

NM OIL CONSERVATION

ARTESIA DISTRICT

OCT 31 2019

District I
1625 N. French Dr., Hobbs, NM 88240
Phone: (505) 393-6161 Fax: (505) 393-0720
District II
811 S. First St., Artesia, NM 88210
Phone: (505) 748-1283 Fax: (505) 748-9720
District III
1000 Rio Pecos Road, Arco, NM 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) 476-3462

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

RECEIVED

Form C-102
Revised August 1, 2011
Submit one copy to appropriate
District Office

☒ AMENDED REPORT

As-Drilled

WELL LOCATION AND ACREAGE DEDICATION PLAT

API Number 30-015-45336	Pool Code 98220/98236	Pool Name Purple Sage Wolfcamp + W.C. 015608
Property Code 322740	Property Name STERLING SILVER MDP1 "33-4" FEDERAL COM	Well Number 171H
OGRID No. 16696	Operator Name OXY USA INC.	Elevation 3371.7'

Surface Location

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
D	33	23 SOUTH	31 EAST, N.M.P.M.		90'	NORTH	869'	WEST	EDDY

Bottom Hole Location If Different From Surface

UL or lot no.	Section	Township	Range	Lot Ida	Feet from the	North/South line	Feet from the	East/West line	County
M	4	24 SOUTH	31 EAST, N.M.P.M.		247	SOUTH	494	WEST	EDDY
Dedicated Acres 640		Joint or Infill	Consolidation Code	Order No.					

No allowable will be assigned to this completion until all interests have been consolidated or a non-standard unit has been approved by the division.

SURFACE LOCATION
NEW MEXICO EAST
NAD 1983
Y=461634.50 US FT
X=709744.04 US FT
LAT.: N 32.2679328°
LONG.: W 103.7884787

GRID AZ = 275°00'22"
430.86'

KICK OFF POINT
NEW MEXICO EAST
NAD 1983
Y=461672.10 US FT
X=709314.81 US FT
LAT.: N 32.2680421°
LONG.: W 103.7898667

TOP PERF.
NEW MEXICO EAST
NAD 1983
Y=461622.10 US FT
X=709315.02 US FT
LAT.: N 32.2679047°
LONG.: W 103.7898669

BOTTOM PERF.
NEW MEXICO EAST
NAD 1983
Y=451488.21 US FT
X=709358.08 US FT
LAT.: N 32.2400484°
LONG.: W 103.7898935°

BOTTOM HOLE LOCATION
NEW MEXICO EAST
NAD 1983
Y=451328.21 US FT
X=709358.76 US FT
LAT.: N 32.2396086°
LONG.: W 103.7898939°

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.

Sarah Chapman 10/28/19
Signature Date

Sarah Chapman
Printed Name

sarah-chapman@oxy.com
E-mail Address

SURVEYOR CERTIFICATION

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

ERRY J. ASE
15079
JANUARY 20, 2019
Date of Survey

Terry J. ASE 3/23/2019
Signature and Seal Professional Surveyor Certificate Number

15079

WOF 180129WL-B (KA)

Wolfcamp Dual Pool 98236 + 98220

OCT 31 2019

Intent ☐ As Drilled ☒

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API # 30-015-45336		Operator Name: Dyng WA Inc.		Property Name: Sterling Silver HDP 33-4 Fed Com		Well Number 171H	
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Kick Off Point (KOP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
H	28	23S	31E		124	South	648	West	EDDY
Latitude 32.26853					Longitude -103.78919				NAD NAD83

First Take Point (FTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
D	33	23S	31E		263	North	469	West	EDDY
Latitude 32.26740					Longitude -103.78978				NAD NAD83

Last Take Point (LTP)

UL	Section	Township	Range	Lot	Feet	From N/S	Feet	From E/W	County
H	4	24S	31E		364	South	495	West	EDDY
Latitude 32.24012					Longitude -103.78985				NAD NAD83

Is this well the defining well for the Horizontal Spacing Unit? ☐

Is this well an infill well? ☐

If infill is yes please provide API if available, Operator Name and well number for Defining well for Horizontal Spacing Unit.

API #		Operator Name:		Property Name:		Well Number	

KZ 06/29/2018

Oilfield Services, Central U.S. Land
Schlumberger Drilling and Measurements
Drilling Group
Geo Market Area: South West Texas Basin
7220 W I-H 20
Midland, Texas 79706
Phone : (432) 742-5400 (Main)
Fax : (432) 742-5606 (Shared)

Schlumberger

September 27, 2019

Oxy USA Incorporated
5 Greenway Plaza Suite 110
Houston, TX 77046-0521

NM OIL CONSERVATION
ARTESIA DISTRICT

OCT 31 2019

RECEIVED

Re:

S33, T23S, R31E Eddy, NM
N 32.26793 W -103.78848

CLIENT: Oxy USA Incorporated
WELL: Sterling Silver MDP1 33-4 Fed Com 171H
FIELD: Purple Sage Wolfcamp

RIG: H&P 556
COUNTY: Eddy
API NO: 30-015-45336
JOB NO: 19MLH0350

Enclosed, please find the original copy of the survey performed on the referenced well by Drilling & Measurements, a division of Schlumberger Technology Corporation (P-5 No. 754900).
Other information required by your office is as follows.

<u>Name & Title of Surveyor</u>	<u>Drainhole Number</u>	<u>Surveyed Depths</u>	<u>Dates Performed</u>	<u>Type of Survey</u>
Cody Jacks FS	Sterling Silver MDP1 33-4 Fed Com 171H Original Hole	583.00 Ft to 21656.00 Ft	August 8, 2019 to September 13, 2019	TelePacer, SlimPulse 3rd Party Corrected

Schlumberger Drilling and Measurements

Drilling Group

Geo Market Area: South West Texas Basin

7220 W I-H 20

Midland, Texas 79706

Phone : (432) 742-5400 (Main)

Fax : (432) 742-5606 (Shared)

Schlumberger

Well Reference:

S33, T23S, R31E Eddy, NM

N 32.26793 W -103.78848

I, Cody Jacks certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of August 08, 2019 through September 13, 2019, conduct or supervise the taking of the TelePacer, SlimPulse & 3rd Party Corrected surveys from a depth of 583.00 feet to a depth of 21656.00 feet referenced to driller's depth; that the data is true, correct, complete and within the limitations of the tool as set forth by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I am authorized and qualified to make this report; that this survey was conducted at the request of Oxy USA Incorporated for the Sterling Silver MDP1 33-4 Fed Com 171H Well (Original Hole) API No. 30-015-45336 in New Mexico; and that I have reviewed this report and find that it conforms to the principals and procedures as set forth by Drilling & Measurements, a division of Schlumberger Technology Corporation.

