.00
13,650.00	90.18	130.545	5,279.89	-5,087.73	4,060.50	6,488.45	0.00	0.00	0.00
13,700.00	90.18	130.545	5,279.73	-5,120.23	4,098.49	6,538.15	0.00	0.00	0.00
13,750.00	90.18	130.545	5,279.57	-5,152.73	4,136.49	6,587.85	0.00	0.00	0.00
13,800.00	90.18	130.545	5,279.41	-5,185.23	4,174.48	6,637.56	0.00	0.00	0.00
13,850.00	90.18	130.545	5,279.25	-5,217.73	4,212.48	6,687.26	0.00	0.00	0.00
13,900.00	90.18	130.545	5,279.09	-5,250.24	4,250.47	6,736.96	0.00	0.00	0.00
13,950.00	90.18	130.545	5,278.93	-5,282.74	4,288.47	6,786.66	0.00	0.00	0.00
14,000.00	90.18	130.545	5,278.77	-5,315.24	4,326.46	6,836.36	0.00	0.00	0.00
14,050.00	90.18	130.545	5,278.61	-5,347.74	4,364.46	6,886.06	0.00	0.00	0.00
14,100.00	90.18	130.545	5,278.45	-5,380.24	4,402.45	6,935.76	0.00	0.00	0.00
14,150.00	90.18	130.545	5,278.29	-5,412.74	4,440.45	6,985.47	0.00	0.00	0.00
14,200.00	90.18	130.545	5,278.13	-5,445.25	4,478.44	7,035.17	0.00	0.00	0.00
14,250.00	90.18	130.545	5,277.96	-5,477.75	4,516.43	7,084.87	0.00	0.00	0.00
14,300.00	90.18	130.545	5,277.80	-5,510.25	4,554.43	7,134.57	0.00	0.00	0.00
14,350.00	90.18	130.545	5,277.64	-5,542.75	4,592.42	7,184.27	0.00	0.00	0.00
14,400.00	90.18	130.545	5,277.48	-5,575.25	4,630.42	7,233.97	0.00	0.00	0.00
14,450.00	90.18	130.545	5,277.32	-5,607.75	4,668.41	7,283.67	0.00	0.00	0.00
14,500.00	90.18	130.545	5,277.16	-5,640.26	4,706.41	7,333.38	0.00	0.00	0.00
14,550.00	90.18	130.545	5,277.00	-5,672.76	4,744.40	7,383.08	0.00	0.00	0.00
14,600.00	90.18	130.545	5,276.84	-5,705.26	4,782.40	7,432.78	0.00	0.00	0.00
14,650.00	90.18	130.545	5,276.68	-5,737.76	4,820.39	7,482.48	0.00	0.00	0.00
14,700.00	90.18	130.545	5,276.52	-5,770.26	4,858.39	7,532.18	0.00	0.00	0.00
14,750.00	90.18	130.545	5,276.36	-5,802.77	4,896.38	7,581.88	0.00	0.00	0.00
14,800.00	90.18	130.545	5,276.20	-5,835.27	4,934.38	7,631.58	0.00	0.00	0.00
14,850.00	90.18	130.545	5,276.04	-5,867.77	4,972.37	7,681.29	0.00	0.00	0.00
14,900.00	90.18	130.545	5,275.87	-5,900.27	5,010.37	7,730.99	0.00	0.00	0.00
14,950.00	90.18	130.545	5,275.71	-5,932.77	5,048.36	7,780.69	0.00	0.00	0.00
15,000.00	90.18	130.545	5,275.55	-5,965.27	5,086.36	7,830.39	0.00	0.00	0.00
15,050.00	90.18	130.545	5,275.39	-5,997.78	5,124.35	7,880.09	0.00	0.00	0.00
15,100.00	90.18	130.545	5,275.23	-6,030.28	5,162.35	7,929.79	0.00	0.00	0.00
15,150.00	90.18	130.545	5,275.07	-6,062.78	5,200.34	7,979.49	0.00	0.00	0.00
15,200.00	90.18	130.545	5,274.91	-6,095.28	5,238.34	8,029.20	0.00	0.00	0.00
15,250.00	90.18	130.545	5,274.75	-6,127.78	5,276.33	8,078.90	0.00	0.00	0.00
15,300.00	90.18	130.545	5,274.59	-6,160.29	5,314.33	8,128.60	0.00	0.00	0.00
15,350.00	90.18	130.545	5,274.43	-6,192.79	5,352.32	8,178.30	0.00	0.00	0.00
15,400.00	90.18	130.545	5,274.27	-6,225.29	5,390.32	8,228.00	0.00	0.00	0.00
15,450.00	90.18	130.545	5,274.11	-6,257.79	5,428.31	8,277.70	0.00	0.00	0.00
15,500.00	90.18	130.545	5,273.94	-6,290.29	5,466.31	8,327.40	0.00	0.00	0.00
15,550.00	90.18	130.545	5,273.78	-6,322.79	5,504.30	8,377.11	0.00	0.00	0.00
15,600.00	90.18	130.545	5,273.62	-6,355.30	5,542.30	8,426.81	0.00	0.00	0.00
15,650.00	90.18	130.545	5,273.46	-6,387.80	5,580.29	8,476.51	0.00	0.00	0.00
15,700.00	90.18	130.545	5,273.30	-6,420.30	5,618.29	8,526.21	0.00	0.00	0.00
15,750.00	90.18	130.545	5,273.14	-6,452.80	5,656.28	8,575.91	0.00	0.00	0.00



Planning Report

Database:	DT_Mar1724_v17	Local Co-ordinate Reference:	Well North Alamito Unit 106 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Project:	Sandoval County, New Mexico NAD83 NM C	MD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Site:	North Alamito Unit (102 & 106)	North Reference:	Grid
Well:	North Alamito Unit 106 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev3		

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)
15,800.00	90.18	130.545	5,272.98	-6,485.30	5,694.27	8,625.61	0.00	0.00	0.00
15,850.00	90.18	130.545	5,272.82	-6,517.81	5,732.27	8,675.31	0.00	0.00	0.00
15,900.00	90.18	130.545	5,272.66	-6,550.31	5,770.26	8,725.02	0.00	0.00	0.00
15,950.00	90.18	130.545	5,272.50	-6,582.81	5,808.26	8,774.72	0.00	0.00	0.00
16,000.00	90.18	130.545	5,272.34	-6,615.31	5,846.25	8,824.42	0.00	0.00	0.00
16,050.00	90.18	130.545	5,272.18	-6,647.81	5,884.25	8,874.12	0.00	0.00	0.00
16,100.00	90.18	130.545	5,272.02	-6,680.31	5,922.24	8,923.82	0.00	0.00	0.00
16,150.00	90.18	130.545	5,271.85	-6,712.82	5,960.24	8,973.52	0.00	0.00	0.00
16,200.00	90.18	130.545	5,271.69	-6,745.32	5,998.23	9,023.23	0.00	0.00	0.00
16,250.00	90.18	130.545	5,271.53	-6,777.82	6,036.23	9,072.93	0.00	0.00	0.00
16,300.00	90.18	130.545	5,271.37	-6,810.32	6,074.22	9,122.63	0.00	0.00	0.00
16,350.00	90.18	130.545	5,271.21	-6,842.82	6,112.22	9,172.33	0.00	0.00	0.00
16,400.00	90.18	130.545	5,271.05	-6,875.32	6,150.21	9,222.03	0.00	0.00	0.00
16,450.00	90.18	130.545	5,270.89	-6,907.83	6,188.21	9,271.73	0.00	0.00	0.00
16,500.00	90.18	130.545	5,270.73	-6,940.33	6,226.20	9,321.43	0.00	0.00	0.00
16,550.00	90.18	130.545	5,270.57	-6,972.83	6,264.20	9,371.14	0.00	0.00	0.00
16,600.00	90.18	130.545	5,270.41	-7,005.33	6,302.19	9,420.84	0.00	0.00	0.00
16,650.00	90.18	130.545	5,270.25	-7,037.83	6,340.19	9,470.54	0.00	0.00	0.00
16,700.00	90.18	130.545	5,270.09	-7,070.34	6,378.18	9,520.24	0.00	0.00	0.00
16,750.00	90.18	130.545	5,269.93	-7,102.84	6,416.18	9,569.94	0.00	0.00	0.00
16,800.00	90.18	130.545	5,269.76	-7,135.34	6,454.17	9,619.64	0.00	0.00	0.00
16,850.00	90.18	130.545	5,269.60	-7,167.84	6,492.17	9,669.34	0.00	0.00	0.00
16,900.00	90.18	130.545	5,269.44	-7,200.34	6,530.16	9,719.05	0.00	0.00	0.00
16,950.00	90.18	130.545	5,269.28	-7,232.84	6,568.16	9,768.75	0.00	0.00	0.00
17,000.00	90.18	130.545	5,269.12	-7,265.35	6,606.15	9,818.45	0.00	0.00	0.00
17,050.00	90.18	130.545	5,268.96	-7,297.85	6,644.15	9,868.15	0.00	0.00	0.00
17,100.00	90.18	130.545	5,268.80	-7,330.35	6,682.14	9,917.85	0.00	0.00	0.00
17,150.00	90.18	130.545	5,268.64	-7,362.85	6,720.14	9,967.55	0.00	0.00	0.00
17,200.00	90.18	130.545	5,268.48	-7,395.35	6,758.13	10,017.25	0.00	0.00	0.00
17,250.00	90.18	130.545	5,268.32	-7,427.86	6,796.13	10,066.96	0.00	0.00	0.00
17,300.00	90.18	130.545	5,268.16	-7,460.36	6,834.12	10,116.66	0.00	0.00	0.00
17,350.00	90.18	130.545	5,268.00	-7,492.86	6,872.11	10,166.36	0.00	0.00	0.00
17,400.00	90.18	130.545	5,267.83	-7,525.36	6,910.11	10,216.06	0.00	0.00	0.00
17,450.00	90.18	130.545	5,267.67	-7,557.86	6,948.10	10,265.76	0.00	0.00	0.00
17,500.00	90.18	130.545	5,267.51	-7,590.36	6,986.10	10,315.46	0.00	0.00	0.00
17,550.00	90.18	130.545	5,267.35	-7,622.87	7,024.09	10,365.16	0.00	0.00	0.00
17,600.00	90.18	130.545	5,267.19	-7,655.37	7,062.09	10,414.87	0.00	0.00	0.00
17,650.00	90.18	130.545	5,267.03	-7,687.87	7,100.08	10,464.57	0.00	0.00	0.00
17,700.00	90.18	130.545	5,266.87	-7,720.37	7,138.08	10,514.27	0.00	0.00	0.00
17,750.00	90.18	130.545	5,266.71	-7,752.87	7,176.07	10,563.97	0.00	0.00	0.00
17,800.00	90.18	130.545	5,266.55	-7,785.37	7,214.07	10,613.67	0.00	0.00	0.00
17,850.00	90.18	130.545	5,266.39	-7,817.88	7,252.06	10,663.37	0.00	0.00	0.00
17,900.00	90.18	130.545	5,266.23	-7,850.38	7,290.06	10,713.07	0.00	0.00	0.00
17,950.00	90.18	130.545	5,266.07	-7,882.88	7,328.05	10,762.78	0.00	0.00	0.00
18,000.00	90.18	130.545	5,265.91	-7,915.38	7,366.05	10,812.48	0.00	0.00	0.00
18,050.00	90.18	130.545	5,265.74	-7,947.88	7,404.04	10,862.18	0.00	0.00	0.00
18,100.00	90.18	130.545	5,265.58	-7,980.39	7,442.04	10,911.88	0.00	0.00	0.00
18,150.00	90.18	130.545	5,265.42	-8,012.89	7,480.03	10,961.58	0.00	0.00	0.00
18,200.00	90.18	130.545	5,265.26	-8,045.39	7,518.03	11,011.28	0.00	0.00	0.00
18,250.00	90.18	130.545	5,265.10	-8,077.89	7,556.02	11,060.98	0.00	0.00	0.00
18,300.00	90.18	130.545	5,264.94	-8,110.39	7,594.02	11,110.69	0.00	0.00	0.00
18,350.00	90.18	130.545	5,264.78	-8,142.89	7,632.01	11,160.39	0.00	0.00	0.00
18,400.00	90.18	130.545	5,264.62	-8,175.40	7,670.01	11,210.09	0.00	0.00	0.00
18,436.95	90.18	130.545	5,264.50	-8,199.42	7,698.09	11,246.82	0.00	0.00	0.00



