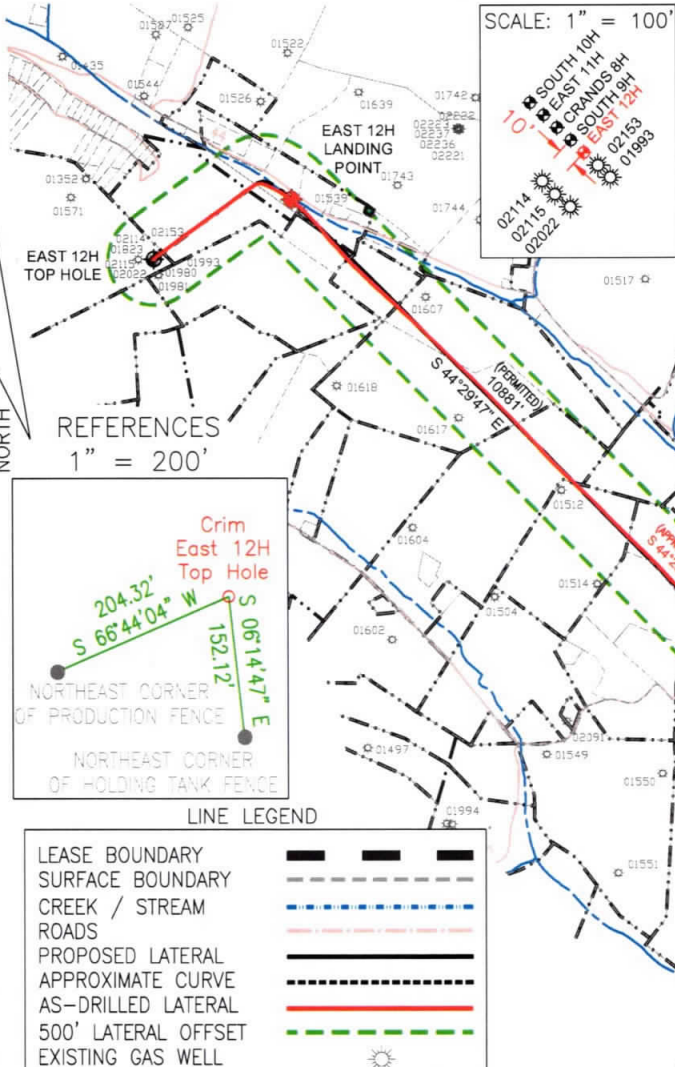


CRIM EAST UNIT 12H

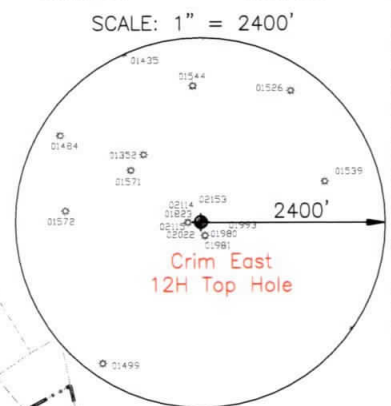
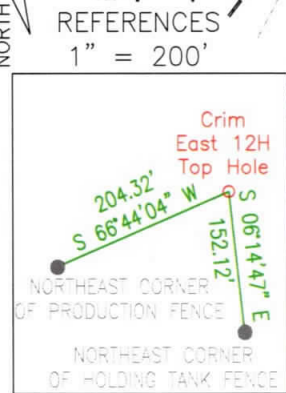
BOTTOM HOLE ← 5466' TOP HOLE ← 2891'

SCALE: 1" = 2000' LATITUDE: 39°30'00" (TOP HOLE)
 SCALE: 1" = 2000' LATITUDE: 39°27'30" (BOTTOM HOLE)



PERMITTED
State Plane Coordinate
West Virginia North

Top Hole Location	Landing Point Location	Bottom Hole Location
NAD 27 Feet N: 354894.111 E: 1773568.362	NAD 27 Feet N: 355538.190 E: 1775070.877	NAD 27 Feet N: 347776.725 E: 1782697.037
UTM Zone 17 (SPCS83) Meters N: 4369356.615 E: 560045.860	UTM Zone 17 (SPCS83) Meters N: 4369560.475 E: 560500.360	UTM Zone 17 (SPCS83) Meters N: 4367234.560 E: 562863.212
NAD 27 N 39.4716181 W 80.3021006	NAD 27 N 39.4734230 W 80.2967987	NAD 27 N 39.4522969 W 80.2695493