By
Cody Jacks
FS

Cody Jacks

Subscribed and Sworn to before me this 27 day of September (month) 2019 (yr)

My Commission expires:

6/14/2023

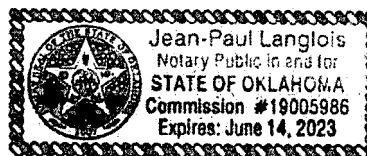
Jean-Paul Langlois

Notary Public

Coconino, Oklahoma

(County State)

(signature)



Schlumberger

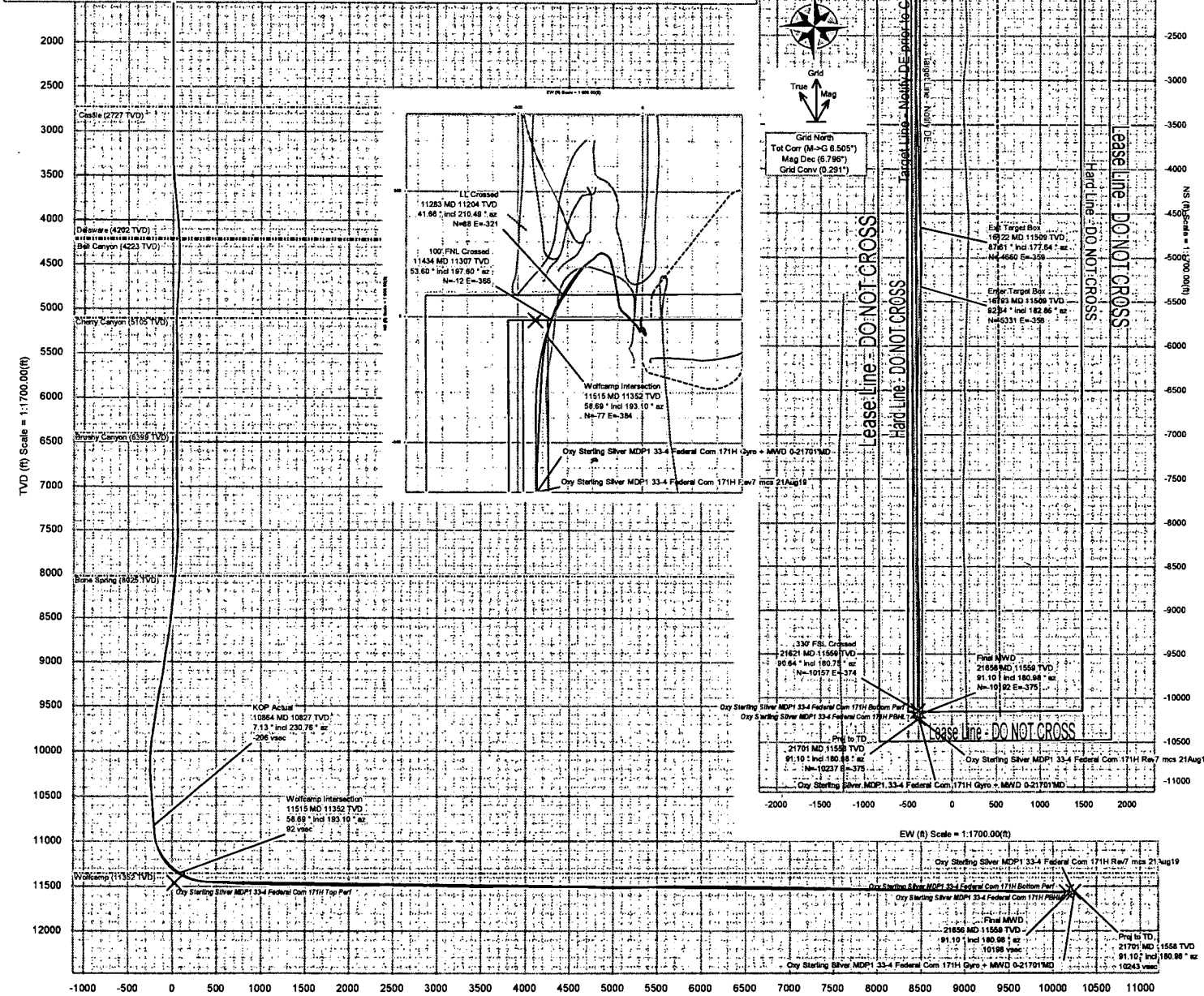
OXY



Borehole:	Well:	Field:	Structure:
Original Borehole	Sterling Silver MDP1 33-4 Federal Com 171H	NM Eddy County (NAD 83)	Oxy Sterling Silver MDP1 33-4 Federal Com 171H

Gravity & Magnetic Parameters				Surface Location				Miscellaneous			
Model:	IPR1	Dip:	69.96°	Date:	21-Aug-2019	Lat:	N 32 16 4.86	North:	461634.8RUS	Grid Conv:	0.2908°
MagDec:	6.796°	FB:	47944nT	Gravity FS:	998.451mgn (9.80665 Based)	Lon:	W 103 47 18.82	East:	709744.04RUS	Scale Fact:	0.99994167
								Slot: MDP1 33-4 Federal Com 171H Plan: Oxy Sterling Silver MDP1 33-4 Federal Com 171H Gyro + MWD 0-21701MD			

Critical Points											
Critical Point	MD	INCL	AZIM	TVD	VSEC	N(+)/S(-)	E(+)/W(-)	DLS			
RKB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00			
SHL	30.00	0.00	0.00	30.00	0.00	0.00	0.00	0.00			
Last Gyro	492.60	0.13	264.53	492.60	-0.44	0.49	-1.44	0.44			
KOP Actual	10864.00	7.13	230.76	10827.27	-205.51	213.98	-220.89	0.42			
LL Crossed	11283.00	41.66	210.49	11204.03	-76.02	88.15	-320.51	6.49			
100' FNL Crossed	11434.00	53.60	197.60	11306.65	25.86	-12.08	-366.01	7.76			
Wolfcamp Intersection	11515.40	58.69	193.10	11352.00	91.65	-77.25	-383.81	7.76			
Exit Target Box	16122.00	87.61	177.64	11508.58	4670.60	-4660.38	-359.16	1.98			
Enter Target Box	16793.00	92.64	182.86	11509.12	5340.27	-5330.63	-356.47	0.28			
330' FSL Crossed	21621.00	90.64	180.75	11559.20	10163.42	-10158.54	-374.10	1.46			
Final MWD	21656.00	91.10	180.98	11558.67	10198.41	-10191.53	-374.63	1.46			
Proj to TD	21701.00	91.10	180.98	11557.80	10243.39	-10236.51	-375.40	0.00			