Planning Report

Database:	DT_Mar1724_v17	Local Co-ordinate Reference:	Well North Alamito Unit 106 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Project:	Sandoval County, New Mexico NAD83 NM C	MD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Site:	North Alamito Unit (102 & 106)	North Reference:	Grid
Well:	North Alamito Unit 106 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev3		

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)
PBHL/TD @ 18436.95 MD 5264.50 TVD									

Casing Points				
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")
348.50	348.50	9-5/8" Surface Casing	9-5/8	12-1/4
6,064.45	5,295.26	7" Intermediate Casing	7	8-3/4

Formations					
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)
1,079.71	1,070.78	Ojo Alamo		-0.22	130.545
1,201.68	1,185.90	Kirtland		-0.22	130.545
1,387.94	1,356.14	Fruitland		-0.22	130.545
1,773.99	1,691.74	Pictured Cliffs		-0.22	130.545
1,953.50	1,847.02	Lewis		-0.22	130.545
2,243.03	2,097.48	Chacra_A		-0.22	130.545
3,499.60	3,184.46	Cliff House_Basal		-0.22	130.545
3,545.93	3,224.53	Menefee		-0.22	130.545
4,507.18	4,056.05	Point Lookout		-0.22	130.545
4,750.38	4,266.43	Mancos		-0.22	130.545
5,130.41	4,604.94	MNCS_A		-0.22	130.545
5,232.50	4,704.97	MNCS_B		-0.22	130.545
5,320.70	4,791.94	MNCS_C		-0.22	130.545
5,366.83	4,836.90	MNCS_Cms		-0.22	130.545
5,500.24	4,961.72	MNCS_D		-0.22	130.545
5,631.50	5,073.46	MNCS_E		-0.22	130.545
5,702.05	5,127.28	MNCS_F		-0.22	130.545
5,815.51	5,200.95	MNCS_G		-0.22	130.545
5,939.93	5,260.54	MNCS_H		-0.22	130.545
6,017.62	5,285.25	MNCS_I		-0.22	130.545

Plan Annotations				
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment
		+N/-S (ft)	+E/-W (ft)	
498.50	498.50	0.00	0.00	KOP Begin 3°/100' build
1,502.27	1,456.69	24.53	-256.59	Begin 30.11° tangent
4,960.69	4,448.35	189.68	-1,983.83	Begin 10°/100' drop build/turn
5,484.45	4,947.48	125.73	-2,034.07	Begin 8°/100' build
5,634.45	5,075.82	75.60	-1,975.47	Begin 10°/100' build
5,964.45	5,269.41	-94.46	-1,776.66	70° inc @ 5964.45 MD 5269.41 TVD
6,166.29	5,303.96	-223.05	-1,626.35	Begin 90.18° lateral
18,436.95	5,264.50	-8,199.42	7,698.09	PBHL/TD @ 18436.95 MD 5264.50 TVD



Planning Report - Geographic

Database:	DT_Mar1724_v17	Local Co-ordinate Reference:	Well North Alamito Unit 106 H	
Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)	
Project:	Sandoval County, New Mexico NAD83 NM C	MD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)	
Site:	North Alamito Unit (102 & 106)	North Reference:	Grid	
Well:	North Alamito Unit 106 H	Survey Calculation Method:	Minimum Curvature	
Wellbore:	Original Hole			
Design:	rev3			

Project	Sandoval 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	North Alamito Unit (102 & 106)				
Site Position:		Northing:	1,901,167.83 usft	Latitude:	36.21727000
From:	Lat/Long	Easting:	1,239,107.83 usft	Longitude:	-107.61047300
Position Uncertainty:	0.00 ft	Slot Radius:	13-3/16 "		

Well	North Alamito Unit 106 H, Surf loc: 897 FNL 1158 FEL Section 19-T23N-R07W					
Well Position	+N/-S	0.00 ft	Northing:	1,901,187.20 usft	Latitude:	36.21732300
	+E/-W	0.00 ft	Easting:	1,239,103.38 usft	Longitude:	-107.61048900
Position Uncertainty		0.00 ft	Wellhead Elevation:	ft	Ground Level:	6,962.00 ft
Grid Convergence:		-0.80 °				

Wellbore	Original Hole				
Magnetics	Model Name	Sample Date	Declination (°)	Dip Angle (°)	Field Strength (nT)
	IGRF2020	4/17/2024	8.44	62.70	49,028.15053347

Design	rev3			
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	136.806

Plan Survey Tool Program	Date	5/8/2024		
Depth From (ft)	Depth To (ft)	Survey (Wellbore)	Tool Name	Remarks
1	0.00	18,436.24 rev3 (Original Hole)	MWD	
			OWSG MWD - Standard	



Planning Report - Geographic

Database:	DT_Mar1724_v17	Local Co-ordinate Reference:	Well North Alamito Unit 106 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Project:	Sandoval County, New Mexico NAD83 NM C	MD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Site:	North Alamito Unit (102 & 106)	North Reference:	Grid
Well:	North Alamito Unit 106 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev3		

Plan Sections										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Dogleg Rate (°/100ft)	Build Rate (°/100ft)	Turn Rate (°/100ft)	TFO (°)	Target
0.00	0.00	0.000	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
498.50	0.00	0.000	498.50	0.00	0.00	0.00	0.00	0.00	0.00	
1,502.27	30.11	275.462	1,456.69	24.53	-256.59	3.00	3.00	0.00	275.46	
4,960.69	30.11	275.462	4,448.35	189.68	-1,983.83	0.00	0.00	0.00	0.00	
5,484.45	25.00	130.545	4,947.48	125.73	-2,034.07	10.00	-0.98	-27.67	-162.14	
5,634.45	37.00	130.545	5,075.82	75.60	-1,975.47	8.00	8.00	0.00	0.00	
5,964.45	70.00	130.545	5,269.41	-94.46	-1,776.66	10.00	10.00	0.00	0.00	
6,166.29	90.18	130.545	5,303.96	-223.05	-1,626.35	10.00	10.00	0.00	0.00	
18,436.95	90.18	130.545	5,264.50	-8,199.42	7,698.09	0.00	0.00	0.00	0.00	North Alamito 106 BH



Planning Report - Geographic

Database:	DT_Mar1724_v17	Local Co-ordinate Reference:	Well North Alamito Unit 106 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Project:	Sandoval County, New Mexico NAD83 NM C	MD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Site:	North Alamito Unit (102 & 106)	North Reference:	Grid
Well:	North Alamito Unit 106 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev3		