LINE LEGEND

LEASE BOUNDARY	---
SURFACE BOUNDARY	- - - -
CREEK / STREAM	~~~~~
ROADS	— · — · — ·
PROPOSED LATERAL	— · — · — ·
APPROXIMATE CURVE	— · — · — ·
AS-DRILLED LATERAL	— · — · — ·
500' LATERAL OFFSET	— · — · — ·
EXISTING GAS WELL	☀

AS-DRILLED

Top Hole Location	Landing Point Location	Bottom Hole Location
NAD 27 Feet N: 354894.111 E: 1773568.362	NAD 27 Feet N: 355538.190 E: 1775070.880	NAD 27 Feet N: 348152.398 E: 1782321.395
UTM Zone 17 (SPCS83) Meters N: 4369356.615 E: 560045.860	UTM Zone 17 (SPCS83) Meters N: 4369560.475 E: 560500.361	UTM Zone 17 (SPCS83) Meters N: 4367347.107 E: 562746.859
NAD 27 N 39.4716181 W 80.3021006	NAD 27 N 39.4734231 W 80.2967987	NAD 27 N 39.4533195 W 80.2708909

- NOTES ON SURVEY
1. NO DWELLINGS WITHIN 625' WERE FOUND.
 2. NO WATER WELLS OR DEVELOPED SPRINGS WITHIN 250' WERE FOUND.
 3. TIES TO WELLS AND CORNERS ARE BASED ON STATE PLANE GRID NORTH WV NORTH ZONE NAD 83.
 4. WELL ELEVATION ESTABLISHED BY RTK GPS NAVD 88.
 5. SURFACE OWNER AND ADJOINER INFORMATION TAKEN FROM THE ASSESSOR AND COUNTY CLERK RECORDS OF MARION COUNTY IN APRIL 2020 AND FILES PROVIDED BY XTO ENERGY INC.
 6. WELLS SHOWN ARE TAKEN FROM RECORDS OF WVDEP AND SURVEYED LOCATIONS OF WELLS WITHIN 500' OF WELL BORE.

2402 PENNSYLVANIA 66 DELMONT, PA 15626 (724) 757 - 2417 www.jonesconsultant.com



SHEET 1 OF 2

FILE #: JC2017-113
 DRAWING #: CRIM EAST 12H AS-DRILLED
 SCALE: 1" = 2000'
 MINIMUM DEGREE OF ACCURACY: 1:2500
 PROVEN SOURCE OF ELEVATION: RTK GPS

I, THE UNDERSIGNED, HEREBY CERTIFY THAT THIS PLAT IS CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF AND SHOWS ALL THE INFORMATION REQUIRED BY LAW AND THE RULES ISSUED AND PRESCRIBED BY THE DEPARTMENT OF ENVIRONMENTAL PROTECTION.

Signed: *Ryan Jones*
 R.P.E.: _____ P.S.: 2165



(+) DENOTES LOCATION OF WELL ON UNITED STATES TOPOGRAPHIC MAPS
 WVDEP
 OFFICE OF OIL & GAS
 601 57TH STREET
 CHARLESTON, WV 25304



DATE: 4/7/2020
 OPERATOR'S WELL #: CRIM EAST UNIT 12H
 API WELL #: 47 049 02488
 STATE COUNTY PERMIT

Well Type: Oil Waste Disposal Production Deep
 Gas Liquid Injection Storage Shallow

WATERSHED: LOWER WEST FORK RIVER (0502000206) ELEVATION: 1,221' (EXISTING FINISH GRADE)
 COUNTY/DISTRICT: MARION / LINCOLN QUADRANGLE: SHINNSTON 7.5'
 SURFACE OWNER: ROCHESTER & PITTSBURGH COAL COMPANY ACREAGE: 55±
 OIL & GAS ROYALTY OWNER: LOUIS A. FERRARI, ET UX ACREAGE: 678.4±

DRILL CONVERT DRILL DEEPER REDRILL FRACTURE OR STIMULATE
 PLUG OFF OLD FORMATION PERFORATE NEW FORMATION PLUG & ABANDON
 CLEAN OUT & REPLUG OTHER CHANGE (SPECIFY): _____

TARGET FORMATION: MARCELLUS ESTIMATED DEPTH: 7,580' (TVD), 18,237' (TMD) (AS-DRILLED)