Vertical Section (ft) Azim = 182.16° Scale = 1:1700.00(ft) Origin = 0N-S, 0E-W

Oxy Sterling Silver MDP1 33-4 Federal Com 171H Gyro + MWD 0-21701'MD

Survey Geodetic Report

(Def Survey)



NM OIL CONSERVATION
ARTESIA DISTRICT

OCT 31 2019

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Report Date: September 18, 2019 - 09:44 AM
Client: OXY
Field: NM Eddy County (NAD 83)
Structure / Slot: Oxy Sterling Silver MDP1 33-4 Federal Com 171H / Sterling Silver MDP1 33-4 Federal Com 171H
Well: Sterling Silver MDP1 33-4 Federal Com 171H
Borehole: Original Borehole
UWI / API#: Unknown / 30-015-45336
Survey Name: Oxy Sterling Silver MDP1 33-4 Federal Com 171H Gyro + MWD 0-21701'MD
Survey Date: August 05, 2019
Tort / AHD / DDI / ERD Ratio: 293.312" / 11104.530 ft / 6.786 / 0.961
Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet
Location Lat / Long: N 32° 16' 4.55814", W 103° 47' 18.52324"
Location Grid N/E Y/X: N 461634.500 RUS, E 709744.040 RUS
CRS Grid Convergence Angle: 0.2909°
Grid Scale Factor: 0.99994157
Version / Patch: 2.10.782.0

Survey / DLS Computation: Minimum Curvature / Lubinski
Vertical Section Azimuth: 182.158° (Grid North)
Vertical Section Origin: 0.000 ft, 0.000 ft
TVD Reference Datum: RKB=30'
TVD Reference Elevation: 3401.700 ft above MSL
Seabed / Ground Elevation: 3371.700 ft above MSL
Magnetic Declination: 6.796°
Total Gravity Field Strength: 998.4507mgm (9.80665 Based)
Gravity Model: GARM
Total Magnetic Field Strength: 47944.000 nT
Magnetic Dip Angle: 59.950°
Declination Date: August 21, 2019
Magnetic Declination Model: IFR1
North Reference: Grid North
Grid Convergence Used: 0.2909°
Total Corr Mag North->Grid North: 6.5051°
Local Coord Referenced To: Well Head