Planned Survey									
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude
0.00	0.00	0.000	0.00	0.00	0.00	1,901,187.20	1,239,103.38	36.21732300	-107.61048900
50.00	0.00	0.000	50.00	0.00	0.00	1,901,187.20	1,239,103.38	36.21732300	-107.61048900
100.00	0.00	0.000	100.00	0.00	0.00	1,901,187.20	1,239,103.38	36.21732300	-107.61048900
150.00	0.00	0.000	150.00	0.00	0.00	1,901,187.20	1,239,103.38	36.21732300	-107.61048900
200.00	0.00	0.000	200.00	0.00	0.00	1,901,187.20	1,239,103.38	36.21732300	-107.61048900
250.00	0.00	0.000	250.00	0.00	0.00	1,901,187.20	1,239,103.38	36.21732300	-107.61048900
300.00	0.00	0.000	300.00	0.00	0.00	1,901,187.20	1,239,103.38	36.21732300	-107.61048900
348.50	0.00	0.000	348.50	0.00	0.00	1,901,187.20	1,239,103.38	36.21732300	-107.61048900
9-5/8" Surface Casing									
350.00	0.00	0.000	350.00	0.00	0.00	1,901,187.20	1,239,103.38	36.21732300	-107.61048900
400.00	0.00	0.000	400.00	0.00	0.00	1,901,187.20	1,239,103.38	36.21732300	-107.61048900
450.00	0.00	0.000	450.00	0.00	0.00	1,901,187.20	1,239,103.38	36.21732300	-107.61048900
498.50	0.00	0.000	498.50	0.00	0.00	1,901,187.20	1,239,103.38	36.21732300	-107.61048900
KOP Begin 3"/100' build									
500.00	0.05	275.462	500.00	0.00	0.00	1,901,187.20	1,239,103.38	36.21732300	-107.61048901
550.00	1.55	275.462	549.99	0.07	-0.69	1,901,187.26	1,239,102.69	36.21732315	-107.61049135
600.00	3.05	275.462	599.95	0.26	-2.68	1,901,187.45	1,239,100.70	36.21732360	-107.61049811
650.00	4.55	275.462	649.84	0.57	-5.98	1,901,187.77	1,239,097.41	36.21732434	-107.61050929
700.00	6.05	275.462	699.63	1.01	-10.57	1,901,188.21	1,239,092.81	36.21732537	-107.61052488
750.00	7.55	275.462	749.27	1.57	-16.46	1,901,188.77	1,239,086.92	36.21732669	-107.61054487
800.00	9.05	275.462	798.75	2.26	-23.64	1,901,189.46	1,239,079.74	36.21732830	-107.61056924
850.00	10.55	275.462	848.02	3.07	-32.11	1,901,190.27	1,239,071.28	36.21733019	-107.61059797
900.00	12.05	275.462	897.05	4.00	-41.86	1,901,191.20	1,239,061.53	36.21733238	-107.61063106
950.00	13.55	275.462	945.81	5.06	-52.88	1,901,192.25	1,239,050.51	36.21733485	-107.61066846
1,000.00	15.05	275.462	994.26	6.23	-65.17	1,901,193.43	1,239,038.22	36.21733760	-107.61071017
1,050.00	16.55	275.462	1,042.37	7.53	-78.72	1,901,194.72	1,239,024.67	36.21734064	-107.61075615
1,079.71	17.44	275.462	1,070.78	8.35	-87.36	1,901,195.55	1,239,016.03	36.21734257	-107.61078547
Ojo Alamo									
1,100.00	18.05	275.462	1,090.11	8.94	-93.51	1,901,196.14	1,239,009.87	36.21734395	-107.61080637
1,150.00	19.55	275.462	1,137.44	10.47	-109.55	1,901,197.67	1,238,993.84	36.21734754	-107.61086079
1,200.00	21.05	275.462	1,184.33	12.12	-126.81	1,901,199.32	1,238,976.57	36.21735141	-107.61091937
1,201.68	21.10	275.462	1,185.90	12.18	-127.41	1,901,199.38	1,238,975.97	36.21735155	-107.61092142
Kirtland									
1,250.00	22.55	275.462	1,230.76	13.89	-145.29	1,901,201.09	1,238,958.09	36.21735555	-107.61098209
1,300.00	24.05	275.462	1,276.68	15.77	-164.97	1,901,202.97	1,238,938.41	36.21735996	-107.61104889
1,350.00	25.55	275.462	1,322.07	17.77	-185.85	1,901,204.96	1,238,917.54	36.21736464	-107.61111973
1,387.94	26.68	275.462	1,356.14	19.36	-202.47	1,901,206.55	1,238,900.91	36.21736836	-107.61117615
Fruitland									
1,400.00	27.05	275.462	1,366.89	19.88	-207.90	1,901,207.07	1,238,895.49	36.21736958	-107.61119455
1,450.00	28.55	275.462	1,411.12	22.10	-231.10	1,901,209.29	1,238,872.28	36.21737478	-107.61127332
1,500.00	30.05	275.462	1,454.73	24.43	-255.46	1,901,211.62	1,238,847.93	36.21738023	-107.61135597
1,502.27	30.11	275.462	1,456.69	24.53	-256.59	1,901,211.73	1,238,846.79	36.21738049	-107.61135982
Begin 30.11° tangent									
1,550.00	30.11	275.462	1,497.98	26.81	-280.43	1,901,214.01	1,238,822.96	36.21738583	-107.61144071
1,600.00	30.11	275.462	1,541.23	29.20	-305.40	1,901,216.40	1,238,797.99	36.21739142	-107.61152546
1,650.00	30.11	275.462	1,584.48	31.59	-330.37	1,901,218.78	1,238,773.01	36.21739702	-107.61161021
1,700.00	30.11	275.462	1,627.74	33.98	-355.34	1,901,221.17	1,238,748.04	36.21740261	-107.61169496
1,750.00	30.11	275.462	1,670.99	36.36	-380.31	1,901,223.56	1,238,723.07	36.21740820	-107.61177971
1,773.99	30.11	275.462	1,691.74	37.51	-392.29	1,901,224.70	1,238,711.09	36.21741089	-107.61182036
Pictured Cliffs									
1,800.00	30.11	275.462	1,714.24	38.75	-405.29	1,901,225.95	1,238,698.10	36.21741380	-107.61186445
1,850.00	30.11	275.462	1,757.49	41.14	-430.26	1,901,228.33	1,238,673.13	36.21741939	-107.61194920
1,900.00	30.11	275.462	1,800.74	43.53	-455.23	1,901,230.72	1,238,648.16	36.21742499	-107.61203395
1,950.00	30.11	275.462	1,844.00	45.91	-480.20	1,901,233.11	1,238,623.18	36.21743058	-107.61211870



Planning Report - Geographic

Database:	DT_Mar1724_v17	Local Co-ordinate Reference:	Well North Alamito Unit 106 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Project:	Sandoval County, New Mexico NAD83 NM C	MD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Site:	North Alamito Unit (102 & 106)	North Reference:	Grid
Well:	North Alamito Unit 106 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev3		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
1,953.50	30.11	275.462	1,847.02	46.08	-481.95	1,901,233.28	1,238,621.44	36.21743097	-107.61212463	
Lewis										
2,000.00	30.11	275.462	1,887.25	48.30	-505.17	1,901,235.50	1,238,598.21	36.21743617	-107.61220345	
2,050.00	30.11	275.462	1,930.50	50.69	-530.14	1,901,237.88	1,238,573.24	36.21744177	-107.61228819	
2,100.00	30.11	275.462	1,973.75	53.08	-555.12	1,901,240.27	1,238,548.27	36.21744736	-107.61237294	
2,150.00	30.11	275.462	2,017.00	55.46	-580.09	1,901,242.66	1,238,523.30	36.21745295	-107.61245769	
2,200.00	30.11	275.462	2,060.25	57.85	-605.06	1,901,245.05	1,238,498.33	36.21745855	-107.61254244	
2,243.03	30.11	275.462	2,097.48	59.91	-626.55	1,901,247.10	1,238,476.84	36.21746336	-107.61261537	
Chacra_A										
2,250.00	30.11	275.462	2,103.51	60.24	-630.03	1,901,247.44	1,238,473.36	36.21746414	-107.61262719	
2,300.00	30.11	275.462	2,146.76	62.63	-655.00	1,901,249.82	1,238,448.38	36.21746973	-107.61271193	
2,350.00	30.11	275.462	2,190.01	65.01	-679.97	1,901,252.21	1,238,423.41	36.21747533	-107.61279668	
2,400.00	30.11	275.462	2,233.26	67.40	-704.95	1,901,254.60	1,238,398.44	36.21748092	-107.61288143	
2,450.00	30.11	275.462	2,276.51	69.79	-729.92	1,901,256.99	1,238,373.47	36.21748651	-107.61296618	
2,500.00	30.11	275.462	2,319.77	72.18	-754.89	1,901,259.37	1,238,348.50	36.21749211	-107.61305093	
2,550.00	30.11	275.462	2,363.02	74.57	-779.86	1,901,261.76	1,238,323.53	36.21749770	-107.61313567	
2,600.00	30.11	275.462	2,406.27	76.95	-804.83	1,901,264.15	1,238,298.56	36.21750329	-107.61322042	
2,650.00	30.11	275.462	2,449.52	79.34	-829.80	1,901,266.54	1,238,273.58	36.21750889	-107.61330517	
2,700.00	30.11	275.462	2,492.77	81.73	-854.77	1,901,268.92	1,238,248.61	36.21751448	-107.61338992	
2,750.00	30.11	275.462	2,536.02	84.12	-879.75	1,901,271.31	1,238,223.64	36.21752007	-107.61347467	
2,800.00	30.11	275.462	2,579.28	86.50	-904.72	1,901,273.70	1,238,198.67	36.21752566	-107.61355942	
2,850.00	30.11	275.462	2,622.53	88.89	-929.69	1,901,276.09	1,238,173.70	36.21753126	-107.61364416	
2,900.00	30.11	275.462	2,665.78	91.28	-954.66	1,901,278.47	1,238,148.73	36.21753685	-107.61372891	
2,950.00	30.11	275.462	2,709.03	93.67	-979.63	1,901,280.86	1,238,123.75	36.21754244	-107.61381366	
3,000.00	30.11	275.462	2,752.28	96.05	-1,004.60	1,901,283.25	1,238,098.78	36.21754803	-107.61389841	
3,050.00	30.11	275.462	2,795.54	98.44	-1,029.58	1,901,285.64	1,238,073.81	36.21755363	-107.61398316	
3,100.00	30.11	275.462	2,838.79	100.83	-1,054.55	1,901,288.02	1,238,048.84	36.21755922	-107.61406790	
3,150.00	30.11	275.462	2,882.04	103.22	-1,079.52	1,901,290.41	1,238,023.87	36.21756481	-107.61415265	
3,200.00	30.11	275.462	2,925.29	105.60	-1,104.49	1,901,292.80	1,237,998.90	36.21757040	-107.61423740	
3,250.00	30.11	275.462	2,968.54	107.99	-1,129.46	1,901,295.19	1,237,973.93	36.21757600	-107.61432215	
3,300.00	30.11	275.462	3,011.79	110.38	-1,154.43	1,901,297.58	1,237,948.95	36.21758159	-107.61440690	
3,350.00	30.11	275.462	3,055.05	112.77	-1,179.40	1,901,299.96	1,237,923.98	36.21758718	-107.61449165	
3,400.00	30.11	275.462	3,098.30	115.16	-1,204.38	1,901,302.35	1,237,899.01	36.21759277	-107.61457639	
3,450.00	30.11	275.462	3,141.55	117.54	-1,229.35	1,901,304.74	1,237,874.04	36.21759837	-107.61466114	
3,499.60	30.11	275.462	3,184.46	119.91	-1,254.12	1,901,307.11	1,237,849.27	36.21760391	-107.61474522	
Cliff House_Basal										
3,500.00	30.11	275.462	3,184.80	119.93	-1,254.32	1,901,307.13	1,237,849.07	36.21760396	-107.61474589	
3,545.93	30.11	275.462	3,224.53	122.12	-1,277.26	1,901,309.32	1,237,826.13	36.21760909	-107.61482374	
Menefee										
3,550.00	30.11	275.462	3,228.05	122.32	-1,279.29	1,901,309.51	1,237,824.10	36.21760955	-107.61483064	
3,600.00	30.11	275.462	3,271.31	124.71	-1,304.26	1,901,311.90	1,237,799.12	36.21761514	-107.61491539	
3,650.00	30.11	275.462	3,314.56	127.09	-1,329.23	1,901,314.29	1,237,774.15	36.21762073	-107.61500014	
3,700.00	30.11	275.462	3,357.81	129.48	-1,354.21	1,901,316.68	1,237,749.18	36.21762632	-107.61508488	
3,750.00	30.11	275.462	3,401.06	131.87	-1,379.18	1,901,319.06	1,237,724.21	36.21763192	-107.61516963	
3,800.00	30.11	275.462	3,444.31	134.26	-1,404.15	1,901,321.45	1,237,699.24	36.21763751	-107.61525438	
3,850.00	30.11	275.462	3,487.56	136.64	-1,429.12	1,901,323.84	1,237,674.27	36.21764310	-107.61533913	
3,900.00	30.11	275.462	3,530.82	139.03	-1,454.09	1,901,326.23	1,237,649.30	36.21764869	-107.61542388	
3,950.00	30.11	275.462	3,574.07	141.42	-1,479.06	1,901,328.61	1,237,624.32	36.21765428	-107.61550863	
4,000.00	30.11	275.462	3,617.32	143.81	-1,504.04	1,901,331.00	1,237,599.35	36.21765987	-107.61559337	
4,050.00	30.11	275.462	3,660.57	146.19	-1,529.01	1,901,333.39	1,237,574.38	36.21766546	-107.61567812	
4,100.00	30.11	275.462	3,703.82	148.58	-1,553.98	1,901,335.78	1,237,549.41	36.21767106	-107.61576287	
4,150.00	30.11	275.462	3,747.08	150.97	-1,578.95	1,901,338.16	1,237,524.44	36.21767665	-107.61584762	
4,200.00	30.11	275.462	3,790.33	153.36	-1,603.92	1,901,340.55	1,237,499.47	36.21768224	-107.61593237	
4,250.00	30.11	275.462	3,833.58	155.74	-1,628.89	1,901,342.94	1,237,474.50	36.21768783	-107.61601712	