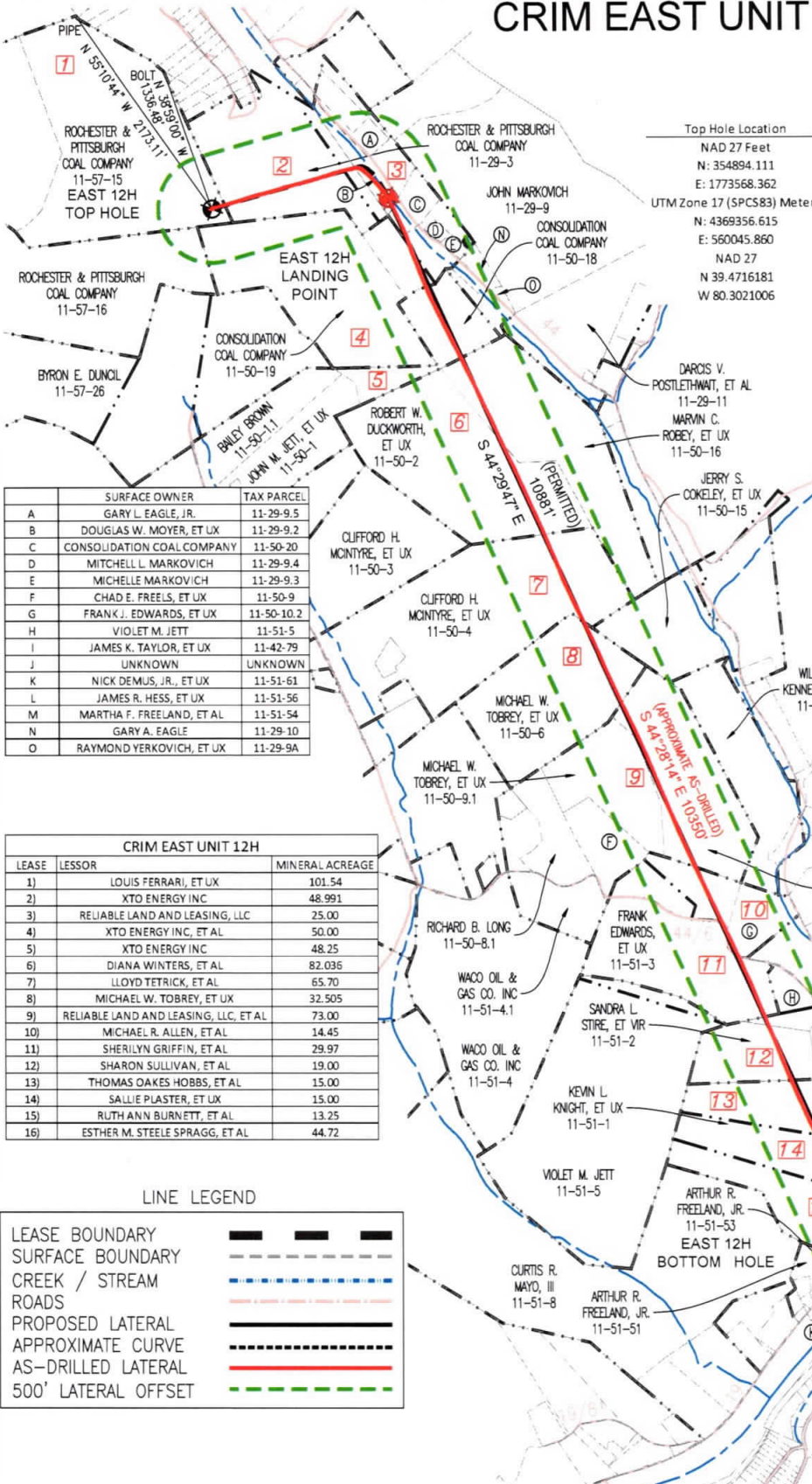
WELL OPERATOR: XTO ENERGY INC. DESIGNATED AGENT: GARY BEALL
 Address: 190 THORN HILL ROAD Address: P.O. BOX 1008
 City: WARRENDALE State: PA Zip Code: 15086 City: JANE LEW State: WV Zip Code: 26378