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (RUS)	Easting (RUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
RKB	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	461634.50	709744.04	N 32 16 4.56 W 103 47 18.52
SHL	30.00	0.00	0.00	30.00	0.00	0.00	0.00	0.00	461634.50	709744.04	N 32 16 4.56 W 103 47 18.52	
	72.40	0.03	174.45	72.40	0.01	-0.01	0.00	0.07	461634.49	709744.04	N 32 16 4.56 W 103 47 18.52	
	101.70	0.34	295.76	101.70	-0.02	0.02	-0.08	1.22	461634.52	709743.96	N 32 16 4.56 W 103 47 18.52	
	134.60	0.45	334.41	134.60	-0.17	0.18	-0.22	0.85	461634.68	709743.82	N 32 16 4.56 W 103 47 18.53	
	163.70	0.38	338.59	163.70	-0.36	0.37	-0.30	0.26	461634.87	709743.74	N 32 16 4.56 W 103 47 18.53	
	191.10	0.23	320.58	191.10	-0.48	0.50	-0.37	0.64	461635.00	709743.67	N 32 16 4.56 W 103 47 18.53	
	220.40	0.23	315.95	220.40	-0.57	0.59	-0.45	0.06	461635.09	709743.59	N 32 16 4.56 W 103 47 18.53	
	246.90	0.17	288.91	246.90	-0.62	0.64	-0.53	0.42	461635.14	709743.51	N 32 16 4.56 W 103 47 18.53	
	272.80	0.24	252.05	272.80	-0.61	0.63	-0.61	0.56	461635.13	709743.43	N 32 16 4.56 W 103 47 18.53	
	304.30	0.19	266.51	304.30	-0.58	0.61	-0.73	0.23	461635.11	709743.31	N 32 16 4.56 W 103 47 18.53	
	335.80	0.20	259.45	335.80	-0.56	0.60	-0.83	0.08	461635.10	709743.21	N 32 16 4.56 W 103 47 18.53	
	367.40	0.25	271.10	367.40	-0.55	0.59	-0.96	0.21	461635.09	709743.08	N 32 16 4.56 W 103 47 18.53	
	398.90	0.21	271.20	398.90	-0.55	0.59	-1.08	0.13	461635.09	709742.96	N 32 16 4.56 W 103 47 18.54	
	430.40	0.25	248.49	430.40	-0.52	0.57	-1.21	0.31	461635.07	709742.83	N 32 16 4.56 W 103 47 18.54	
	461.90	0.26	252.16	461.90	-0.47	0.52	-1.34	0.06	461635.02	709742.70	N 32 16 4.56 W 103 47 18.54	
	492.80	0.13	264.53	492.80	-0.44	0.49	-1.44	0.44	461634.99	709742.60	N 32 16 4.56 W 103 47 18.54	
	583.00	0.16	152.21	583.00	-0.32	0.37	-1.48	0.27	461634.87	709742.56	N 32 16 4.56 W 103 47 18.54	
	674.00	0.16	284.55	674.00	-0.23	0.29	-1.55	0.32	461634.79	709742.49	N 32 16 4.56 W 103 47 18.54	
	764.00	0.10	246.96	764.00	-0.23	0.29	-1.74	0.11	461634.79	709742.30	N 32 16 4.56 W 103 47 18.54	
	856.00	0.16	248.73	855.99	-0.14	0.21	-1.93	0.07	461634.71	709742.11	N 32 16 4.56 W 103 47 18.55	
	946.00	0.16	262.93	945.99	-0.07	0.15	-2.17	0.04	461634.65	709741.87	N 32 16 4.56 W 103 47 18.55	
	1036.00	0.16	153.28	1035.99	0.06	0.03	-2.24	0.29	461634.53	709741.80	N 32 16 4.56 W 103 47 18.55	
	1128.00	0.16	345.37	1127.99	0.05	0.04	-2.22	0.35	461634.54	709741.82	N 32 16 4.56 W 103 47 18.55	
	1218.00	0.14	240.76	1217.99	-0.01	0.10	-2.35	0.26	461634.60	709741.69	N 32 16 4.56 W 103 47 18.55	
	1308.00	0.16	168.69	1307.99	0.16	-0.07	-2.42	0.20	461634.43	709741.62	N 32 16 4.56 W 103 47 18.55	
	1402.00	0.16	172.66	1401.99	0.42	-0.33	-2.37	0.01	461634.17	709741.67	N 32 16 4.55 W 103 47 18.55	
	1497.00	0.16	351.39	1496.99	0.42	-0.33	-2.38	0.34	461634.17	709741.66	N 32 16 4.55 W 103 47 18.55	
	1592.00	0.10	100.69	1591.99	0.30	-0.22	-2.32	0.23	461634.28	709741.72	N 32 16 4.56 W 103 47 18.55	
	1686.00	0.16	217.40	1685.99	0.42	-0.34	-2.31	0.24	461634.16	709741.73	N 32 16 4.55 W 103 47 18.55	
	1781.00	0.10	333.56	1780.99	0.46	0.37	-2.43	0.23	461634.13	709741.61	N 32 16 4.55 W 103 47 18.55	
	1875.00	0.16	109.90	1874.99	0.43	-0.34	-2.35	0.26	461634.16	709741.69	N 32 16 4.55 W 103 47 18.55	
	1970.00	0.11	226.43	1969.99	0.53	-0.45	-2.29	0.24	461634.05	709741.75	N 32 16 4.55 W 103 47 18.55	
	2064.00	0.18	286.95	2063.99	0.56	-0.47	-2.49	0.17	461634.03	709741.55	N 32 16 4.55 W 103 47 18.55	
	2159.00	0.16	297.71	2158.99	0.46	-0.36	-2.75	0.04	461634.14	709741.29	N 32 16 4.55 W 103 47 18.56	
	2253.00	0.16	128.73	2252.99	0.49	-0.38	-2.77	0.34	461634.12	709741.27	N 32 16 4.55 W 103 47 18.56	
	2348.00	0.16	326.85	2347.99	0.46	-0.35	-2.74	0.33	461634.15	709741.30	N 32 16 4.55 W 103 47 18.56	
	2443.00	0.16	6.09	2442.99	0.22	-0.11	-2.79	0.11	461634.39	709741.25	N 32 16 4.56 W 103 47 18.56	
	2537.00	0.16	187.61	2536.99	0.22	-0.11	-2.80	0.34	461634.39	709741.24	N 32 16 4.56 W 103 47 18.56	
	2632.00	0.11	352.10	2631.99	0.26	-0.15	-2.83	0.28	461634.35	709741.21	N 32 16 4.56 W 103 47 18.56	
	2727.00	0.16	172.54	2726.99	0.30	-0.19	-2.82	0.28	461634.31	709741.22	N 32 16 4.56 W 103 47 18.56	
	2821.00	0.16	87.34	2820.99	0.42	-0.32	-2.68	0.23	461634.18	709741.36	N 32 16 4.56 W 103 47 18.55	
	2916.00	0.14	219.86	2915.99	0.50	-0.40	-2.62	0.29	461634.10	709741.42	N 32 16 4.55 W 103 47 18.55	
	3011.00	0.34	233.38	3010.99	0.77	-0.66	-2.92	0.22	461633.84	709741.12	N 32 16 4.55 W 103 47 18.56	
	3106.00	0.14	276.14	3105.99	0.94	-0.81	-3.26	0.27	461633.69	709740.78	N 32 16 4.55 W 103 47 18.56	
	3200.00	0.37	185.34	3199.99	1.23	-1.10	-3.40	0.42	461633.40	709740.64	N 32 16 4.55 W 103 47 18.56	
	3295.00	1.11	210.59	3294.98	2.35	-2.20	-3.90	0.83	461632.30	709740.14	N 32 16 4.54 W 103 47 18.57	
	3390.00	2.45	197.60	3389.93	5.11	-4.93	-4.98	1.46	461629.57	709739.06	N 32 16 4.51 W 103 47 18.58	
	3484.00	4.09	182.43	3483.78	10.40	-10.19	-5.73	1.96	461624.31	709738.31	N 32 16 4.46 W 103 47 18.59	
	3579.00	5.29	183.41	3578.46	18.17	-17.95	-6.13	1.27	461616.55	709737.91	N 32 16 4.38 W 103 47 18.60	
	3673.00	5.12	175.57	3672.07	26.67	-26.46	-6.07	0.78	461608.04	709737.97	N 32 16 4.30 W 103 47 18.60	
	3768.00	5.82	168.15	3766.64	35.55	-35.40	-4.75	1.05	461599.10	709739.29	N 32 16 4.21 W 103 47 18.58	
	3863.00	6.22	159.95	3861.12	44.99	-44.95	-2.00	1.00	461589.56	709742.04	N 32 16 4.11 W 103 47 18.55	
	3957.00	6.32	154.04	3954.56	54.27	-54.38	2.01	0.69	461580.12	709746.05	N 32 16 4.02 W 103 47 18.50	
	4052.00	4.89	149.65	4049.10	62.29	-62.58	6.35	1.57	461571.93	709750.39	N 32 16 3.94 W 103 47 18.45	
	4147.00	3.35	149.85	4143.85	68.06	-68.47	9.79	1.62	461566.03	709753.83	N 32 16 3.88 W 103 47 18.41	
	4174.00	2.84	150.02	4170.81	69.29	-69.73	10.52	1.89	461564.77	709754.56	N 32 16 3.87 W 103 47 18.40	
	4348.00	0.85	114.86	4344.72	73.44	-74.01	13.84	1.26	461560.49	709757.88	N 32 16 3.83 W 103 47 18.37	
	4442.00	0.71	18.92	4438.71	73.15	-73.75	14.66	1.24	461560.75	709758.70	N 32 16 3.83 W 103 47 18.36	
	4537.00	1.47	355.55	4533.69	71.37	-71.98	14.76	0.91	461562.52	709758.80	N 32 16 3.85 W 103 47 18.36	
	4632.00	2.20	354.08	4628.64	68.36	-68.95	14.48	0.77	461565.55	709758.52	N 32 16 3.88 W 103 47 18.36	
	4727.00	3.48	350.71	4723.53	63.73	-64.29	13.83	1.36	461570.21	709757.86	N 32 16 3.92 W 103 47 18.37	
	4821.00	3.99	349.28	4817.33	57.74	-58.26	12.76	0.55	461576.24	709756.80	N 32 16 3.98 W 103 47 18.38	
	4916.00	4.13	340.44	4912.09	51.34	-51.79	11.00	0.67	461582.71	709755.04	N 32 16 4.05 W 103 47 18.40	
	5010.00	3.58	326.56	5005.88	45.81	-46.15	8.25	1.15	461588.35	709752.28	N 32 16 4.10 W 103 47 18.43	
	5105.00	3.33	308.99	5100.71	41.75	-41.94	4.47	1.14	461592.56	709748.51	N 32 16 4.14 W 103 47 18.47	
	5200.00	5.14	255.00	5195.48	41.35	-41.31	-1.79	4.39	461593.19	709742.25	N 32 16 4.15 W 103 47 18.55	
	5364.00	2.11	221.26	5359.15	45.86	-45.48	-10.88	2.18	461589.02	709733.16	N 32 16 4.11 W 103 47 18.65	
	5459.00	1.13	224.17	5454.11	47.91	-47.47	-12.69	1.03	461587.04	709731.35	N 32 16 4.09 W 103 47 18.67	
	5553.00	0.22	68.99	5548.10	48.53	-48.07	-13.16	1.42	461586.43	709730.88	N 32 16 4.08 W 103 47 18.68	
	5648.00	0.09	266.11	5643.10	48.47	-48.01	-13.07	0.32	461586.50	709730.97	N 32 16 4.08 W 103 47 18.68	
	5742.00	0.12	271.95	5737.10	48.47	-48.01	-13.24	0.03	461586.49	709730.80	N 32 16 4.08 W 103 47 18.68	
	5837.00	0.17	218.97	5832.10	48.59	-48.12	-13.43	0.14	461586.39	709730.61	N 32 16 4.08 W 103 47 18.68	
	5931.00	0.25	199.37	5926.10	48.89	-48.42	-13.58	0.11	461586.09	709730.46	N 32 16 4.08 W 103 47 18.68	
	6026.00	0.09	172.76	6021.10	49.17	-48.69	-13.64	0.18	461585.82	709730.40	N 32 16 4.08 W 103 47 18.69	
	6120.00	0.26	16.17	6115.10	49.03	-48.56	-13.58	0.37	461585.95	709730.47	N 32 16 4.08 W 103 47 18.68	
	6215.00	0.59	22.88	6210.10	48.37	-47.90	-13.33	0.35	461586.61	709730.72	N 32 16 4.08 W 103 47 18.68	