Planning Report - Geographic

Database:	DT_Mar1724_v17	Local Co-ordinate Reference:	Well North Alamito Unit 106 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Project:	Sandoval County, New Mexico NAD83 NM C	MD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Site:	North Alamito Unit (102 & 106)	North Reference:	Grid
Well:	North Alamito Unit 106 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev3		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
4,300.00	30.11	275.462	3,876.83	158.13	-1,653.86	1,901,345.33	1,237,449.52	36.21769342	-107.61610186	
4,350.00	30.11	275.462	3,920.08	160.52	-1,678.84	1,901,347.72	1,237,424.55	36.21769901	-107.61618661	
4,400.00	30.11	275.462	3,963.33	162.91	-1,703.81	1,901,350.10	1,237,399.58	36.21770460	-107.61627136	
4,450.00	30.11	275.462	4,006.59	165.30	-1,728.78	1,901,352.49	1,237,374.61	36.21771019	-107.61635611	
4,500.00	30.11	275.462	4,049.84	167.68	-1,753.75	1,901,354.88	1,237,349.64	36.21771578	-107.61644086	
4,507.18	30.11	275.462	4,056.05	168.03	-1,757.34	1,901,355.22	1,237,346.05	36.21771659	-107.61645302	
Point Lookout										
4,550.00	30.11	275.462	4,093.09	170.07	-1,778.72	1,901,357.27	1,237,324.67	36.21772137	-107.61652561	
4,600.00	30.11	275.462	4,136.34	172.46	-1,803.69	1,901,359.65	1,237,299.69	36.21772696	-107.61661035	
4,650.00	30.11	275.462	4,179.59	174.85	-1,828.67	1,901,362.04	1,237,274.72	36.21773255	-107.61669510	
4,700.00	30.11	275.462	4,222.85	177.23	-1,853.64	1,901,364.43	1,237,249.75	36.21773815	-107.61677985	
4,750.00	30.11	275.462	4,266.10	179.62	-1,878.61	1,901,366.82	1,237,224.78	36.21774374	-107.61686460	
4,750.38	30.11	275.462	4,266.43	179.64	-1,878.80	1,901,366.83	1,237,224.59	36.21774378	-107.61686525	
Mancos										
4,800.00	30.11	275.462	4,309.35	182.01	-1,903.58	1,901,369.20	1,237,199.81	36.21774933	-107.61694935	
4,850.00	30.11	275.462	4,352.60	184.40	-1,928.55	1,901,371.59	1,237,174.84	36.21775492	-107.61703410	
4,900.00	30.11	275.462	4,395.85	186.78	-1,953.52	1,901,373.98	1,237,149.87	36.21776051	-107.61711885	
4,950.00	30.11	275.462	4,439.11	189.17	-1,978.49	1,901,376.37	1,237,124.89	36.21776610	-107.61720359	
4,960.69	30.11	275.462	4,448.35	189.68	-1,983.83	1,901,376.88	1,237,119.56	36.21776729	-107.61722171	
Begin 10°/100' drop build/turn										
5,000.00	26.40	272.751	4,482.97	191.04	-2,002.39	1,901,378.24	1,237,101.00	36.21777030	-107.61728465	
5,050.00	21.77	268.086	4,528.61	191.26	-2,022.77	1,901,378.46	1,237,080.62	36.21777013	-107.61735374	
5,100.00	17.34	261.117	4,575.72	189.80	-2,039.40	1,901,377.00	1,237,063.98	36.21776547	-107.61741006	
5,130.41	14.82	254.968	4,604.94	188.09	-2,047.64	1,901,375.29	1,237,055.75	36.21776046	-107.61743789	
MNCS_A										
5,150.00	13.30	249.838	4,623.95	186.67	-2,052.17	1,901,373.86	1,237,051.22	36.21775637	-107.61745319	
5,200.00	10.14	230.506	4,672.92	181.88	-2,060.98	1,901,369.08	1,237,042.41	36.21774289	-107.61748279	
5,232.50	9.02	212.076	4,704.97	177.91	-2,064.54	1,901,365.10	1,237,038.85	36.21773182	-107.61749467	
MNCS_B										
5,250.00	8.85	200.835	4,722.26	175.48	-2,065.74	1,901,362.68	1,237,037.65	36.21772513	-107.61749865	
5,300.00	10.17	171.261	4,771.60	167.52	-2,066.44	1,901,354.72	1,237,036.95	36.21770323	-107.61750063	
5,320.70	11.33	162.044	4,791.94	163.78	-2,065.54	1,901,350.98	1,237,037.85	36.21769299	-107.61749739	
MNCS_C										
5,350.00	13.35	152.056	4,820.57	158.05	-2,063.06	1,901,345.25	1,237,040.33	36.21767736	-107.61748873	
5,366.83	14.64	147.614	4,836.90	154.54	-2,061.01	1,901,341.73	1,237,042.38	36.21766779	-107.61748161	
MNCS_Cms										
5,400.00	17.39	140.849	4,868.78	147.15	-2,055.64	1,901,334.35	1,237,047.75	36.21764771	-107.61746304	
5,450.00	21.83	133.918	4,915.87	134.90	-2,044.22	1,901,322.10	1,237,059.17	36.21761451	-107.61742375	
5,484.45	25.00	130.545	4,947.48	125.73	-2,034.07	1,901,312.92	1,237,069.32	36.21758970	-107.61738892	
Begin 8°/100' build										
5,500.00	26.24	130.545	4,961.50	121.36	-2,028.96	1,901,308.55	1,237,074.43	36.21757790	-107.61737139	
5,500.24	26.24	130.545	4,961.72	121.29	-2,028.88	1,901,308.48	1,237,074.51	36.21757771	-107.61737110	
MNCS_D										
5,550.00	30.24	130.545	5,005.54	105.98	-2,010.98	1,901,293.17	1,237,092.41	36.21753636	-107.61730972	
5,600.00	34.24	130.545	5,047.82	88.64	-1,990.71	1,901,275.84	1,237,112.67	36.21748953	-107.61724020	
5,631.50	36.76	130.545	5,073.46	76.75	-1,976.82	1,901,263.95	1,237,126.57	36.21745742	-107.61719253	
MNCS_E										
5,634.45	37.00	130.545	5,075.82	75.60	-1,975.47	1,901,262.80	1,237,127.92	36.21745431	-107.61718791	
Begin 10°/100' build										
5,650.00	38.56	130.545	5,088.11	69.41	-1,968.23	1,901,256.60	1,237,135.16	36.21743758	-107.61716308	
5,700.00	43.56	130.545	5,125.81	48.07	-1,943.28	1,901,235.26	1,237,160.11	36.21737994	-107.61707751	
5,702.05	43.76	130.545	5,127.28	47.15	-1,942.21	1,901,234.34	1,237,161.18	36.21737746	-107.61707383	
MNCS_F										