CRIM EAST UNIT 12H

PERMITTED

State Plane Coordinate
West Virginia North

Top Hole Location	Landing Point Location	Bottom Hole Location
NAD 27 Feet	NAD 27 Feet	NAD 27 Feet
N: 354894.111	N: 355538.190	N: 347776.725
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UTM Zone 17 (SPCS83) Meters	UTM Zone 17 (SPCS83) Meters	UTM Zone 17 (SPCS83) Meters
N: 4369356.615	N: 4369560.475	N: 4367234.560
E: 560045.860	E: 560500.360	E: 562863.212
NAD 27	NAD 27	NAD 27
N 39.4716181	N 39.4734230	N 39.4522969
W 80.3021006	W 80.2967987	W 80.2695493



	SURFACE OWNER	TAX PARCEL
A	GARY L. EAGLE, JR.	11-29-9.5
B	DOUGLAS W. MOYER, ET UX	11-29-9.2
C	CONSOLIDATION COAL COMPANY	11-50-20
D	MITCHELL L. MARKOVICH	11-29-9.4
E	MICHELLE MARKOVICH	11-29-9.3
F	CHAD E. FREELS, ET UX	11-50-9
G	FRANK J. EDWARDS, ET UX	11-50-10.2
H	VIOLET M. JETT	11-51-5
I	JAMES K. TAYLOR, ET UX	11-42-79
J	UNKNOWN	UNKNOWN
K	NICK DEMUS, JR., ET UX	11-51-61
L	JAMES R. HESS, ET UX	11-51-56
M	MARTHA F. FREELAND, ET AL	11-51-54
N	GARY A. EAGLE	11-29-10
O	RAYMOND YERKOVICH, ET UX	11-29-9A

CRIM EAST UNIT 12H		
LEASE	LESSOR	MINERAL ACREAGE
1)	LOUIS FERRARI, ET UX	101.54
2)	XTO ENERGY INC	48.991
3)	RELIABLE LAND AND LEASING, LLC	25.00
4)	XTO ENERGY INC, ET AL	50.00
5)	XTO ENERGY INC	48.25
6)	DIANA WINTERS, ET AL	82.036
7)	LLOYD TETRICK, ET AL	65.70
8)	MICHAEL W. TOBREY, ET UX	32.505
9)	RELIABLE LAND AND LEASING, LLC, ET AL	73.00
10)	MICHAEL R. ALLEN, ET AL	14.45
11)	SHERILYN GRIFFIN, ET AL	29.97
12)	SHARON SULLIVAN, ET AL	19.00
13)	THOMAS OAKES HOBBS, ET AL	15.00
14)	SALLIE PASTER, ET UX	15.00
15)	RUTH ANN BURNETT, ET AL	13.25
16)	ESTHER M. STEELE SPRAGG, ET AL	44.72

LINE LEGEND

LEASE BOUNDARY	---
SURFACE BOUNDARY	- - - - -
CREEK / STREAM	~ ~ ~ ~ ~
ROADS	— — — — —
PROPOSED LATERAL	— — — — —
APPROXIMATE CURVE	- - - - -
AS-DRILLED LATERAL	— — — — —
500' LATERAL OFFSET	- - - - -

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State Plane Coordinate
West Virginia North

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E: 560045.860	E: 560500.361	E: 562746.859
NAD 27	NAD 27	NAD 27
N 39.4716181	N 39.4734231	N 39.4533195
W 80.3021006	W 80.2967987	W 80.2708909

JONES CONSULTANTS, LLC

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(724) 757 - 2417 www.jonesconsultant.com



190 THORN HILL ROAD
WARRENDALE, PA 15086

0' 1500'



SUPPLEMENTAL SURFACE AND LESSOR EXHIBIT

CRIM EAST UNIT 12H

Drawn By: JRV	Date: 4/7/2020	LINCOLN DISTRICT MARION COUNTY, WEST VIRGINIA
Scale: 1" = 1500'	Sheet: SHEET 2 OF 2	File No.: JC2017-113
APP # DD.2011.06194.CAP.DRL.01		



Company: XTO Energy
 Well: Crim East Unit 12H
 County: Marion County, West Virginia (NAD 27)
 Rig: Patterson 579
 Wellbore: Wellbore #1
 Design: Design #4
 Created By: BSW
 Date: 12.37, March 30 2020

Geoidetic System: US State Plane 1927 (Exact solution)
 Datum: NAD 1927 (NADCON CONUS)
 Ellipsoid: Clarke 1866
 Zone: West Virginia North 4701
 System Datum: Mean Sea Level