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (ft)	Easting (ft)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')
	6310.00	0.61	29.93	6305.09	47.46	-47.01	-12.88	0.08	461587.49	709731.16	N 32 16 4.09 W 103 47 18.68	
	6404.00	0.61	20.18	6399.09	46.54	-46.11	-12.46	0.11	461588.40	709731.58	N 32 16 4.10 W 103 47 18.67	
	6499.00	0.28	94.83	6494.08	46.07	-45.65	-12.05	0.63	461588.85	709731.99	N 32 16 4.11 W 103 47 18.67	
	6593.00	0.44	131.85	6588.08	46.31	-45.91	-11.56	0.29	461588.59	709732.48	N 32 16 4.10 W 103 47 18.66	
	6688.00	0.53	138.01	6683.08	46.86	-46.48	-10.99	0.11	461588.02	709733.05	N 32 16 4.10 W 103 47 18.65	
	6782.00	0.68	155.00	6777.07	47.67	-47.31	-10.46	0.25	461587.19	709733.58	N 32 16 4.09 W 103 47 18.65	
	6877.00	0.80	161.67	6872.07	48.79	-48.45	-10.02	0.16	461586.05	709734.02	N 32 16 4.08 W 103 47 18.64	
	6971.00	0.84	162.78	6966.06	50.06	-49.73	-9.61	0.05	461584.77	709734.43	N 32 16 4.07 W 103 47 18.64	
	7066.00	0.84	157.45	7061.05	51.35	-51.04	-9.13	0.08	461583.46	709734.91	N 32 16 4.05 W 103 47 18.63	
	7160.00	0.93	156.25	7155.03	52.66	-52.37	-8.56	0.10	461582.13	709735.48	N 32 16 4.04 W 103 47 18.63	
	7255.00	0.97	159.93	7250.02	54.10	-53.83	-7.98	0.08	461580.67	709736.06	N 32 16 4.03 W 103 47 18.62	
	7349.00	0.92	163.74	7344.01	55.55	-55.31	-7.49	0.09	461579.20	709736.55	N 32 16 4.01 W 103 47 18.61	
	7444.00	1.17	163.34	7438.99	57.19	-56.97	-7.00	0.26	461577.54	709737.04	N 32 16 3.99 W 103 47 18.61	
	7539.00	0.70	297.71	7533.99	57.86	-57.63	-7.24	1.82	461576.88	709736.80	N 32 16 3.99 W 103 47 18.61	
	7633.00	3.20	328.37	7627.93	55.43	-55.13	-9.12	2.79	461579.38	709734.92	N 32 16 4.01 W 103 47 18.63	
	7728.00	4.25	333.16	7722.72	50.15	-49.73	-12.10	1.15	461584.78	709731.94	N 32 16 4.07 W 103 47 18.67	
	7823.00	4.26	333.97	7817.46	43.96	-43.42	-15.24	0.06	461591.09	709728.80	N 32 16 4.13 W 103 47 18.70	
	7917.00	4.93	325.08	7911.16	37.66	-36.97	-19.08	1.04	461597.54	709724.96	N 32 16 4.19 W 103 47 18.75	
	8011.00	7.08	318.78	8004.64	30.22	-29.30	-25.21	2.39	461605.21	709718.83	N 32 16 4.27 W 103 47 18.82	
	8130.00	6.85	311.43	8122.76	20.40	-19.08	-35.37	0.77	461615.42	709708.68	N 32 16 4.37 W 103 47 18.94	
	8225.00	8.85	316.93	8216.87	11.67	-10.00	-44.61	2.25	461624.51	709699.44	N 32 16 4.46 W 103 47 19.04	
	8319.00	9.62	318.36	8309.65	0.91	1.16	-54.76	0.85	461635.66	709689.28	N 32 16 4.57 W 103 47 19.16	
	8414.00	8.99	309.34	8403.41	-9.31	11.80	-65.78	1.67	461646.29	709678.27	N 32 16 4.68 W 103 47 19.29	
	8509.00	8.55	313.33	8497.30	-18.44	21.35	-76.66	0.79	461655.85	709667.39	N 32 16 4.77 W 103 47 19.41	
	8603.00	8.21	326.38	8590.30	-28.49	31.73	-85.46	2.05	461666.23	709658.59	N 32 16 4.88 W 103 47 19.52	
	8698.00	8.52	343.51	8684.31	-40.66	44.13	-91.21	2.63	461678.63	709652.84	N 32 16 5.00 W 103 47 19.58	
	8793.00	9.40	350.79	8777.16	-54.79	58.38	-94.42	1.53	461692.88	709649.63	N 32 16 5.14 W 103 47 19.62	
	8887.00	9.43	350.88	8870.88	-70.03	73.73	-96.89	0.04	461708.22	709647.16	N 32 16 5.29 W 103 47 19.65	
	8982.00	8.40	352.30	8964.73	-84.50	88.29	-99.05	1.11	461722.78	709644.99	N 32 16 5.44 W 103 47 19.67	
	9076.00	7.24	349.82	9057.86	-97.05	100.92	-101.02	1.28	461735.42	709643.03	N 32 16 5.56 W 103 47 19.69	
	9171.00	8.53	350.07	9104.41	-103.35	107.27	-102.15	2.75	461741.76	709641.90	N 32 16 5.62 W 103 47 19.71	
	9265.00	10.49	350.75	9151.75	-111.11	115.09	-103.46	4.09	461749.58	709640.58	N 32 16 5.70 W 103 47 19.72	
	9360.00	11.17	351.50	9244.07	-128.45	132.54	-106.18	0.74	461767.03	709637.86	N 32 16 5.87 W 103 47 19.75	
	9454.00	9.85	350.69	9337.33	-146.24	150.45	-108.99	0.40	461784.94	709635.05	N 32 16 6.05 W 103 47 19.78	
	9549.00	9.27	346.91	9429.80	-162.67	167.01	-112.17	1.20	461801.50	709631.88	N 32 16 6.22 W 103 47 19.82	
	9643.00	9.24	348.76	9523.48	-177.91	182.40	-115.66	0.52	461816.89	709628.38	N 32 16 6.37 W 103 47 19.86	
	9738.00	9.44	343.32	9616.26	-192.56	197.17	-118.85	0.32	461831.66	709625.20	N 32 16 6.52 W 103 47 19.90	
	9832.00	9.28	343.40	9710.00	-207.35	212.12	-126.95	0.95	461846.61	709621.48	N 32 16 6.66 W 103 47 19.94	
	9927.00	9.24	320.43	9802.75	-221.83	226.77	-128.57	0.17	461861.25	709617.10	N 32 16 6.81 W 103 47 19.99	