Planning Report - Geographic

Database:	DT_Mar1724_v17	Local Co-ordinate Reference:	Well North Alamito Unit 106 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Project:	Sandoval County, New Mexico NAD83 NM C	MD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Site:	North Alamito Unit (102 & 106)	North Reference:	Grid
Well:	North Alamito Unit 106 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev3		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
5,750.00	48.56	130.545	5,160.49	24.67	-1,915.93	1,901,211.87	1,237,187.45	36.21731675	-107.61698370	
5,800.00	53.56	130.545	5,191.91	-0.60	-1,886.39	1,901,186.60	1,237,217.00	36.21724849	-107.61688237	
5,815.51	55.11	130.545	5,200.95	-8.79	-1,876.82	1,901,178.41	1,237,226.57	36.21722636	-107.61684953	
MNCS_G										
5,850.00	58.56	130.545	5,219.82	-27.55	-1,854.88	1,901,159.64	1,237,248.50	36.21717568	-107.61677429	
5,900.00	63.56	130.545	5,244.01	-55.99	-1,821.65	1,901,131.21	1,237,281.74	36.21709888	-107.61666028	
5,939.93	67.55	130.545	5,260.54	-79.61	-1,794.03	1,901,107.58	1,237,309.36	36.21703506	-107.61656555	
MNCS_H										
5,950.00	68.56	130.545	5,264.30	-85.68	-1,786.93	1,901,101.51	1,237,316.46	36.21701867	-107.61654121	
5,964.45	70.00	130.545	5,269.41	-94.46	-1,776.66	1,901,092.73	1,237,326.72	36.21699495	-107.61650599	
70° inc @ 5964.45 MD 5269.41 TVD										
6,000.00	73.56	130.545	5,280.53	-116.41	-1,751.01	1,901,070.78	1,237,352.38	36.21693566	-107.61641798	
6,017.62	75.32	130.545	5,285.25	-127.45	-1,738.11	1,901,059.75	1,237,365.28	36.21690586	-107.61637374	
MNCS_I										
6,050.00	78.56	130.545	5,292.57	-147.95	-1,714.14	1,901,039.25	1,237,389.25	36.21685048	-107.61629154	
6,064.45	80.00	130.545	5,295.26	-157.18	-1,703.35	1,901,030.02	1,237,400.03	36.21682556	-107.61625453	
7" Intermediate Casing										
6,100.00	83.56	130.545	5,300.34	-180.04	-1,676.62	1,901,007.15	1,237,426.77	36.21676379	-107.61616284	
6,150.00	88.56	130.545	5,303.78	-212.46	-1,638.73	1,900,974.74	1,237,464.66	36.21667623	-107.61603287	
6,166.29	90.18	130.545	5,303.96	-223.05	-1,626.35	1,900,964.15	1,237,477.04	36.21664763	-107.61599041	
Begin 90.18° lateral										
6,200.00	90.18	130.545	5,303.85	-244.96	-1,600.73	1,900,942.24	1,237,502.65	36.21658844	-107.61590255	
6,250.00	90.18	130.545	5,303.69	-277.46	-1,562.74	1,900,909.73	1,237,540.65	36.21650065	-107.61577222	
6,300.00	90.18	130.545	5,303.53	-309.96	-1,524.74	1,900,877.23	1,237,578.64	36.21641286	-107.61564190	
6,350.00	90.18	130.545	5,303.37	-342.46	-1,486.75	1,900,844.73	1,237,616.64	36.21632507	-107.61551158	
6,400.00	90.18	130.545	5,303.21	-374.97	-1,448.75	1,900,812.23	1,237,654.63	36.21623728	-107.61538125	
6,450.00	90.18	130.545	5,303.05	-407.47	-1,410.76	1,900,779.73	1,237,692.63	36.21614948	-107.61525093	
6,500.00	90.18	130.545	5,302.89	-439.97	-1,372.77	1,900,747.23	1,237,730.62	36.21606169	-107.61512061	
6,550.00	90.18	130.545	5,302.73	-472.47	-1,334.77	1,900,714.72	1,237,768.62	36.21597390	-107.61499029	
6,600.00	90.18	130.545	5,302.57	-504.97	-1,296.78	1,900,682.22	1,237,806.61	36.21588611	-107.61485997	
6,650.00	90.18	130.545	5,302.40	-537.48	-1,258.78	1,900,649.72	1,237,844.61	36.21579832	-107.61472965	
6,700.00	90.18	130.545	5,302.24	-569.98	-1,220.79	1,900,617.22	1,237,882.60	36.21571052	-107.61459933	
6,750.00	90.18	130.545	5,302.08	-602.48	-1,182.79	1,900,584.72	1,237,920.60	36.21562273	-107.61446901	
6,800.00	90.18	130.545	5,301.92	-634.98	-1,144.80	1,900,552.22	1,237,958.59	36.21553494	-107.61433869	
6,850.00	90.18	130.545	5,301.76	-667.48	-1,106.80	1,900,519.71	1,237,996.59	36.21544714	-107.61420837	
6,900.00	90.18	130.545	5,301.60	-699.98	-1,068.81	1,900,487.21	1,238,034.58	36.21535935	-107.61407805	
6,950.00	90.18	130.545	5,301.44	-732.49	-1,030.81	1,900,454.71	1,238,072.58	36.21527156	-107.61394773	
7,000.00	90.18	130.545	5,301.28	-764.99	-992.82	1,900,422.21	1,238,110.57	36.21518376	-107.61381741	
7,050.00	90.18	130.545	5,301.12	-797.49	-954.82	1,900,389.71	1,238,148.56	36.21509597	-107.61368709	
7,100.00	90.18	130.545	5,300.96	-829.99	-916.83	1,900,357.21	1,238,186.56	36.21500818	-107.61355677	
7,150.00	90.18	130.545	5,300.80	-862.49	-878.83	1,900,324.70	1,238,224.55	36.21492038	-107.61342645	
7,200.00	90.18	130.545	5,300.64	-895.00	-840.84	1,900,292.20	1,238,262.55	36.21483259	-107.61329614	
7,250.00	90.18	130.545	5,300.48	-927.50	-802.84	1,900,259.70	1,238,300.54	36.21474479	-107.61316582	
7,300.00	90.18	130.545	5,300.31	-960.00	-764.85	1,900,227.20	1,238,338.54	36.21465700	-107.61303550	
7,350.00	90.18	130.545	5,300.15	-992.50	-726.85	1,900,194.70	1,238,376.53	36.21456920	-107.61290518	
7,400.00	90.18	130.545	5,299.99	-1,025.00	-688.86	1,900,162.20	1,238,414.53	36.21448141	-107.61277487	
7,450.00	90.18	130.545	5,299.83	-1,057.50	-650.86	1,900,129.69	1,238,452.52	36.21439361	-107.61264455	
7,500.00	90.18	130.545	5,299.67	-1,090.01	-612.87	1,900,097.19	1,238,490.52	36.21430582	-107.61251424	
7,550.00	90.18	130.545	5,299.51	-1,122.51	-574.87	1,900,064.69	1,238,528.51	36.21421802	-107.61238392	
7,600.00	90.18	130.545	5,299.35	-1,155.01	-536.88	1,900,032.19	1,238,566.51	36.21413023	-107.61225360	
7,650.00	90.18	130.545	5,299.19	-1,187.51	-498.88	1,899,999.69	1,238,604.50	36.21404243	-107.61212329	
7,700.00	90.18	130.545	5,299.03	-1,220.01	-460.89	1,899,967.18	1,238,642.50	36.21395464	-107.61199297	
7,750.00	90.18	130.545	5,298.87	-1,252.51	-422.89	1,899,934.68	1,238,680.49	36.21386684	-107.61186266	
7,800.00	90.18	130.545	5,298.71	-1,285.02	-384.90	1,899,902.18	1,238,718.49	36.21377904	-107.61173235	



Planning Report - Geographic

Database:	DT_Mar1724_v17	Local Co-ordinate Reference:	Well North Alamito Unit 106 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Project:	Sandoval County, New Mexico NAD83 NM C	MD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Site:	North Alamito Unit (102 & 106)	North Reference:	Grid
Well:	North Alamito Unit 106 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev3		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
7,850.00	90.18	130.545	5,298.55	-1,317.52	-346.90	1,899,869.68	1,238,756.48	36.21369125	-107.61160203	
7,900.00	90.18	130.545	5,298.39	-1,350.02	-308.91	1,899,837.18	1,238,794.48	36.21360345	-107.61147172	
7,950.00	90.18	130.545	5,298.22	-1,382.52	-270.91	1,899,804.68	1,238,832.47	36.21351565	-107.61134141	
8,000.00	90.18	130.545	5,298.06	-1,415.02	-232.92	1,899,772.17	1,238,870.47	36.21342786	-107.61121109	
8,050.00	90.18	130.545	5,297.90	-1,447.53	-194.93	1,899,739.67	1,238,908.46	36.21334006	-107.61108078	
8,100.00	90.18	130.545	5,297.74	-1,480.03	-156.93	1,899,707.17	1,238,946.45	36.21325226	-107.61095047	
8,150.00	90.18	130.545	5,297.58	-1,512.53	-118.94	1,899,674.67	1,238,984.45	36.21316447	-107.61082015	
8,200.00	90.18	130.545	5,297.42	-1,545.03	-80.94	1,899,642.17	1,239,022.44	36.21307667	-107.61068984	
8,250.00	90.18	130.545	5,297.26	-1,577.53	-42.95	1,899,609.67	1,239,060.44	36.21298887	-107.61055953	
8,300.00	90.18	130.545	5,297.10	-1,610.03	-4.95	1,899,577.16	1,239,098.43	36.21290108	-107.61042922	
8,350.00	90.18	130.545	5,296.94	-1,642.54	33.04	1,899,544.66	1,239,136.43	36.21281328	-107.61029891	
8,400.00	90.18	130.545	5,296.78	-1,675.04	71.04	1,899,512.16	1,239,174.42	36.21272548	-107.61016860	
8,450.00	90.18	130.545	5,296.62	-1,707.54	109.03	1,899,479.66	1,239,212.42	36.21263768	-107.61003829	
8,500.00	90.18	130.545	5,296.46	-1,740.04	147.03	1,899,447.16	1,239,250.41	36.21254988	-107.60990798	
8,550.00	90.18	130.545	5,296.29	-1,772.54	185.02	1,899,414.66	1,239,288.41	36.21246209	-107.60977767	
8,600.00	90.18	130.545	5,296.13	-1,805.05	223.02	1,899,382.15	1,239,326.40	36.21237429	-107.60964736	
8,650.00	90.18	130.545	5,295.97	-1,837.55	261.01	1,899,349.65	1,239,364.40	36.21228649	-107.60951705	
8,700.00	90.18	130.545	5,295.81	-1,870.05	299.01	1,899,317.15	1,239,402.39	36.21219869	-107.60938674	
8,750.00	90.18	130.545	5,295.65	-1,902.55	337.00	1,899,284.65	1,239,440.39	36.21211089	-107.60925643	
8,800.00	90.18	130.545	5,295.49	-1,935.05	375.00	1,899,252.15	1,239,478.38	36.21202309	-107.60912612	
8,850.00	90.18	130.545	5,295.33	-1,967.55	412.99	1,899,219.65	1,239,516.38	36.21193529	-107.60899581	
8,900.00	90.18	130.545	5,295.17	-2,000.06	450.99	1,899,187.14	1,239,554.37	36.21184749	-107.60886551	
8,950.00	90.18	130.545	5,295.01	-2,032.56	488.98	1,899,154.64	1,239,592.37	36.21175969	-107.60873520	
9,000.00	90.18	130.545	5,294.85	-2,065.06	526.98	1,899,122.14	1,239,630.36	36.21167189	-107.60860489	
9,050.00	90.18	130.545	5,294.69	-2,097.56	564.97	1,899,089.64	1,239,668.36	36.21158409	-107.60847458	
9,100.00	90.18	130.545	5,294.53	-2,130.06	602.97	1,899,057.14	1,239,706.35	36.21149629	-107.60834428	
9,150.00	90.18	130.545	5,294.37	-2,162.56	640.96	1,899,024.63	1,239,744.34	36.21140849	-107.60821397	
9,200.00	90.18	130.545	5,294.20	-2,195.07	678.96	1,898,992.13	1,239,782.34	36.21132069	-107.60808366	
9,250.00	90.18	130.545	5,294.04	-2,227.57	716.95	1,898,959.63	1,239,820.33	36.21123289	-107.60795336	
9,300.00	90.18	130.545	5,293.88	-2,260.07	754.95	1,898,927.13	1,239,858.33	36.21114509	-107.60782305	
9,350.00	90.18	130.545	5,293.72	-2,292.57	792.94	1,898,894.63	1,239,896.32	36.21105729	-107.60769275	
9,400.00	90.18	130.545	5,293.56	-2,325.07	830.94	1,898,862.13	1,239,934.32	36.21096949	-107.60756244	
9,450.00	90.18	130.545	5,293.40	-2,357.58	868.93	1,898,829.62	1,239,972.31	36.21088169	-107.60743214	
9,500.00	90.18	130.545	5,293.24	-2,390.08	906.93	1,898,797.12	1,240,010.31	36.21079389	-107.60730183	
9,550.00	90.18	130.545	5,293.08	-2,422.58	944.92	1,898,764.62	1,240,048.30	36.21070609	-107.60717153	
9,600.00	90.18	130.545	5,292.92	-2,455.08	982.91	1,898,732.12	1,240,086.30	36.21061829	-107.60704123	
9,650.00	90.18	130.545	5,292.76	-2,487.58	1,020.91	1,898,699.62	1,240,124.29	36.21053048	-107.60691092	
9,700.00	90.18	130.545	5,292.60	-2,520.08	1,058.90	1,898,667.12	1,240,162.29	36.21044268	-107.60678062	
9,750.00	90.18	130.545	5,292.44	-2,552.59	1,096.90	1,898,634.61	1,240,200.28	36.21035488	-107.60665032	
9,800.00	90.18	130.545	5,292.27	-2,585.09	1,134.89	1,898,602.11	1,240,238.28	36.21026708	-107.60652001	
9,850.00	90.18	130.545	5,292.11	-2,617.59	1,172.89	1,898,569.61	1,240,276.27	36.21017928	-107.60638971	
9,900.00	90.18	130.545	5,291.95	-2,650.09	1,210.88	1,898,537.11	1,240,314.27	36.21009147	-107.60625941	
9,950.00	90.18	130.545	5,291.79	-2,682.59	1,248.88	1,898,504.61	1,240,352.26	36.21000367	-107.60612911	
10,000.00	90.18	130.545	5,291.63	-2,715.10	1,286.87	1,898,472.11	1,240,390.26	36.20991587	-107.60599881	
10,050.00	90.18	130.545	5,291.47	-2,747.60	1,324.87	1,898,439.60	1,240,428.25	36.20982807	-107.60586850	
10,100.00	90.18	130.545	5,291.31	-2,780.10	1,362.86	1,898,407.10	1,240,466.25	36.20974026	-107.60573820	
10,150.00	90.18	130.545	5,291.15	-2,812.60	1,400.86	1,898,374.60	1,240,504.24	36.20965246	-107.60560790	
10,200.00	90.18	130.545	5,290.99	-2,845.10	1,438.85	1,898,342.10	1,240,542.23	36.20956466	-107.60547760	
10,250.00	90.18	130.545	5,290.83	-2,877.60	1,476.85	1,898,309.60	1,240,580.23	36.20947685	-107.60534730	
10,300.00	90.18	130.545	5,290.67	-2,910.11	1,514.84	1,898,277.10	1,240,618.22	36.20938905	-107.60521700	
10,350.00	90.18	130.545	5,290.51	-2,942.61	1,552.84	1,898,244.59	1,240,656.22	36.20930125	-107.60508670	
10,400.00	90.18	130.545	5,290.35	-2,975.11	1,590.83	1,898,212.09	1,240,694.21	36.20921344	-107.60495640	
10,450.00	90.18	130.545	5,290.18	-3,007.61	1,628.83	1,898,179.59	1,240,732.21	36.20912564	-107.60482611	
10,500.00	90.18	130.545	5,290.02	-3,040.11	1,666.82	1,898,147.09	1,240,770.20	36.20903784	-107.60469581	
10,550.00	90.18	130.545	5,289.86	-3,072.62	1,704.82	1,898,114.59	1,240,808.20	36.20895003	-107.60456551	



