

State of New Mexico
Energy, Minerals and Natural Resources Department

Michelle Lujan Grisham
Governor

Sarah Cottrell Propst
Cabinet Secretary

Todd E. Leahy, JD, PhD
Deputy Secretary

Adrienne Sandoval, Division Director
Oil Conservation Division



Notice of C-104 Denial and Request for Information

OCD denies your C-104 – *Request for Allowable and Authorization to Transport* because it is incomplete or conflicts with other information provided to OCD.

The sale or transport of product without a C-104 approved by OCD violates the Oil and Gas Act and the implementing rules, including 19.15.7.15 and 19.15.16.19 NMAC.

To avoid an enforcement action, you must submit the indicated information no later than 30 days after receipt of this notice.

Test Allowable, New Well and Recompleted Well

- ☒ C-103 (or BLM equivalent) for all casing strings
 - ☐ Spud Notice
 - ☐ Surface Casing
 - ☐ Intermediate Casing (if applicable)
 - ☐ Additional Intermediate Casing (if applicable)
 - ☒ Production Casing or Liner

☐ Applicable Order (NSL, NSP, Other _____)

☐ Deviation Survey for Vertical Wells

☐ Directional Survey

☒ C-102 (As-Drilled Plat for Horizontal Well)

*Amend Sundry to
BLM.
Prod. Casing hole size does
not match. Please review*

New Well and Recompleted Well Only

☐ C-103 Completion Sundry (or BLM equivalent)

☒ C-105 Completion Report (or BLM equivalent) *Approved copy*

☐ All Logs Run on Well

If you have any questions please contact the local OCD District Office

District I
1625 N. French Dr., Hobbs, NM 88240
District II
811 S. First St., Artesia, NM 88210
District III
1000 Rio Brazos Rd., Aztec, NM 87410
District IV
1220 S. St. Francis Dr., Santa Fe, NM 87505

State of New Mexico
Energy, Minerals & Natural Resources

Oil Conservation Division
1220 South St. Francis Dr.
Santa Fe, NM 87505

RECEIVED

Form C-104
Revised August 1, 2011

SEP 06 2019

Submit one copy to appropriate District Office

DISTRICT II-ARTESIA O.C.D.

AMENDED REPORT

I. REQUEST FOR ALLOWABLE AND AUTHORIZATION TO TRANSPORT

¹ Operator name and Address OXY USA INC P.O. BOX 4294 HOUSTON, TX 77210		² OGRID Number 16696
⁴ API Number 30-015-45243		³ Reason for Filing Code/ Effective Date - NW
⁵ Pool Name INGLE WELLS BONE SPRING	⁶ Pool Code 33740	
⁷ Property Code: 321632	⁸ Property Name: IRIIDIUM MDP1 28-21 FEDERAL COM	⁹ Well Number: 2H

II. ¹⁰ Surface Location

Ul or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South Line	Feet from the	East/West line	County
M	28	23S	31E		270	NORTH	904	WEST	EDDY

¹¹ Bottom Hole Location

FTP: 141' FSL 1403' FWL LTP: 133' FNL 1378' FWL

UL or lot no.	Section	Township	Range	Lot Idn	Feet from the	North/South line	Feet from the	East/West line	County
C	21	23S	31E		19	NORTH	1375	WEST	EDDY
¹² Lse Code F	¹³ Producing Method Code : F	¹⁴ Gas Connection Date: 05/07/2019	¹⁵ C-129 Permit Number	¹⁶ C-129 Effective Date	¹⁷ C-129 Expiration Date				

III. Oil and Gas Transporters

¹⁸ Transporter OGRID	¹⁹ Transporter Name and Address	²⁰ O/G/W
237722	CENTURION PIPELINE L.P.	O
151618	ENTERPRISE FIELD SERVICES LLC	G

IV. Well Completion Data

²¹ Spud Date 11/28/2018	²² Ready Date 04/30/2019	²³ TD 9912'V/20470'M	²⁴ PBSD 9912'V/20428'M	²⁵ Perforations ? 10297'-20495'	²⁶ DHC, MC
²⁷ Hole Size	²⁸ Casing & Tubing Size	²⁹ Depth Set	³⁰ Sacks Cement		
17-1/2" ✓	13-3/8" ✓	692' ✓	900		
12-1/4" ✓	9-5/8" ✓	4307' ✓	1386		
8-1/2" ?	7-5/8"	9378'	532		
6-3/4" ✓	5-1/2" ✓	20470' ✓	848		

V. Well Test Data

³¹ Date New Oil 05/08/2019	³² Gas Delivery Date 05/07/2019	³³ Test Date 05/15/2019	³⁴ Test Length 24 HOURS	³⁵ Tbg. Pressure	³⁶ Csg. Pressure 713
³⁷ Choke Size 128/128	³⁸ Oil 2816	³⁹ Water 6921	⁴⁰ Gas 2679		⁴¹ Test Method FLOWING

⁴² I hereby certify that the rules of the Oil Conservation Division have been complied with and that the information given above is true and complete to the best of my knowledge and belief.