	10021.00	9.18	297.94	9898.36	-234.77	249.32	-134.00	3.87	461874.48	709610.05	N 32 16 6.94 W 103 47 20.07	
	10116.00	5.33	293.26	10083.58	-243.67	254.62	-156.19	3.81	461883.81	709608.62	N 32 16 7.03 W 103 47 20.20	
	10210.00	5.87	261.13	10177.15	-248.56	254.62	-156.19	4.10	461898.10	709597.86	N 32 16 7.09 W 103 47 20.33	
	10305.00	5.51	241.18	10271.68	-249.19	255.89	-165.03	3.39	461890.07	709590.12	N 32 16 7.10 W 103 47 20.43	
	10400.00	5.82	225.70	10366.22	-247.07	247.07	-181.35	1.64	461881.55	709582.70	N 32 16 7.01 W 103 47 20.62	
	10495.00	5.03	218.98	10460.80	-233.24	240.46	-187.42	1.07	461874.95	709566.63	N 32 16 6.95 W 103 47 20.69	
	10589.00	5.96	228.23	10554.37	-226.55	234.01	-193.65	1.36	461868.50	709550.40	N 32 16 6.88 W 103 47 20.76	
	10684.00	7.26	238.91	10648.74	-219.84	227.62	-202.47	1.88	461862.11	709541.58	N 32 16 6.82 W 103 47 20.87	
	10778.00	7.46	231.93	10741.97	-212.64	220.79	-212.36	0.97	461855.28	709531.69	N 32 16 6.75 W 103 47 20.98	
	10864.00	7.13	230.76	10827.27	-205.51	213.88	-220.89	0.42	461848.46	709523.16	N 32 16 6.69 W 103 47 21.08	
	10953.00	8.81	228.87	10915.41	-197.18	206.00	-230.30	1.91	461840.49	709513.75	N 32 16 6.61 W 103 47 21.19	
	11048.00	19.42	226.60	11007.41	-180.87	190.32	-247.31	11.18	461824.81	709496.75	N 32 16 6.45 W 103 47 21.39	
	11142.00	32.21	216.07	11091.89	-148.77	159.18	-273.53	14.41	461793.68	709470.52	N 32 16 6.15 W 103 47 21.70	
	11237.00	39.17	213.03	11169.01	-101.95	113.51	-304.83	7.56	461748.00	709439.22	N 32 16 5.70 W 103 47 22.07	
	11283.00	41.66	210.49	11204.03	-76.02	88.15	-320.51	6.49	461722.64	709423.55	N 32 16 5.45 W 103 47 22.25	
	11332.00	44.37	208.05	11238.86	-46.26	58.99	-336.84	6.49	461693.48	709407.22	N 32 16 5.16 W 103 47 22.44	
	11426.00	53.11	198.07	11301.88	19.68	-5.97	-364.04	12.23	461628.53	709380.02	N 32 16 4.52 W 103 47 22.76	
	11434.00	53.60	197.60	11306.65	25.86	-12.08	-366.01	7.76	461622.42	709378.05	N 32 16 4.46 W 103 47 22.79	
	11515.40	58.69	193.10	11352.00	91.65	-77.25	-383.81	7.76	461557.26	709360.25	N 32 16 3.81 W 103 47 23.00	
	11521.00	59.05	192.81	11354.89	96.35	-81.92	-384.89	7.76	461552.59	709359.17	N 32 16 3.77 W 103 47 23.01	
	11615.00	66.18	186.73	11398.13	178.99	-164.09	-398.89	9.51	461470.42	709345.17	N 32 16 2.95 W 103 47 23.18	
	11710.00	75.97	182.33	11428.92	268.65	-253.55	-405.88	11.20	461380.97	709338.19	N 32 16 2.07 W 103 47 23.27	
	11899.00	87.94	183.57	11455.33	455.43	-440.09	-415.52	6.37	461194.43	709328.54	N 32 16 0.22 W 103 47 23.39	
	12061.00	87.51	181.42	11461.76	617.29	-601.80	-422.57	1.35	461032.73	709321.50	N 32 15 58.62 W 103 47 23.48	
	12156.00	86.99	180.42	11466.31	712.15	-696.68	-424.09	1.19	460937.86	709319.97	N 32 15 57.69 W 103 47 23.50	
	12251.00	87.41	180.24	11470.96	806.99	-791.56	-424.64	0.48	460842.98	709319.43	N 32 15 56.75 W 103 47 23.52	
	12345.00	89.64	179.38	11473.38	900.88	-885.52	-424.33	2.54	460749.03	709319.74	N 32 15 55.82 W 103 47 23.52	
	12440.00	89.47	177.38	11474.11	995.66	-980.48	-421.64	2.11	460654.08	709322.42	N 32 15 54.88 W 103 47 23.49	
	12535.00	88.30	175.47	11475.96	1090.16	-1075.27	-415.72	2.36	460559.29	709328.35	N 32 15 53.94 W 103 47 23.43	
	12629.00	89.92	177.83	11477.42	1183.71	-1169.09	-410.23	3.04	460465.48	709333.84	N 32 15 53.01 W 103 47 23.37	
	12723.00	90.23	179.91	11477.30	1277.55	-1263.07	-408.37	2.24	460371.51	709335.69	N 32 15 52.08 W 103 47 23.35	
	12812.00	89.13	180.63	11478.35	1466.44	-1452.06	-409.26	0.70	460182.53	709334.80	N 32 15 50.21 W 103 47 23.38	
	13101.00	88.44	180.35	11482.36	1655.31	-1641.01	-410.88	0.39	459993.59	709333.18	N 32 15 48.34 W 103 47 23.41	
	13291.00	89.99	180.49	11484.97	1845.20	-1830.98	-412.27	0.82	459803.63	709331.79	N 32 15 46.46 W 103 47 23.43	
	13385.00	88.34	179.00	11486.33	1939.10	-1924.96	-411.86	2.36	459709.66	709332.21	N 32 15 45.53 W 103 47 23.43	
	13480.00	88.78	179.42	11488.72	2033.95	-2019.92	-410.55	0.64	459614.70	709333.52	N 32 15 44.59 W 103 47 23.42	
	13575.00	90.43	179.87	11489.38	2128.85	-2114.91	-409.96	1.80	459519.72	709334.11	N 32 15 43.65 W 103 47 23.42	
	13669.00	91.60	180.88	11487.71	2222.79	-2208.89	-410.57	1.64	459425.74	709333.49	N 32 15 42.72 W 103 47 23.44	
	13764.00	91.16	180.33	11485.42	2317.72	-2303.86	-411.58	0.				