Planning Report - Geographic

Database:	DT_Mar1724_v17	Local Co-ordinate Reference:	Well North Alamito Unit 106 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Project:	Sandoval County, New Mexico NAD83 NM C	MD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Site:	North Alamito Unit (102 & 106)	North Reference:	Grid
Well:	North Alamito Unit 106 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev3		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
10,600.00	90.18	130.545	5,289.70	-3,105.12	1,742.81	1,898,082.08	1,240,846.19	36.20886223	-107.60443521	
10,650.00	90.18	130.545	5,289.54	-3,137.62	1,780.81	1,898,049.58	1,240,884.19	36.20877442	-107.60430491	
10,700.00	90.18	130.545	5,289.38	-3,170.12	1,818.80	1,898,017.08	1,240,922.18	36.20868662	-107.60417462	
10,750.00	90.18	130.545	5,289.22	-3,202.62	1,856.80	1,897,984.58	1,240,960.18	36.20859881	-107.60404432	
10,800.00	90.18	130.545	5,289.06	-3,235.12	1,894.79	1,897,952.08	1,240,998.17	36.20851101	-107.60391402	
10,850.00	90.18	130.545	5,288.90	-3,267.63	1,932.79	1,897,919.58	1,241,036.17	36.20842320	-107.60378372	
10,900.00	90.18	130.545	5,288.74	-3,300.13	1,970.78	1,897,887.07	1,241,074.16	36.20833540	-107.60365343	
10,950.00	90.18	130.545	5,288.58	-3,332.63	2,008.78	1,897,854.57	1,241,112.16	36.20824759	-107.60352313	
11,000.00	90.18	130.545	5,288.42	-3,365.13	2,046.77	1,897,822.07	1,241,150.15	36.20815979	-107.60339284	
11,050.00	90.18	130.545	5,288.26	-3,397.63	2,084.77	1,897,789.57	1,241,188.15	36.20807198	-107.60326254	
11,100.00	90.18	130.545	5,288.09	-3,430.13	2,122.76	1,897,757.07	1,241,226.14	36.20798417	-107.60313225	
11,150.00	90.18	130.545	5,287.93	-3,462.64	2,160.75	1,897,724.57	1,241,264.14	36.20789637	-107.60300195	
11,200.00	90.18	130.545	5,287.77	-3,495.14	2,198.75	1,897,692.06	1,241,302.13	36.20780856	-107.60287166	
11,250.00	90.18	130.545	5,287.61	-3,527.64	2,236.74	1,897,659.56	1,241,340.12	36.20772076	-107.60274136	
11,300.00	90.18	130.545	5,287.45	-3,560.14	2,274.74	1,897,627.06	1,241,378.12	36.20763295	-107.60261107	
11,350.00	90.18	130.545	5,287.29	-3,592.64	2,312.73	1,897,594.56	1,241,416.11	36.20754514	-107.60248078	
11,400.00	90.18	130.545	5,287.13	-3,625.15	2,350.73	1,897,562.06	1,241,454.11	36.20745734	-107.60235048	
11,450.00	90.18	130.545	5,286.97	-3,657.65	2,388.72	1,897,529.56	1,241,492.10	36.20736953	-107.60222019	
11,500.00	90.18	130.545	5,286.81	-3,690.15	2,426.72	1,897,497.05	1,241,530.10	36.20728172	-107.60208990	
11,550.00	90.18	130.545	5,286.65	-3,722.65	2,464.71	1,897,464.55	1,241,568.09	36.20719391	-107.60195960	
11,600.00	90.18	130.545	5,286.49	-3,755.15	2,502.71	1,897,432.05	1,241,606.09	36.20710611	-107.60182931	
11,650.00	90.18	130.545	5,286.33	-3,787.65	2,540.70	1,897,399.55	1,241,644.08	36.20701830	-107.60169902	
11,700.00	90.18	130.545	5,286.16	-3,820.16	2,578.70	1,897,367.05	1,241,682.08	36.20693049	-107.60156873	
11,750.00	90.18	130.545	5,286.00	-3,852.66	2,616.69	1,897,334.55	1,241,720.07	36.20684268	-107.60143844	
11,800.00	90.18	130.545	5,285.84	-3,885.16	2,654.69	1,897,302.04	1,241,758.07	36.20675488	-107.60130815	
11,850.00	90.18	130.545	5,285.68	-3,917.66	2,692.68	1,897,269.54	1,241,796.06	36.20666707	-107.60117785	
11,900.00	90.18	130.545	5,285.52	-3,950.16	2,730.68	1,897,237.04	1,241,834.06	36.20657926	-107.60104756	
11,950.00	90.18	130.545	5,285.36	-3,982.67	2,768.67	1,897,204.54	1,241,872.05	36.20649145	-107.60091727	
12,000.00	90.18	130.545	5,285.20	-4,015.17	2,806.67	1,897,172.04	1,241,910.05	36.20640364	-107.60078698	
12,050.00	90.18	130.545	5,285.04	-4,047.67	2,844.66	1,897,139.53	1,241,948.04	36.20631583	-107.60065669	
12,100.00	90.18	130.545	5,284.88	-4,080.17	2,882.66	1,897,107.03	1,241,986.04	36.20622802	-107.60052640	
12,150.00	90.18	130.545	5,284.72	-4,112.67	2,920.65	1,897,074.53	1,242,024.03	36.20614022	-107.60039612	
12,200.00	90.18	130.545	5,284.56	-4,145.17	2,958.65	1,897,042.03	1,242,062.03	36.20605241	-107.60026583	
12,250.00	90.18	130.545	5,284.40	-4,177.68	2,996.64	1,897,009.53	1,242,100.02	36.20596460	-107.60013554	
12,300.00	90.18	130.545	5,284.24	-4,210.18	3,034.64	1,896,977.03	1,242,138.01	36.20587679	-107.60000525	
12,350.00	90.18	130.545	5,284.07	-4,242.68	3,072.63	1,896,944.52	1,242,176.01	36.20578898	-107.59987496	
12,400.00	90.18	130.545	5,283.91	-4,275.18	3,110.63	1,896,912.02	1,242,214.00	36.20570117	-107.59974467	
12,450.00	90.18	130.545	5,283.75	-4,307.68	3,148.62	1,896,879.52	1,242,252.00	36.20561336	-107.59961439	
12,500.00	90.18	130.545	5,283.59	-4,340.19	3,186.62	1,896,847.02	1,242,289.99	36.20552555	-107.59948410	
12,550.00	90.18	130.545	5,283.43	-4,372.69	3,224.61	1,896,814.52	1,242,327.99	36.20543774	-107.59935381	
12,600.00	90.18	130.545	5,283.27	-4,405.19	3,262.61	1,896,782.02	1,242,365.98	36.20534993	-107.59922353	
12,650.00	90.18	130.545	5,283.11	-4,437.69	3,300.60	1,896,749.51	1,242,403.98	36.20526212	-107.59909324	
12,700.00	90.18	130.545	5,282.95	-4,470.19	3,338.59	1,896,717.01	1,242,441.97	36.20517431	-107.59896296	
12,750.00	90.18	130.545	5,282.79	-4,502.69	3,376.59	1,896,684.51	1,242,479.97	36.20508650	-107.59883267	
12,800.00	90.18	130.545	5,282.63	-4,535.20	3,414.58	1,896,652.01	1,242,517.96	36.20499868	-107.59870238	
12,850.00	90.18	130.545	5,282.47	-4,567.70	3,452.58	1,896,619.51	1,242,555.96	36.20491087	-107.59857210	
12,900.00	90.18	130.545	5,282.31	-4,600.20	3,490.57	1,896,587.01	1,242,593.95	36.20482306	-107.59844181	
12,950.00	90.18	130.545	5,282.15	-4,632.70	3,528.57	1,896,554.50	1,242,631.95	36.20473525	-107.59831153	
13,000.00	90.18	130.545	5,281.98	-4,665.20	3,566.56	1,896,522.00	1,242,669.94	36.20464744	-107.59818125	
13,050.00	90.18	130.545	5,281.82	-4,697.70	3,604.56	1,896,489.50	1,242,707.94	36.20455963	-107.59805096	
13,100.00	90.18	130.545	5,281.66	-4,730.21	3,642.55	1,896,457.00	1,242,745.93	36.20447182	-107.59792068	
13,150.00	90.18	130.545	5,281.50	-4,762.71	3,680.55	1,896,424.50	1,242,783.93	36.20438400	-107.59779040	
13,200.00	90.18	130.545	5,281.34	-4,795.21	3,718.54	1,896,391.99	1,242,821.92	36.20429619	-107.59766011	
13,250.00	90.18	130.545	5,281.18	-4,827.71	3,756.54	1,896,359.49	1,242,859.92	36.20420838	-107.59752983	
13,300.00	90.18	130.545	5,281.02	-4,860.21	3,794.53	1,896,326.99	1,242,897.91	36.20412057	-107.59739955	