Signature:

Printed name:

LESLIE REEVES

Title:

REGULATORY ADVISOR

E-mail Address:

LESLIE.REEVES@OXY.COM

Date:

08/29/2019

Phone:

713-497-2492

OIL CONSERVATION DIVISION

DENIED

See Attached Cover Sheet

Approved by:

Title:

Approval Date:

*Your RT Expired 7/20/19

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

March 28, 2019

OXY USA Inc.
P.O. BOX 2289
Houston, TX 77252

RECEIVED

SEP 06 2019

DISTRICT/ARTESIAO.C.D.

33, 23S, 31E, Eddy NM
N 32.26744 W -103.78836

Re:

CLIENT: OXY USA Inc.
WELL: Iridium MDP1 28-21 Federal Com 2H
FIELD: Ingle Wells Bone Springs

RIG: H&P 556
COUNTY: Eddy
API NO: 30-015-45243
JOB NO: 18MLD4276

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). Final Surveys are corrected by Superior, a third party company. 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>
Jude Omokwale FS	Iridium MDP1 28-21 Federal Com 2H Original Hole	768.00 Ft to 20363.00 Ft	February 27, 2019 to March 25, 2019	TelePacer/SlimPulse Third Party Corrected

If any other information is required, please contact the undersigned at the above letterhead and phone number.
Sincerely,

Eric Payne / Jason Rajab
Field Service Manager

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

Well Reference:
33, 23S, 31E, Eddy NM
N 32.26744 W -103.78836

I, Jude Omokwale certify that; I am employed by Drilling & Measurements, a division of Schlumberger Technology Corporation; that I did on the day(s) of February 27, 2019 through March 25, 2019, conduct or supervise the taking of the TelePacer/SlimPulse & Third Party Corrected surveys from a depth of 768.00 feet to a depth of 20363.00 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 Inc. for the Iridium MDPI 28-21 Federal Com 2H Well (Original Hole) API No. 30-015-45243 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.

Final Surveys are corrected by Superior, a third party company.

By
Jude Omokwale
FS



Subscribed and Sworn to before me this 28th day of March (month) 2019 (yr)

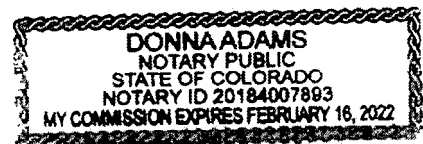
My Commission expires:

2-16-2022

D. Adams
Notary Public

(signature)

Adams County Colorado
(County State)