Azimuths to True North
 Magnetic North: -9.10°
 Magnetic Field
 Strength: 52084.7nT
 Dip Angle: 66.47°
 Date: 9/12/2019
 Model: HDGM2019



WELL DETAILS: Crim East Unit 12H

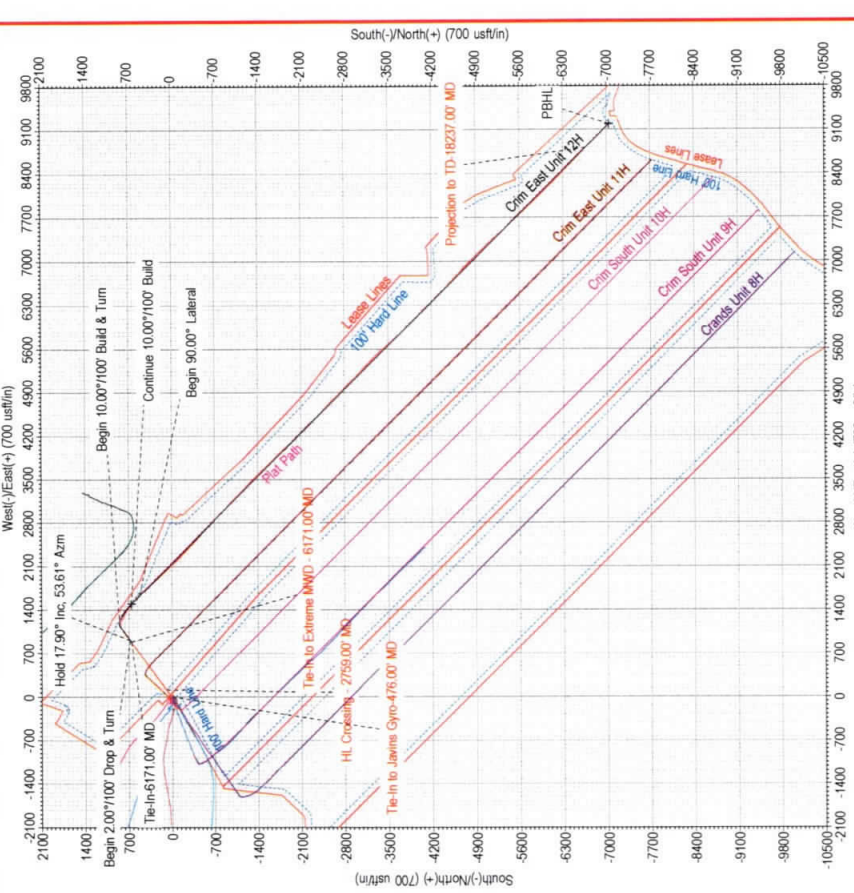
+	N/S	E/W	N/S	E/W	North	East	Latitude	Longitude
GL @ 1221.00	WELL @ 1247.00	usth (Patterson 579)						
0.00	354894.11	1773568.36	39° 28' 17.825 N	80° 18' 7.562 W				

DESIGN TARGET DETAILS

Name	TVD	+N/S	+E/W	North	East	Latitude	Longitude
PBHL v4 - Crim East Unit 12H	7544.00	-7035.60	3477672.72	1782897.04		39° 27' 8.269 N	80° 16' 10.378 W
LP Final - Crim East Unit 12H	7544.00	657.47	1466.70	355538.19	1775070.88	39° 28' 24.323 N	80° 17' 48.475 W