Planning Report - Geographic

Database:	DT_Mar1724_v17	Local Co-ordinate Reference:	Well North Alamito Unit 106 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Project:	Sandoval County, New Mexico NAD83 NM C	MD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Site:	North Alamito Unit (102 & 106)	North Reference:	Grid
Well:	North Alamito Unit 106 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev3		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
13,350.00	90.18	130.545	5,280.86	-4,892.72	3,832.53	1,896,294.49	1,242,935.90	36.20403275	-107.59726927	
13,400.00	90.18	130.545	5,280.70	-4,925.22	3,870.52	1,896,261.99	1,242,973.90	36.20394494	-107.59713898	
13,450.00	90.18	130.545	5,280.54	-4,957.72	3,908.52	1,896,229.49	1,243,011.89	36.20385713	-107.59700870	
13,500.00	90.18	130.545	5,280.38	-4,990.22	3,946.51	1,896,196.98	1,243,049.89	36.20376931	-107.59687842	
13,550.00	90.18	130.545	5,280.22	-5,022.72	3,984.51	1,896,164.48	1,243,087.88	36.20368150	-107.59674814	
13,600.00	90.18	130.545	5,280.05	-5,055.22	4,022.50	1,896,131.98	1,243,125.88	36.20359369	-107.59661786	
13,650.00	90.18	130.545	5,279.89	-5,087.73	4,060.50	1,896,099.48	1,243,163.87	36.20350587	-107.59648758	
13,700.00	90.18	130.545	5,279.73	-5,120.23	4,098.49	1,896,066.98	1,243,201.87	36.20341806	-107.59635730	
13,750.00	90.18	130.545	5,279.57	-5,152.73	4,136.49	1,896,034.48	1,243,239.86	36.20333025	-107.59622702	
13,800.00	90.18	130.545	5,279.41	-5,185.23	4,174.48	1,896,001.97	1,243,277.86	36.20324243	-107.59609674	
13,850.00	90.18	130.545	5,279.25	-5,217.73	4,212.48	1,895,969.47	1,243,315.85	36.20315462	-107.59596646	
13,900.00	90.18	130.545	5,279.09	-5,250.24	4,250.47	1,895,936.97	1,243,353.85	36.20306680	-107.59583618	
13,950.00	90.18	130.545	5,278.93	-5,282.74	4,288.47	1,895,904.47	1,243,391.84	36.20297899	-107.59570590	
14,000.00	90.18	130.545	5,278.77	-5,315.24	4,326.46	1,895,871.97	1,243,429.84	36.20289118	-107.59557563	
14,050.00	90.18	130.545	5,278.61	-5,347.74	4,364.46	1,895,839.47	1,243,467.83	36.20280336	-107.59544535	
14,100.00	90.18	130.545	5,278.45	-5,380.24	4,402.45	1,895,806.96	1,243,505.83	36.20271555	-107.59531507	
14,150.00	90.18	130.545	5,278.29	-5,412.74	4,440.45	1,895,774.46	1,243,543.82	36.20262773	-107.59518479	
14,200.00	90.18	130.545	5,278.13	-5,445.25	4,478.44	1,895,741.96	1,243,581.82	36.20253992	-107.59505451	
14,250.00	90.18	130.545	5,277.96	-5,477.75	4,516.43	1,895,709.46	1,243,619.81	36.20245210	-107.59492424	
14,300.00	90.18	130.545	5,277.80	-5,510.25	4,554.43	1,895,676.96	1,243,657.81	36.20236429	-107.59479396	
14,350.00	90.18	130.545	5,277.64	-5,542.75	4,592.42	1,895,644.46	1,243,695.80	36.20227647	-107.59466368	
14,400.00	90.18	130.545	5,277.48	-5,575.25	4,630.42	1,895,611.95	1,243,733.79	36.20218865	-107.59453341	
14,450.00	90.18	130.545	5,277.32	-5,607.75	4,668.41	1,895,579.45	1,243,771.79	36.20210084	-107.59440313	
14,500.00	90.18	130.545	5,277.16	-5,640.26	4,706.41	1,895,546.95	1,243,809.78	36.20201302	-107.59427286	
14,550.00	90.18	130.545	5,277.00	-5,672.76	4,744.40	1,895,514.45	1,243,847.78	36.20192521	-107.59414258	
14,600.00	90.18	130.545	5,276.84	-5,705.26	4,782.40	1,895,481.95	1,243,885.77	36.20183739	-107.59401231	
14,650.00	90.18	130.545	5,276.68	-5,737.76	4,820.39	1,895,449.44	1,243,923.77	36.20174957	-107.59388203	
14,700.00	90.18	130.545	5,276.52	-5,770.26	4,858.39	1,895,416.94	1,243,961.76	36.20166176	-107.59375176	
14,750.00	90.18	130.545	5,276.36	-5,802.77	4,896.38	1,895,384.44	1,243,999.76	36.20157394	-107.59362149	
14,800.00	90.18	130.545	5,276.20	-5,835.27	4,934.38	1,895,351.94	1,244,037.75	36.20148612	-107.59349121	
14,850.00	90.18	130.545	5,276.04	-5,867.77	4,972.37	1,895,319.44	1,244,075.75	36.20139831	-107.59336094	
14,900.00	90.18	130.545	5,275.87	-5,900.27	5,010.37	1,895,286.94	1,244,113.74	36.20131049	-107.59323066	
14,950.00	90.18	130.545	5,275.71	-5,932.77	5,048.36	1,895,254.43	1,244,151.74	36.20122267	-107.59310039	
15,000.00	90.18	130.545	5,275.55	-5,965.27	5,086.36	1,895,221.93	1,244,189.73	36.20113485	-107.59297012	
15,050.00	90.18	130.545	5,275.39	-5,997.78	5,124.35	1,895,189.43	1,244,227.73	36.20104704	-107.59283985	
15,100.00	90.18	130.545	5,275.23	-6,030.28	5,162.35	1,895,156.93	1,244,265.72	36.20095922	-107.59270958	
15,150.00	90.18	130.545	5,275.07	-6,062.78	5,200.34	1,895,124.43	1,244,303.72	36.20087140	-107.59257930	
15,200.00	90.18	130.545	5,274.91	-6,095.28	5,238.34	1,895,091.93	1,244,341.71	36.20078358	-107.59244903	
15,250.00	90.18	130.545	5,274.75	-6,127.78	5,276.33	1,895,059.42	1,244,379.71	36.20069576	-107.59231876	
15,300.00	90.18	130.545	5,274.59	-6,160.29	5,314.33	1,895,026.92	1,244,417.70	36.20060794	-107.59218849	
15,350.00	90.18	130.545	5,274.43	-6,192.79	5,352.32	1,894,994.42	1,244,455.70	36.20052013	-107.59205822	
15,400.00	90.18	130.545	5,274.27	-6,225.29	5,390.32	1,894,961.92	1,244,493.69	36.20043231	-107.59192795	
15,450.00	90.18	130.545	5,274.11	-6,257.79	5,428.31	1,894,929.42	1,244,531.68	36.20034449	-107.59179768	
15,500.00	90.18	130.545	5,273.94	-6,290.29	5,466.31	1,894,896.92	1,244,569.68	36.20025667	-107.59166741	
15,550.00	90.18	130.545	5,273.78	-6,322.79	5,504.30	1,894,864.41	1,244,607.67	36.20016885	-107.59153714	
15,600.00	90.18	130.545	5,273.62	-6,355.30	5,542.30	1,894,831.91	1,244,645.67	36.20008103	-107.59140687	
15,650.00	90.18	130.545	5,273.46	-6,387.80	5,580.29	1,894,799.41	1,244,683.66	36.19999321	-107.59127660	
15,700.00	90.18	130.545	5,273.30	-6,420.30	5,618.29	1,894,766.91	1,244,721.66	36.19990539	-107.59114633	
15,750.00	90.18	130.545	5,273.14	-6,452.80	5,656.28	1,894,734.41	1,244,759.65	36.19981757	-107.59101607	
15,800.00	90.18	130.545	5,272.98	-6,485.30	5,694.27	1,894,701.91	1,244,797.65	36.19972975	-107.59088580	
15,850.00	90.18	130.545	5,272.82	-6,517.81	5,732.27	1,894,669.40	1,244,835.64	36.19964193	-107.59075553	
15,900.00	90.18	130.545	5,272.66	-6,550.31	5,770.26	1,894,636.90	1,244,873.64	36.19955411	-107.59062526	
15,950.00	90.18	130.545	5,272.50	-6,582.81	5,808.26	1,894,604.40	1,244,911.63	36.19946629	-107.59049500	
16,000.00	90.18	130.545	5,272.34	-6,615.31	5,846.25	1,894,571.90	1,244,949.63	36.19937847	-107.59036473	
16,050.00	90.18	130.545	5,272.18	-6,647.81	5,884.25	1,894,539.40	1,244,987.62	36.19929065	-107.59023446	



Planning Report - Geographic

Database:	DT_Mar1724_v17	Local Co-ordinate Reference:	Well North Alamito Unit 106 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Project:	Sandoval County, New Mexico NAD83 NM C	MD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Site:	North Alamito Unit (102 & 106)	North Reference:	Grid
Well:	North Alamito Unit 106 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev3		