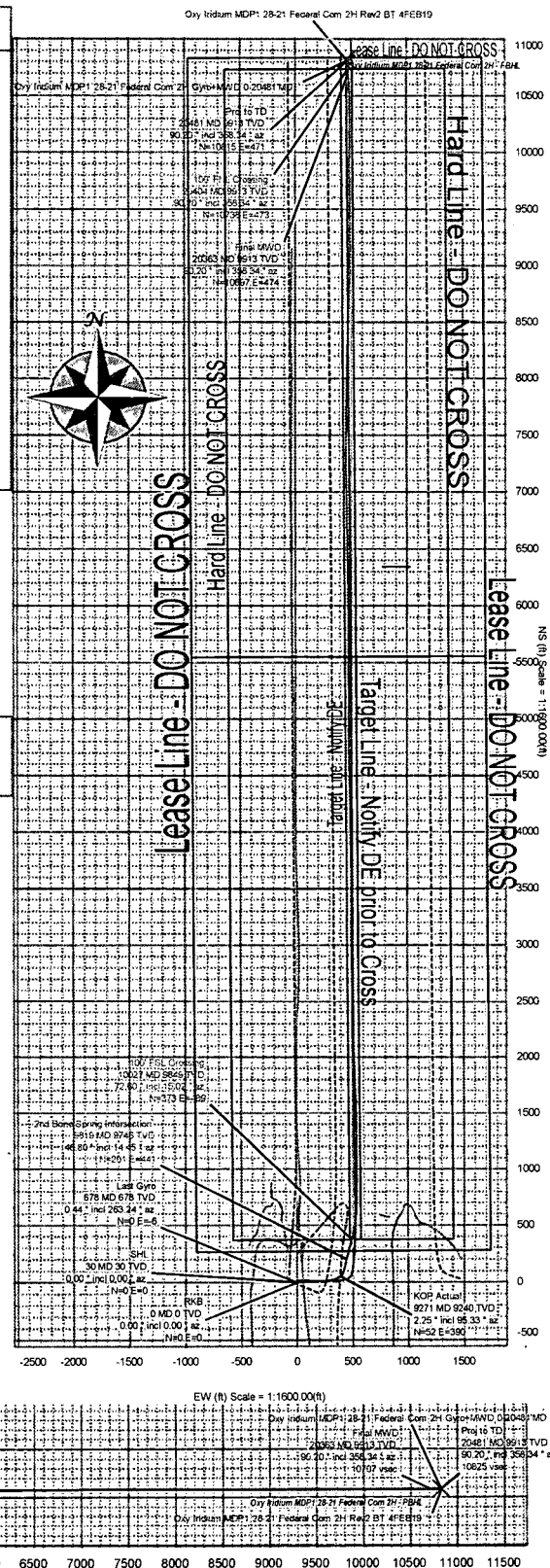
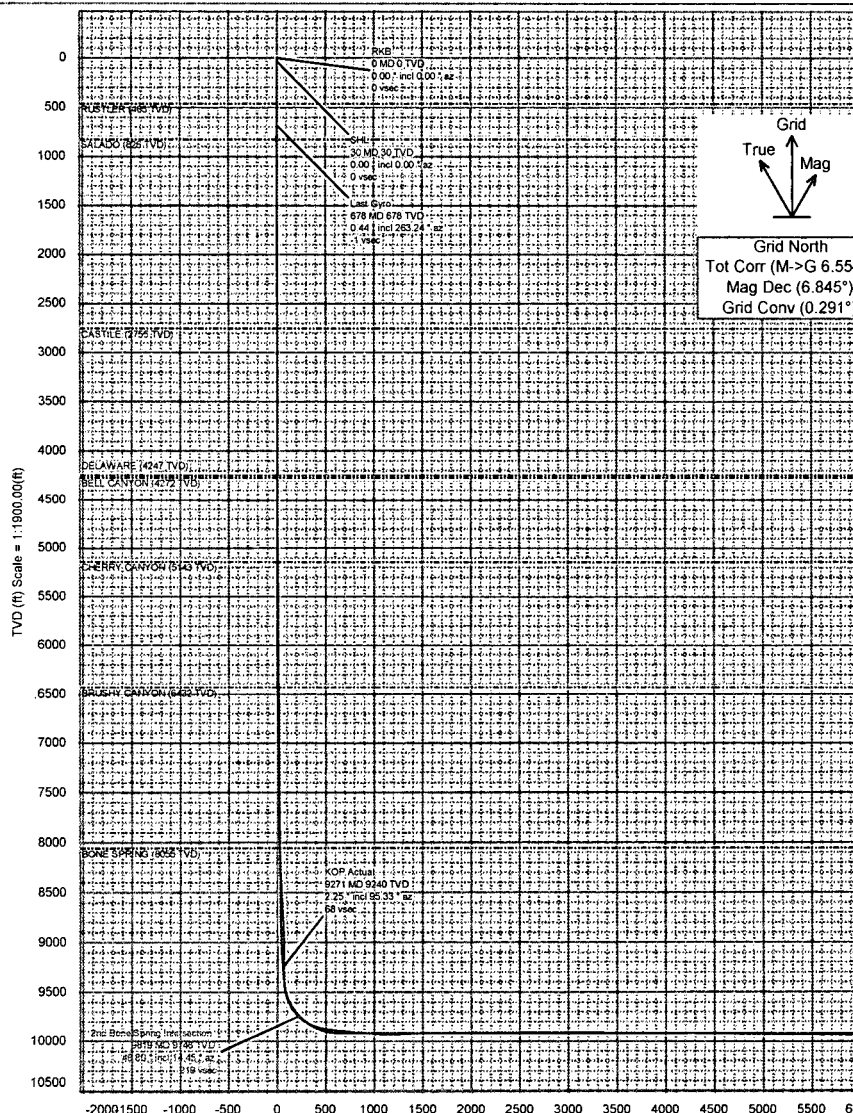
OXY



Borehole:	Well:	Field:	Structure:
Original Borehole	Oxy Iridium MDP1 28-21 Federal Com 2H	NM Eddy County (NAD 83)	Oxy Iridium MDP1 28-21 Federal Com 2H

Gravity & Magnetic Parameters				Surface Location				NAD83 New Mexico State Plane, Eastern Zone, US Feet				Miscellaneous			
Model:	IFR1	Dip:	59.991°	Date:	18-Mar-2019	Lat:	N 32 16 2.78	Northing:	461454.77US	Grid Conv:	0.2909°	Slot:	Oxy Iridium MDP1	TVD Ref:	RXB=30°/3406.1ft above MSL)
MagDec:	6.846°	FS:	47891.4nT	Gravity FS:	998.45mgm (9.80665 Based)	Lon:	W 103 47 18.11	Easting:	709780.16US	Scale Fact:	0.99994169	Plan:	Oxy Iridium MDP1 26-21 Federal Com 2H		Oxy Iridium MDP1 26-21 Federal Com 2H Gyro+MWD 0.20481°ND

	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	
SHL	30.00	0.00	0.00	30.00	0.00	0.00	0.00	0.00
Last Gyo	678.00	0.44	263.24	677.97	-0.69	-0.45	-5.60	0.13
KOP Actual	9271.00	2.25	95.33	9239.93	68.32	51.86	389.88	0.57
2nd Bone Spring Intersection	9819.12	46.80	14.45	9746.00	219.44	200.94	441.18	12.31
100' FSL Crossing	10027.00	72.60	15.02	9849.17	393.08	372.69	489.37	11.73
Final MWD	20363.00	90.20	358.34	9913.24	10707.46	10696.97	474.32	1.07
100' FNL Crossing	20404.00	90.20	358.34	9913.10	10748.35	10737.95	473.13	0.00
Proj to TD	20481.00	90.20	358.34	9912.83	10825.16	10814.92	470.90	0.00



Vertical Section (ft) Azim = 2.43° Scale = 1:1900.00(ft) Origin = 0N/-S, 0E/-W

Oxy Iridium MDP1 28-21 Federal Com 2H Gyro+MWD 0-20481'MD Survey Geodetic Report (Def Survey)