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (ft/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
	16698.00	92.71	182.60	11513.56	5245.38	-5235.84	-351.95	1.69	456398.98	709392.11	N 32 15 12.77	W 103 47 22.93
Enter Target Box	16793.00	92.64	182.86	11509.12	5340.27	-5330.63	-356.47	0.28	456304.20	709387.60	N 32 15 11.83	W 103 47 22.99
	16887.00	92.58	183.11	11504.83	5434.16	-5424.40	-361.35	0.28	456210.43	709382.71	N 32 15 10.90	W 103 47 23.05
	16982.00	91.51	182.51	11501.44	5529.09	-5519.22	-366.01	1.29	456115.61	709378.06	N 32 15 9.96	W 103 47 23.11
	17171.00	90.06	182.62	11498.85	5718.06	-5708.01	-374.46	0.77	455926.83	709369.60	N 32 15 8.10	W 103 47 23.22
	17265.00	89.45	180.72	11499.26	5812.06	-5801.97	-377.20	2.12	455832.88	709366.86	N 32 15 7.17	W 103 47 23.26
	17454.00	89.58	182.41	11500.86	6001.03	-5990.88	-382.36	0.90	455643.98	709361.70	N 32 15 5.30	W 103 47 23.33
	17548.00	89.69	180.05	11501.46	6095.01	-6084.85	-384.38	2.51	455550.02	709359.68	N 32 15 4.37	W 103 47 23.36
	17643.00	89.62	180.91	11502.03	6189.97	-6179.85	-385.18	0.91	455455.03	709358.89	N 32 15 3.43	W 103 47 23.37
	17737.00	89.41	181.45	11502.82	6283.95	-6273.82	-387.11	0.62	455361.06	709356.95	N 32 15 2.50	W 103 47 23.40
	17832.00	89.48	181.31	11503.74	6378.94	-6368.79	-389.40	0.16	455266.09	709354.66	N 32 15 1.56	W 103 47 23.43
	17926.00	89.00	181.78	11504.99	6472.92	-6462.75	-391.94	0.71	455172.14	709352.13	N 32 15 0.63	W 103 47 23.47
	18116.00	89.03	180.79	11508.26	6662.87	-6652.67	-396.20	0.52	454982.23	709347.87	N 32 14 58.75	W 103 47 23.53
	18211.00	89.00	180.51	11509.89	6757.82	-6747.65	-397.27	0.30	454887.26	709346.79	N 32 14 55.00	W 103 47 23.55
	18305.00	89.17	180.69	11511.39	6851.78	-6841.63	-398.26	0.26	454793.28	709345.81	N 32 14 56.88	W 103 47 23.56
	18495.00	89.07	180.87	11514.31	7041.70	-7031.59	-400.84	0.11	454603.33	709343.22	N 32 14 55.00	W 103 47 23.61
	18589.00	89.00	179.36	11515.89	7135.62	-7125.58	-401.03	1.61	454509.35	709343.03	N 32 14 54.07	W 103 47 23.61
	18684.00	88.83	178.75	11517.69	7230.47	-7220.55	-399.47	0.67	454414.39	709344.60	N 32 14 53.13	W 103 47 23.60
	18874.00	89.17	180.15	11521.01	7420.22	-7410.50	-397.64	0.76	454224.45	709346.42	N 32 14 51.25	W 103 47 23.59
	18968.00	88.93	180.26	11522.57	7514.15	-7504.49	-397.98	0.28	454130.46	709346.09	N 32 14 50.32	W 103 47 23.60
	19157.00	89.00	180.52	11525.98	7703.03	-7693.45	-399.26	0.14	453941.51	709344.80	N 32 14 48.45	W 103 47 23.63
	19345.00	88.86	180.50	11529.49	7890.92	-7881.41	-400.94	0.08	453753.56	709343.13	N 32 14 46.59	W 103 47 23.66
	19440.00	89.65	181.12	11530.73	7985.89	-7976.39	-402.28	1.06	453658.59	709341.78	N 32 14 45.65	W 103 47 23.68
	19629.00	88.93	178.92	11533.07	8174.73	-8165.37	-402.35	1.22	453469.63	709341.72	N 32 14 43.78	W 103 47 23.69
	19724.00	90.06	178.62	11533.90	8269.56	-8260.34	-400.31	1.23	453374.66	709343.76	N 32 14 42.84	W 103 47 23.67
	19818.00	88.90	178.08	11534.76	8363.34	-8354.30	-397.60	1.36	453280.71	709346.46	N 32 14 41.91	W 103 47 23.65
	19913.00	89.07	177.42	11536.44	8458.05	-8449.21	-393.87	0.72	453185.80	709350.19	N 32 14 40.97	W 103 47 23.61
	20102.00	89.27	178.42	11539.18	8646.51	-8638.06	-387.01	0.54	452996.96	709357.05	N 32 14 39.10	W 103 47 23.54
	20196.00	88.79	177.44	11540.77	8740.24	-8731.98	-383.62	1.16	452903.04	709360.44	N 32 14 38.17	W 103 47 23.51
	20387.00	89.45	177.48	11543.70	8930.57	-8922.77	-375.16	0.35	452712.27	709368.91	N 32 14 36.29	W 103 47 23.42
	20576.00	88.96	179.65	11546.33	9119.17	-9111.68	-370.42	1.18	452523.37	709373.64	N 32 14 34.42	W 103 47 23.37
	20671.00	88.10	179.61	11548.76	9214.04	-9206.65	-369.81	0.91	452428.41	709374.25	N 32 14 33.48	W 103 47 23.37
	20765.00	89.62	180.24	11550.63	9307.95	-9300.63	-369.69	1.75	452334.44	709374.38	N 32 14 32.55	W 103 47 23.38
	20858.00	89.58	180.38	11551.28	9400.90	-9393.62	-370.19	0.16	452241.44	709373.87	N 32 14 31.63	W 103 47 23.39
	20953.00	89.75	180.61	11551.84	9495.86	-9488.62	-371.01	0.30	452148.46	709373.05	N 32 14 30.69	W 103 47 23.40
	21047.00	88.45	179.73	11553.31	9589.79	-9582.60	-371.29	1.67	452052.48	709372.77	N 32 14 29.76	W 103 47 23.41
	21236.00	89.55	180.34	11556.61	9778.63	-9771.57	-371.40	0.67	451963.52	709372.68	N 32 14 27.89	W 103 47 23.42
	21330.00	89.20	179.82	11557.64	9872.56	-9865.56	-371.54	0.67	451769.53	709372.53	N 32 14 26.96	W 103 47 23.43
	21519.00	89.69	180.88	11559.47	10061.45	-10054.55	-372.69	0.62	451580.56	709371.37	N 32 14 25.09	W 103 47 23.46
	21614.00	90.55	180.71	11559.27	10156.42	-10149.54	-374.01	0.92	451485.58	709370.05	N 32 14 24.15	W 103 47 23.48
330' FSL Crossed	21621.00	90.64	180.75	11559.20	10163.42	-10156.54	-374.10	1.46	451478.58	709369.96	N 32 14 24.08	W 103 47 23.48
Final MWD	21656.00	91.10	180.98	11558.67	10198.41	-10191.53	-374.63	1.46	451443.59	709369.43	N 32 14 23.73	W 103 47 23.49
Proj to TD	21701.00	91.10	180.98	11557.80	10243.39	-10236.51	-375.40	0.00	451398.60	709368.66	N 32 14 23.29	W 103 47 23.50