Planned Survey										
Measured Depth (ft)	Inclination (°)	Azimuth (°)	Vertical Depth (ft)	+N/-S (ft)	+E/-W (ft)	Map Northing (usft)	Map Easting (usft)	Latitude	Longitude	
16,100.00	90.18	130.545	5,272.02	-6,680.31	5,922.24	1,894,506.89	1,245,025.62	36.19920283	-107.59010420	
16,150.00	90.18	130.545	5,271.85	-6,712.82	5,960.24	1,894,474.39	1,245,063.61	36.19911501	-107.58997393	
16,200.00	90.18	130.545	5,271.69	-6,745.32	5,998.23	1,894,441.89	1,245,101.61	36.19902719	-107.58984367	
16,250.00	90.18	130.545	5,271.53	-6,777.82	6,036.23	1,894,409.39	1,245,139.60	36.19893937	-107.58971340	
16,300.00	90.18	130.545	5,271.37	-6,810.32	6,074.22	1,894,376.89	1,245,177.60	36.19885154	-107.58958314	
16,350.00	90.18	130.545	5,271.21	-6,842.82	6,112.22	1,894,344.39	1,245,215.59	36.19876372	-107.58945287	
16,400.00	90.18	130.545	5,271.05	-6,875.32	6,150.21	1,894,311.88	1,245,253.59	36.19867590	-107.58932261	
16,450.00	90.18	130.545	5,270.89	-6,907.83	6,188.21	1,894,279.38	1,245,291.58	36.19858808	-107.58919234	
16,500.00	90.18	130.545	5,270.73	-6,940.33	6,226.20	1,894,246.88	1,245,329.58	36.19850026	-107.58906208	
16,550.00	90.18	130.545	5,270.57	-6,972.83	6,264.20	1,894,214.38	1,245,367.57	36.19841244	-107.58893182	
16,600.00	90.18	130.545	5,270.41	-7,005.33	6,302.19	1,894,181.88	1,245,405.56	36.19832461	-107.58880155	
16,650.00	90.18	130.545	5,270.25	-7,037.83	6,340.19	1,894,149.38	1,245,443.56	36.19823679	-107.58867129	
16,700.00	90.18	130.545	5,270.09	-7,070.34	6,378.18	1,894,116.87	1,245,481.55	36.19814897	-107.58854103	
16,750.00	90.18	130.545	5,269.93	-7,102.84	6,416.18	1,894,084.37	1,245,519.55	36.19806114	-107.58841076	
16,800.00	90.18	130.545	5,269.76	-7,135.34	6,454.17	1,894,051.87	1,245,557.54	36.19797332	-107.58828050	
16,850.00	90.18	130.545	5,269.60	-7,167.84	6,492.17	1,894,019.37	1,245,595.54	36.19788550	-107.58815024	
16,900.00	90.18	130.545	5,269.44	-7,200.34	6,530.16	1,893,986.87	1,245,633.53	36.19779768	-107.58801998	
16,950.00	90.18	130.545	5,269.28	-7,232.84	6,568.16	1,893,954.37	1,245,671.53	36.19770985	-107.58788972	
17,000.00	90.18	130.545	5,269.12	-7,265.35	6,606.15	1,893,921.86	1,245,709.52	36.19762203	-107.58775946	
17,050.00	90.18	130.545	5,268.96	-7,297.85	6,644.15	1,893,889.36	1,245,747.52	36.19753421	-107.58762920	
17,100.00	90.18	130.545	5,268.80	-7,330.35	6,682.14	1,893,856.86	1,245,785.51	36.19744638	-107.58749894	
17,150.00	90.18	130.545	5,268.64	-7,362.85	6,720.14	1,893,824.36	1,245,823.51	36.19735856	-107.58736868	
17,200.00	90.18	130.545	5,268.48	-7,395.35	6,758.13	1,893,791.86	1,245,861.50	36.19727073	-107.58723842	
17,250.00	90.18	130.545	5,268.32	-7,427.86	6,796.13	1,893,759.36	1,245,899.50	36.19718291	-107.58710816	
17,300.00	90.18	130.545	5,268.16	-7,460.36	6,834.12	1,893,726.85	1,245,937.49	36.19709508	-107.58697790	
17,350.00	90.18	130.545	5,268.00	-7,492.86	6,872.11	1,893,694.35	1,245,975.49	36.19700726	-107.58684764	
17,400.00	90.18	130.545	5,267.83	-7,525.36	6,910.11	1,893,661.85	1,246,013.48	36.19691944	-107.58671738	
17,450.00	90.18	130.545	5,267.67	-7,557.86	6,948.10	1,893,629.35	1,246,051.48	36.19683161	-107.58658712	
17,500.00	90.18	130.545	5,267.51	-7,590.36	6,986.10	1,893,596.85	1,246,089.47	36.19674379	-107.58645686	
17,550.00	90.18	130.545	5,267.35	-7,622.87	7,024.09	1,893,564.34	1,246,127.47	36.19665596	-107.58632661	
17,600.00	90.18	130.545	5,267.19	-7,655.37	7,062.09	1,893,531.84	1,246,165.46	36.19656813	-107.58619635	
17,650.00	90.18	130.545	5,267.03	-7,687.87	7,100.08	1,893,499.34	1,246,203.45	36.19648031	-107.58606609	
17,700.00	90.18	130.545	5,266.87	-7,720.37	7,138.08	1,893,466.84	1,246,241.45	36.19639248	-107.58593583	
17,750.00	90.18	130.545	5,266.71	-7,752.87	7,176.07	1,893,434.34	1,246,279.44	36.19630466	-107.58580558	
17,800.00	90.18	130.545	5,266.55	-7,785.37	7,214.07	1,893,401.84	1,246,317.44	36.19621683	-107.58567532	
17,850.00	90.18	130.545	5,266.39	-7,817.88	7,252.06	1,893,369.33	1,246,355.43	36.19612901	-107.58554506	
17,900.00	90.18	130.545	5,266.23	-7,850.38	7,290.06	1,893,336.83	1,246,393.43	36.19604118	-107.58541481	
17,950.00	90.18	130.545	5,266.07	-7,882.88	7,328.05	1,893,304.33	1,246,431.42	36.19595335	-107.58528455	
18,000.00	90.18	130.545	5,265.91	-7,915.38	7,366.05	1,893,271.83	1,246,469.42	36.19586553	-107.58515430	
18,050.00	90.18	130.545	5,265.74	-7,947.88	7,404.04	1,893,239.33	1,246,507.41	36.19577770	-107.58502404	
18,100.00	90.18	130.545	5,265.58	-7,980.39	7,442.04	1,893,206.83	1,246,545.41	36.19568987	-107.58489379	
18,150.00	90.18	130.545	5,265.42	-8,012.89	7,480.03	1,893,174.32	1,246,583.40	36.19560205	-107.58476353	
18,200.00	90.18	130.545	5,265.26	-8,045.39	7,518.03	1,893,141.82	1,246,621.40	36.19551422	-107.58463328	
18,250.00	90.18	130.545	5,265.10	-8,077.89	7,556.02	1,893,109.32	1,246,659.39	36.19542639	-107.58450303	
18,300.00	90.18	130.545	5,264.94	-8,110.39	7,594.02	1,893,076.82	1,246,697.39	36.19533856	-107.58437277	
18,350.00	90.18	130.545	5,264.78	-8,142.89	7,632.01	1,893,044.32	1,246,735.38	36.19525074	-107.58424252	
18,400.00	90.18	130.545	5,264.62	-8,175.40	7,670.01	1,893,011.82	1,246,773.38	36.19516291	-107.58411227	
18,436.95	90.18	130.545	5,264.50	-8,199.42	7,698.09	1,892,987.79	1,246,801.46	36.19509800	-107.58401600	
PBHL/TD @ 18436.95 MD 5264.50 TVD										



Planning Report - Geographic

Database:	DT_Mar1724_v17	Local Co-ordinate Reference:	Well North Alamito Unit 106 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Project:	Sandoval County, New Mexico NAD83 NM C	MD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Site:	North Alamito Unit (102 & 106)	North Reference:	Grid
Well:	North Alamito Unit 106 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev3		

Design Targets									
Target Name	Dip Angle (°)	Dip Dir. (°)	TVD (ft)	+N/-S (ft)	+E/-W (ft)	Northing (usft)	Easting (usft)	Latitude	Longitude
North Alamito 106 BHL 1 - hit/miss target - Shape	0.00	0.000	5,264.50	-8,199.42	7,698.09	1,892,987.79	1,246,801.46	36.19509800	-107.58401600
North Alamito 106 vs=0 - plan hits target center - Point	0.00	0.000	5,299.50	-844.66	-899.67	1,900,342.54	1,238,203.72	36.21496855	-107.61349793
North Alamito 106 POE : - plan misses target center by 1.38ft at 7122.58ft MD (5300.88 TVD, -844.67 N, -899.67 E) - Point	0.00	0.000	5,317.50	685.62	-2,688.58	1,901,872.82	1,236,414.81	36.21910200	-107.61963400

Casing Points					
Measured Depth (ft)	Vertical Depth (ft)	Name	Casing Diameter (")	Hole Diameter (")	
348.50	348.50	9-5/8" Surface Casing	9-5/8	12-1/4	
6,064.45	5,295.26	7" Intermediate Casing	7	8-3/4	

Formations						
Measured Depth (ft)	Vertical Depth (ft)	Name	Lithology	Dip (°)	Dip Direction (°)	
1,079.71	1,070.78	Ojo Alamo		-0.22	130.545	
1,201.68	1,185.90	Kirtland		-0.22	130.545	
1,387.94	1,356.14	Fruitland		-0.22	130.545	
1,773.99	1,691.74	Pictured Cliffs		-0.22	130.545	
1,953.50	1,847.02	Lewis		-0.22	130.545	
2,243.03	2,097.48	Chacra_A		-0.22	130.545	
3,499.60	3,184.46	Cliff House_Basal		-0.22	130.545	
3,545.93	3,224.53	Menefee		-0.22	130.545	
4,507.18	4,056.05	Point Lookout		-0.22	130.545	
4,750.38	4,266.43	Mancos		-0.22	130.545	
5,130.41	4,604.94	MNCS_A		-0.22	130.545	
5,232.50	4,704.97	MNCS_B		-0.22	130.545	
5,320.70	4,791.94	MNCS_C		-0.22	130.545	
5,366.83	4,836.90	MNCS_Cms		-0.22	130.545	
5,500.24	4,961.72	MNCS_D		-0.22	130.545	
5,631.50	5,073.46	MNCS_E		-0.22	130.545	
5,702.05	5,127.28	MNCS_F		-0.22	130.545	
5,815.51	5,200.95	MNCS_G		-0.22	130.545	
5,939.93	5,260.54	MNCS_H		-0.22	130.545	
6,017.62	5,285.25	MNCS_I		-0.22	130.545	



Planning Report - Geographic

Database:	DT_Mar1724_v17	Local Co-ordinate Reference:	Well North Alamito Unit 106 H
Company:	Enduring Resources LLC	TVD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Project:	Sandoval County, New Mexico NAD83 NM C	MD Reference:	RKB=6962+23.5 @ 6985.50ft (Ensign 140)
Site:	North Alamito Unit (102 & 106)	North Reference:	Grid
Well:	North Alamito Unit 106 H	Survey Calculation Method:	Minimum Curvature
Wellbore:	Original Hole		
Design:	rev3		

Plan Annotations					
Measured Depth (ft)	Vertical Depth (ft)	Local Coordinates		Comment	
		+N/-S (ft)	+E/-W (ft)		
498.50	498.50	0.00	0.00	KOP Begin 3°/100' build	
1,502.27	1,456.69	24.53	-256.59	Begin 30.11° tangent	
4,960.69	4,448.35	189.68	-1,983.83	Begin 10°/100' drop build/turn	
5,484.45	4,947.48	125.73	-2,034.07	Begin 8°/100' build	
5,634.45	5,075.82	75.60	-1,975.47	Begin 10°/100' build	
5,964.45	5,269.41	-94.46	-1,776.66	70° inc @ 5964.45 MD 5269.41 TVD	
6,166.29	5,303.96	-223.05	-1,626.35	Begin 90.18° lateral	
18,436.95	5,264.50	-8,199.42	7,698.09	PBHL/TD @ 18436.95 MD 5264.50 TVD	

District I
1625 N. French Dr., Hobbs, NM 88240
Phone:(575) 393-6161 Fax:(575) 393-0720
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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 346443

CONDITIONS

Operator: DJR OPERATING, LLC 200 Energy Court Farmington, NM 87401	OGRID: 371838
	Action Number: 346443
	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.	5/21/2024