Report Date: March 26, 2019 - 09:57 AM Client: OXY Field: NM Eddy County (NAD 83) Structure / Slot: Oxy Iridium MDP1 28-21 Federal Com 2H / Oxy Iridium MDP1 28-21 Federal Com 2H Well: Oxy Iridium MDP1 28-21 Federal Com 2H Borehole: Original Borehole UWM / API#: Unknown / 30-015-45243 Survey Name: Oxy Iridium MDP1 28-21 Federal Com 2H Gyro+MWD 0-20481'MD Survey Date: February 11, 2019 Tort / AHD / DDI / ERD Ratio: 194.610° / 11216.056 ft / 6.653 / 1.129 Coordinate Reference System: NAD83 New Mexico State Plane, Eastern Zone, US Feet Location Lat / Long: N 32° 16' 2.77710", W 103° 47' 18.11331" Location Grid N/E Y/X: N 461454.700 RUS, E 709780.150 RUS CRS Grid Convergence Angle: 0.2909° Grid Scale Factor: 0.99994159 Version / Patch: 2.10.753.0	Survey / DLS Computation: Minimum Curvature / Lubinski Vertical Section Azimuth: 2.427° (Grid North) Vertical Section Origin: 0.000 ft, 0.000 ft TVD Reference Datum: RKB=30' TVD Reference Elevation: 3406.100 ft above MSL Seabed / Ground Elevation: 3376.100 ft above MSL Magnetic Declination: 6.845° Total Gravity Field Strength: 998.4502mgm (9.80665 Based) Gravity Model: GARM Total Magnetic Field Strength: 47991.400 nT Magnetic Dip Angle: 59.991° Declination Date: March 18, 2019 Magnetic Declination Model: IFR1 North Reference: Grid North Grid Convergence Used: 0.2909° Total Corr Mag North->Grid North: 6.5541° Local Coord Referenced To: Well Head	
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Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (RUS)	Easting (RUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
RKB SHL	0.00	0.00	0.00	0.00	0.00	0.00	0.00	N/A	461454.70	709780.15	N 32 16 2.78	W 103 47 18.11
	30.00	0.00	0.00	30.00	0.00	0.00	0.00	0.00	461454.70	709780.15	N 32 16 2.78	W 103 47 18.11
	102.00	0.56	274.48	102.00	0.01	0.03	-0.35	0.78	461454.73	709779.80	N 32 16 2.78	W 103 47 18.12
Last Gyro	134.00	0.65	281.59	134.00	0.05	0.08	-0.68	0.37	461454.78	709779.47	N 32 16 2.78	W 103 47 18.12
	218.00	0.72	268.95	217.99	0.09	0.16	-1.68	0.20	461454.86	709778.47	N 32 16 2.78	W 103 47 18.13
	307.00	0.63	259.85	306.98	-0.05	0.07	-2.72	0.16	461454.77	709777.43	N 32 16 2.78	W 103 47 18.14
	401.00	0.48	249.67	400.98	-0.31	-0.16	-3.60	0.19	461454.54	709776.55	N 32 16 2.78	W 103 47 18.16
	496.00	0.43	254.00	495.98	-0.58	-0.40	-4.31	0.06	461454.30	709775.84	N 32 16 2.77	W 103 47 18.16
	590.00	0.39	277.68	589.98	-0.66	-0.45	-4.97	0.18	461454.25	709775.18	N 32 16 2.77	W 103 47 18.17
	678.00	0.44	263.24	677.97	-0.69	-0.45	-5.60	0.13	461454.25	709774.55	N 32 16 2.77	W 103 47 18.18
	768.00	0.09	28.92	767.97	-0.68	-0.43	-5.91	0.55	461454.27	709774.24	N 32 16 2.77	W 103 47 18.18
	857.00	0.11	350.51	856.97	-0.54	-0.29	-5.89	0.08	461454.41	709774.26	N 32 16 2.77	W 103 47 18.18
	1054.00	0.07	85.81	1053.97	-0.34	-0.09	-5.80	0.07	461454.61	709774.35	N 32 16 2.78	W 103 47 18.18
	1131.00	0.09	289.02	1130.97	-0.31	-0.07	-5.81	0.20	461454.63	709774.34	N 32 16 2.78	W 103 47 18.18
	1221.00	0.09	283.74	1220.97	-0.28	-0.03	-5.95	0.01	461454.67	709774.20	N 32 16 2.78	W 103 47 18.18