Survey Type: Def Survey

Survey Error Model: ISCWSA Rev 3 *** 3-D 95.000% Confidence 2.7955 sigma
Survey Program:

Description	Part	MD From (ft)	MD To (ft)	EOU Freq (ft)	Hole Size Casing Diameter (in)	Survey Tool Type	Borehole / Survey
	1	0.000	30.000	1/98.425	30.000	30.000 GYD_GC+DROP+OH-Depth Only	Original Borehole / Oxy Sterling Silver MDP1 33-4 Federal Com 171H Gyro + MWD 0-21701MD
	1	30.000	30.000	Act Stns	30.000	30.000 GYD_GC+DROP+OH-Depth Only	Original Borehole / Oxy Sterling Silver MDP1 33-4 Federal Com 171H Gyro + MWD 0-21701MD
	1	30.000	492.600	Act Stns	30.000	GYD_GC+DROP+OH	Original Borehole / Oxy Sterling Silver MDP1 33-4 Federal Com Original Borehole / Oxy Sterling
	1	492.600	4174.000	Act Stns	30.000	A010Mb_MWD+IFR1+SAG+MS	Silver MDP1 33-4 Federal Com 171H Gyro + MWD 0-21701MD
	1	4174.000	5364.000	Act Stns	30.000	B001Mb_MWD+HRGM	Original Borehole / Oxy Sterling Silver MDP1 33-4 Federal Com Original Borehole / Oxy Sterling
	1	5364.000	21701.000	Act Stns	30.000	A010Mb_MWD+IFR1+SAG+MS	Silver MDP1 33-4 Federal Com 171H Gyro + MWD 0-21701MD