SECTION DETAILS

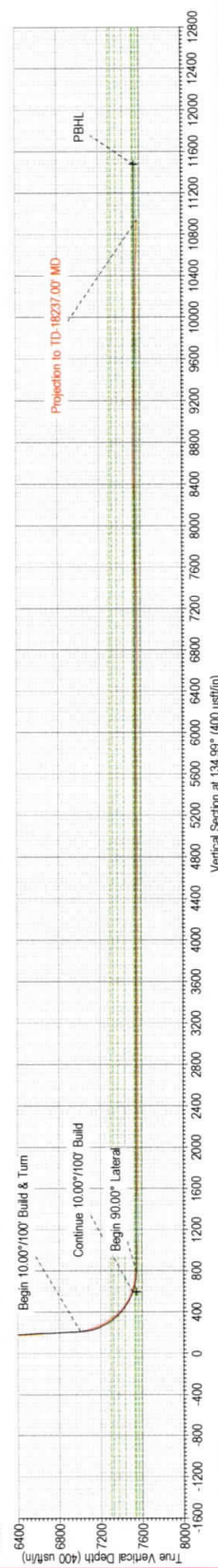
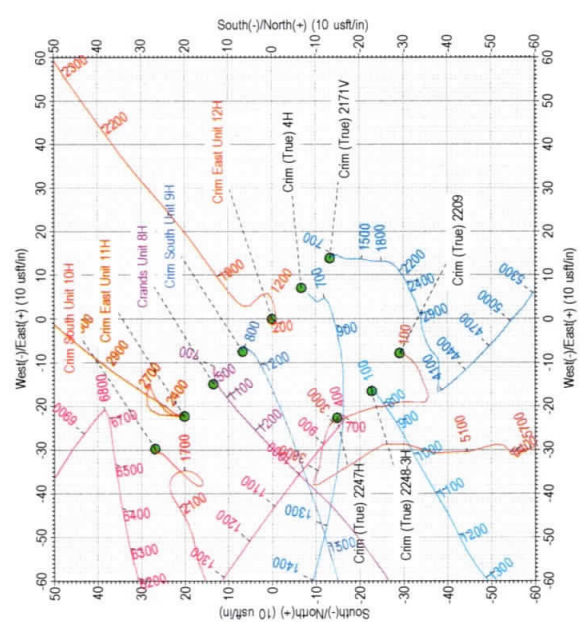
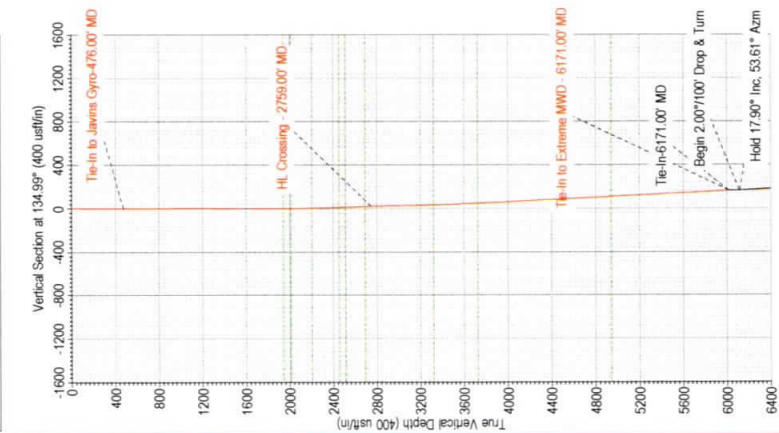
MD	Inc	Azi	TVD	+N/S	+E/W	Dleg	TFace	VSect	Annotation
6171.00	17.96	53.18	6017.37	653.35	884.89	0.00	0.000	162.50	Tie-In-6171.00 MD
6271.00	17.96	53.18	6124.49	673.63	969.57	0.00	0.000	166.89	Begin 2,007/100 Drop & Turn
6278.38	17.90	53.61	6193.52	675.18	911.40	2.00	115.951	167.22	Hold 17.90° Inc, 53.61° Azm
7210.04	17.90	53.61	7006.10	643.02	1141.86	0.00	0.000	210.14	Begin 10,007/100 Build & Turn
7893.65	70.00	134.99	7509.45	657.46	1486.70	10.00	88.215	593.70	Continue 10,007/100 Build
8093.65	90.00	134.99	7544.00	518.91	1635.29	10.00	0.006	789.66	Begin 90.00° Lateral
18778.80	90.00	134.99	7544.00	-7035.60	9191.86	0.00	0.000	11474.81	PBHL



SURVEY PROGRAM

Depth From	Depth To	SurveyPlan	Tool
26.00	476.00	Javins Gyro (Wellbore #1)	SROIG
582.00	6171.00	Extreme EM (Wellbore #1)	MWD
6171.00	18778.80	Design #4 (Wellbore #1)	MWD-HRGM

To convert a Magnetic Direction to a Grid Direction, Subtract 8.588°
 To convert a Magnetic Direction to a True Direction, Subtract 9.100°
 To convert a True Direction to a Grid Direction, Add 0.512°



The customer should only rely on this document after independently verifying all paths, targets, coordinates, lines and hard lines represented. Any disclosure made or wellbore data is not responsible for the accuracy of this schematic or the information contained herein.