	1312.00	0.11	115.88	1311.97	-0.30	-0.05	-5.94	0.22	461454.65	709774.21	N 32 16 2.78	W 103 47 18.18
	1497.00	0.07	235.01	1496.97	-0.44	-0.19	-5.87	0.08	461454.51	709774.28	N 32 16 2.78	W 103 47 18.18
	1591.00	0.11	11.24	1590.97	-0.39	-0.14	-5.90	0.18	461454.56	709774.25	N 32 16 2.78	W 103 47 18.18
	1780.00	0.11	330.86	1779.97	-0.05	0.20	-5.95	0.04	461454.90	709774.20	N 32 16 2.78	W 103 47 18.18
	1969.00	0.11	174.31	1968.97	-0.08	0.18	-6.02	0.11	461454.88	709774.13	N 32 16 2.78	W 103 47 18.18
	2064.00	0.11	335.00	2063.97	-0.09	0.17	-6.05	0.23	461454.87	709774.10	N 32 16 2.78	W 103 47 18.18
	2158.00	0.09	325.93	2157.97	0.05	0.31	-6.13	0.03	461455.01	709774.02	N 32 16 2.78	W 103 47 18.18
	2253.00	0.11	150.29	2252.97	0.04	0.30	-6.13	0.21	461455.00	709774.02	N 32 16 2.78	W 103 47 18.18
	2347.00	0.11	266.49	2346.97	-0.05	0.21	-6.18	0.20	461454.91	709773.97	N 32 16 2.78	W 103 47 18.19
	2441.00	0.11	114.65	2440.97	-0.09	0.17	-6.18	0.23	461454.87	709773.97	N 32 16 2.78	W 103 47 18.19
	2630.00	0.11	187.17	2629.97	-0.34	-0.09	-6.04	0.07	461454.61	709774.11	N 32 16 2.78	W 103 47 18.18
	2724.00	0.14	27.66	2723.97	-0.33	-0.07	-6.00	0.26	461454.63	709774.15	N 32 16 2.78	W 103 47 18.18
	2819.00	0.03	212.86	2818.97	-0.24	0.01	-5.96	0.18	461454.71	709774.19	N 32 16 2.78	W 103 47 18.18
	2914.00	0.14	31.48	2913.97	-0.16	0.09	-5.91	0.18	461454.79	709774.24	N 32 16 2.78	W 103 47 18.18
	3008.00	0.11	14.15	3007.97	0.02	0.27	-5.83	0.05	461454.97	709774.32	N 32 16 2.78	W 103 47 18.18
	3103.00	0.11	353.76	3102.97	0.20	0.45	-5.82	0.04	461455.15	709774.33	N 32 16 2.78	W 103 47 18.18
	3197.00	0.16	49.93	3196.97	0.38	0.62	-5.73	0.14	461455.32	709774.42	N 32 16 2.78	W 103 47 18.18
	3291.00	0.13	88.87	3290.97	0.48	0.71	-5.52	0.11	461455.41	709774.63	N 32 16 2.78	W 103 47 18.18
	3481.00	0.14	195.95	3480.97	0.26	0.49	-5.37	0.11	461455.19	709774.78	N 32 16 2.78	W 103 47 18.18
	3575.00	0.07	75.54	3574.97	0.17	0.40	-5.34	0.20	461455.10	709774.81	N 32 16 2.78	W 103 47 18.18
	3669.00	0.14	213.62	3668.97	0.09	0.31	-5.35	0.21	461455.01	709774.80	N 32 16 2.78	W 103 47 18.18
	3764.00	0.09	236.86	3763.97	-0.06	0.18	-5.48	0.07	461454.88	709774.67	N 32 16 2.78	W 103 47 18.18
	3858.00	0.11	77.58	3857.97	-0.07	0.16	-5.45	0.21	461454.86	709774.70	N 32 16 2.78	W 103 47 18.18
	3952.00	0.09	308.31	3951.97	-0.01	0.22	-5.42	0.19	461454.92	709774.73	N 32 16 2.78	W 103 47 18.18
	4046.00	0.21	265.85	4045.97	0.02	0.25	-5.65	0.17	461454.95	709774.50	N 32 16 2.78	W 103 47 18.18
	4141.00	0.26	245.63	4140.97	-0.10	0.15	-6.02	0.10	461454.85	709774.13	N 32 16 2.78	W 103 47 18.18
	4202.00	0.07	149.11	4201.97	-0.20	0.06	-6.13	0.45	461454.76	709774.02	N 32 16 2.78	W 103 47 18.18
	4321.00	0.11	354.04	4320.97	-0.14	0.12	-6.10	0.15	461454.82	709774.05	N 32 16 2.78	W 103 47 18.18
4415.00	0.11	254.56	4414.97	-0.08	0.18	-6.20	0.18	461454.88	709773.95	N 32 16 2.78	W 103 47 18.19	
4510.00	0.11	63.41	4509.97	-0.07	0.20	-6.21	0.23	461454.90	709773.94	N 32 16 2.78	W 103 47 18.19	
4604.00	0.09	311.56	4603.97	0.02	0.29	-6.18	0.18	461454.99	709773.97	N 32 16 2.78	W 103 47 18.19	
4698.00	0.10	356.93	4697.97	0.15	0.42	-6.24	0.08	461455.12	709773.91	N 32 16 2.78	W 103 47 18.19	
4793.00	0.32	8.78	4792.97	0.50	0.76	-6.20	0.23	461455.46	709773.95	N 32 16 2.78	W 103 47 18.19	
4982.00	0.73	19.98	4981.96	2.17	2.42	-5.71	0.22	461457.12	709774.44	N 32 16 2.80	W 103 47 18.18	
5076.00	0.59	21.45	5075.95	3.20	3.43	-5.33	0.15	461458.13	709774.82	N 32 16 2.81	W 103 47 18.18	
5265.00	0.54	14.89	5264.94	4.99	5.20	-4.75	0.04	461459.90	709775.40	N 32 16 2.83	W 103 47 18.17	
5453.00	0.49	4.52	5452.93	6.66	6.85	-4.45	0.06	461461.55	709775.70	N 32 16 2.85	W 103 47 18.16	
5548.00	0.61	5.96	5547.93	7.57	7.76	-4.37	0.13	461462.46	709775.78	N 32 16 2.85	W 103 47 18.16	
5642.00	0.60	2.51	5641.93	8.56	8.75	-4.30	0.04	461463.45	709775.85	N 32 16 2.86	W 103 47 18.16	
5737.00	0.51	13.19	5736.92	9.47	9.66	-4.18	0.14	461464.36	709775.97	N 32 16 2.87	W 103 47 18.16	
5831.00	0.51	352.23	5830.92	10.30	10.48	-4.14	0.20	461465.18	709776.01	N 32 16 2.88	W 103 47 18.16	
5925.00	0.52	11.64	5924.91	11.13	11.31	-4.11	0.19	461466.01	709776.04	N 32 16 2.89	W 103 47 18.16	
6020.00	0.35	7.63	6019.91	11.84	12.02	-3.98	0.18	461466.72	709776.17	N 32 16 2.90	W 103 47 18.16	
6066.00	0.35	333.64	6065.91	12.11	12.29	-4.03	0.44	461466.99	709776.12	N 32 16 2.90	W 103 47 18.16	
6114.00	0.30	329.15	6113.91	12.34	12.53	-4.16	0.12	461467.23	709775.99	N 32 16 2.90	W 103 47 18.16	
6209.00	0.44	352.02	6208.91	12.91	13.10	-4.34	0.21	461467.80	709775.81	N 32 16 2.91	W 103 47 18.16	
6308.00	0.35	341.48	6307.90	13.56	13.77	-4.48	0.12	461468.46	709775.67	N 32 16 2.91	W 103 47 18.16	
6403.00	2.67	65.89	6402.87	14.82	14.94	-2.56	2.80	461469.64	709777.59	N 32 16 2.93	W 103 47 18.14	
6497.00	5.90	82.70	6496.60	16.62	16.45	4.24	3.65	461471.15	709784.39	N 32 16 2.94	W 103 47 18.06	
6592.00	7.54	85.31	6590.94	18.21	17.58	15.29	1.76	461472.28	709795.44	N 32 16 2.95	W 103 47 17.93	
6686.00	8.78	89.30	6683.99	19.37	18.18	28.61	1.45	461472.87	709808.76	N 32 16 2.96	W 103 47 17.78	
6781.00	10.06	89.80	6777.71	20.15	18.29	44.16	1.35	461472.99	709824.31	N 32 16 2.96	W 103 47 17.60	
6876.00	9.50	90.45	6871.32	20.80	18.26	60.30	0.60	461472.96	709840.44	N 32 16 2.95	W 103 47 17.41	
6970.00	9.29	93.18	6964.06	20.96	17.78	75.63	0.52	461472.48	709855.77	N 32 16 2.95	W 103 47 17.23	
7065.00	8.81	95.37	7057.88	20.49	16.67	90.53	0.62	461471.37	709870.67	N 32 16 2.94	W 103 47 17.06	
7159.00	10.24	92.10	7150.58	20.17	15.69	106.05	1.63	461470.39	709886.19	N 32 16 2.93	W 103 47 16.88	
7252.00	10.42	93.52	7242.08	20.06	14.87	122.70	0.34	461469.57	709902.84	N 32 16 2.92	W 103 47 16.68	
7348.00	10.08	93.25	7336.54	19.77	13.86	139.75	0.36	461468.56	709919.90	N 32 16 2.91	W 103 47 16.48	
7443.00	9.75	94.47	7430.13	19.36	12.77	156.07	0.41	461467.46	709936.21	N 32 16 2.90	W 103 47 16.29	
7538.00	9.32	97.40	7523.81	18.41	11.15	171.72	0.68	461465.85	709951.86	N 32 16 2.88	W 103 47 16.11	
7632.00	9.44	96.50	7616.56	17.20	9.29	186.93	0.20	461463.99	709967.07	N 32 16 2.86	W 103 47 15.94	
7726.00	10.02	91.89	7709.21	16.73	8.15	202.76	1.03	461462.85	709982.90	N 32 16 2.85	W 103 47 15.75	

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northings (ft)	Easting (ft)	Latitude (N/S ° ' '')	Longitude (E/W ° ' '')
	7821.00	9.98	84.16	7802.77	17.99	8.72	219.21	1.41	461463.42	709999.35	N 32 16 2.85 W 103 47 15.56	
	7913.00	9.77	84.21	7893.40	20.25	10.32	234.91	0.23	461465.02	710015.04	N 32 16 2.87 W 103 47 15.38	
	8102.00	9.57	81.48	8079.72	25.53	14.26	268.40	0.26	461468.96	710046.53	N 32 16 2.90 W 103 47 15.01	
	8197.00	9.38	78.51	8173.42	28.89	16.97	281.80	0.55	461471.67	710061.93	N 32 16 2.93 W 103 47 14.83	
	8386.00	9.45	78.54	8359.86	36.32	23.12	312.10	0.04	461477.82	710092.23	N 32 16 2.99 W 103 47 14.48	
	8480.00	9.57	75.13	8452.59	40.49	26.66	327.21	0.61	461481.36	710107.34	N 32 16 3.02 W 103 47 14.30	
	8575.00	9.25	70.21	8546.31	45.73	31.27	342.03	0.91	461485.97	710122.16	N 32 16 3.07 W 103 47 14.13	
	8669.00	6.88	64.22	8639.37	51.25	36.28	354.21	2.67	461490.98	710134.34	N 32 16 3.12 W 103 47 13.99	
	8763.00	5.14	58.34	8732.86	56.27	40.94	362.86	1.96	461495.64	710142.99	N 32 16 3.16 W 103 47 13.88	
	8858.00	4.31	57.41	8827.53	60.70	45.10	369.49	0.88	461499.79	710149.62	N 32 16 3.20 W 103 47 13.81	
	8952.00	3.38	59.80	8921.32	64.22	48.39	374.87	1.00	461503.09	710154.99	N 32 16 3.24 W 103 47 13.74	
	9141.00	2.77	83.29	9110.05	67.95	51.73	384.22	0.73	461506.43	710164.34	N 32 16 3.27 W 103 47 13.64	
	9271.00	2.25	95.33	9239.93	68.32	51.86	389.88	0.57	461506.56	710170.00	N 32 16 3.27 W 103 47 13.57	
	9469.00	5.45	42.44	9437.51	75.33	58.44	400.10	2.26	461513.14	710180.22	N 32 16 3.34 W 103 47 13.45	
	9563.00	16.15	21.69	9529.73	91.14	73.93	407.97	11.93	461528.63	710188.09	N 32 16 3.49 W 103 47 13.23	
	9658.00	27.09	15.46	9617.93	124.80	107.16	418.65	11.75	461561.86	710198.77	N 32 16 3.82 W 103 47 13.23	
	9753.00	38.80	12.22	9697.52	175.38	157.28	430.76	12.46	461611.97	710210.88	N 32 16 4.31 W 103 47 13.09	
2nd Bone Spring Intersection	9819.12	46.80	14.45	9746.00	219.44	200.94	441.18	12.31	461655.63	710221.30	N 32 16 4.74 W 103 47 12.96	
	9848.00	50.30	15.25	9765.11	240.57	221.85	446.73	12.31	461676.54	710226.85	N 32 16 4.95 W 103 47 12.90	
	9942.00	62.71	16.42	9816.89	316.66	297.10	468.13	13.24	461751.78	710248.25	N 32 16 5.69 W 103 47 12.64	
100' FSL Crossing	10027.00	72.60	15.02	9849.17	393.08	372.69	489.37	11.73	461827.37	710269.49	N 32 16 6.44 W 103 47 12.39	
	10037.00	73.76	14.87	9852.06	402.42	381.94	491.84	11.73	461836.62	710271.96	N 32 16 6.53 W 103 47 12.36	
	10131.00	80.75	10.16	9872.80	492.62	471.37	511.64	8.90	461926.04	710291.76	N 32 16 7.42 W 103 47 12.13	
	10226.00	81.90	6.89	9887.13	585.98	564.23	525.55	3.61	462018.90	710305.67	N 32 16 8.33 W 103 47 11.96	
	10280.00	84.60	2.70	9893.48	639.55	617.66	530.03	9.18	462072.32	710310.15	N 32 16 8.86 W 103 47 11.90	
	10320.00	84.71	2.45	9897.20	679.37	657.44	531.82	0.68	462112.10	710311.94	N 32 16 9.26 W 103 47 11.88	
	10432.00	84.82	0.77	9907.42	790.89	768.93	534.95	1.50	462223.58	710315.07	N 32 16 10.36 W 103 47 11.84	
	10527.00	85.65	0.63	9915.32	885.52	863.59	536.11	0.89	462318.24	710316.23	N 32 16 11.30 W 103 47 11.82	
	10621.00	86.24	359.73	9921.96	979.21	957.35	536.40	1.14	462411.99	710316.52	N 32 16 12.22 W 103 47 11.81	
	10716.00	87.68	359.70	9927.00	1073.97	1052.21	535.93	1.52	462506.85	710316.05	N 32 16 13.16 W 103 47 11.81	
	10810.00	90.88	359.75	9928.18	1167.84	1146.19	535.48	3.40	462600.82	710315.60	N 32 16 14.09 W 103 47 11.81	
	11000.00	92.02	0.38	9923.37	1357.62	1336.13	535.70	0.69	462790.75	710315.81	N 32 16 15.97 W 103 47 11.80	
	11094.00	91.99	359.27	9920.08	1451.46	1430.07	535.41	1.18	462884.68	710315.53	N 32 16 16.90 W 103 47 11.79	
	11283.00	91.09	358.79	9915.00	1639.82	1618.87	528.91	1.40	463073.48	710309.03	N 32 16 18.77 W 103 47 11.86	
	11378.00	91.09	357.79	9913.20	1734.42	1713.75	524.42	1.05	463168.34	710304.54	N 32 16 19.71 W 103 47 11.90	
	11567.00	90.13	358.24	9911.19	1922.85	1902.62	517.88	0.56	463357.21	710298.00	N 32 16 21.58 W 103 47 11.97	
	11662.00	90.16	357.51	9910.95	2017.54	1997.56	514.35	0.77	463452.13	710294.47	N 32 16 22.52 W 103 47 12.00	
	11757.00	89.99	356.52	9910.82	2112.12	2092.43	509.41	1.06	463547.00	710289.53	N 32 16 23.46 W 103 47 12.06	
	11851.00	90.02	357.21	9910.81	2205.68	2186.28	504.27	0.73	463640.85	710284.39	N 32 16 24.38 W 103 47 12.11	
	11946.00	90.16	0.18	9910.66	2300.46	2281.25	502.10	3.13	463735.81	710282.22	N 32 16 25.32 W 103 47 12.13	
	12040.00	90.20	0.09	9910.37	2394.39	2375.25	502.33	0.10	463829.80	710282.44	N 32 16 26.25 W 103 47 12.12	
	12135.00	90.27	0.31	9909.98	2489.32	2470.25	502.66	0.24	463924.80	710282.78	N 32 16 27.19 W 103 47 12.11	
	12234.00	89.65	358.96	9910.11	2678.09	2659.24	501.45	0.79	464113.78	710281.57	N 32 16 29.06 W 103 47 12.12	
	12419.00	90.02	359.04	9910.38	2772.92	2754.22	499.79	0.40	464208.76	710279.91	N 32 16 30.00 W 103 47 12.13	
	12608.00	89.92	359.46	9910.48	2961.63	2943.21	497.32	0.23	464397.73	710277.44	N 32 16 31.87 W 103 47 12.15	
	12702.00	89.61	359.15	9910.87	3055.48	3037.20	496.18	0.47	464491.71	710276.30	N 32 16 32.81 W 103 47 12.15	
	12797.00	89.61	359.97	9911.51	3150.36	3132.19	495.45	0.86	464586.70	710275.57	N 32 16 33.75 W 103 47 12.16	
	12891.00	89.58	359.63	9912.18	3244.26	3226.19	495.12	0.36	464680.69	710275.24	N 32 16 34.68 W 103 47 12.16	
	13080.00	89.58	0.51	9913.56	3433.09	3415.18	495.35	0.47	464869.68	710275.47	N 32 16 36.55 W 103 47 12.14	
	13174.00	89.71	359.71	9914.15	3527.02	3509.18	495.53	0.86	464963.67	710275.65	N 32 16 37.48 W 103 47 12.13	
	13269.00	89.54	359.05	9914.77	3621.88	3604.17	494.51	0.72	465058.65	710274.63	N 32 16 38.42 W 103 47 12.14	
	13364.00	89.61	359.94	9915.47	3716.75	3699.16	493.67	0.94	465153.64	710273.79	N 32 16 39.36 W 103 47 12.14	
	13459.00	89.71	358.60	9916.04	3811.60	3794.15	492.46	1.41	465248.62	710272.58	N 32 16 40.30 W 103 47 12.15	
	13553.00	89.71	359.44	9916.51	3905.43	3888.14	490.85	0.89	465342.80	710270.97	N 32 16 41.23 W 103 47 12.17	
	13743.00	89.54	358.87	9917.76	4095.12	4078.11	488.05	0.31	465532.56	710268.17	N 32 16 43.11 W 103 47 12.19	
	13837.00	89.58	359.81	9918.48	4188.98	4172.10	486.97	1.00	465626.55	710267.09	N 32 16 44.04 W 103 47 12.19	
	14027.00	89.44	358.44	9920.10	4378.65	4362.07	484.07	0.72	465816.50	710264.19	N 32 16 45.92 W 103 47 12.22	
	14216.00	89.61	358.40	9921.67	4567.18	4550.99	478.85	0.09	466005.41	710258.98	N 32 16 47.78 W 103 47 12.27	
	14405.00	89.58	359.26	9923.01	4755.80	4739.94	475.00	0.46	466194.36	710255.12	N 32 16 49.65 W 103 47 12.30	
	14500.00	89.44	359.41	9923.82	4850.66	4834.93	473.89	0.22	466289.34	710254.01	N 32 16 50.59 W 103 47 12.31	
	14594.00	89.58	0.00	9924.62	4944.55	4928.93	473.41	0.65	466383.33	710253.53	N 32 16 51.52 W 103 47 12.31	
	14784.00	89.75	0.03	9925.73	5134.38	5118.92	473.46	0.09	466573.31	710253.58	N 32 16 53.40 W 103 47 12.30	
	14973.00	89.44	359.45	9927.07	5323.17	5307.92	472.60	0.35	466762.30	710252.72	N 32 16 55.27 W 103 47 12.29	
	15162.00	89.44	359.65	9928.92	5511.92	5496.90	471.12	0.11	466951.27	710251.24	N 32 16 57.14 W 103 47 12.30	
	15351.00	89.71	359.96	9930.32	5700.72	5685.89	470.47	0.22	467140.25	710250.59	N 32 16 59.01 W 103 47 12.30	
	15540.00	90.57	359.94	9929.86	5889.54	5874.89	470.31	0.46	467329.24	710250.43	N 32 17 0.89 W 103 47 12.29	
	15730.00	90.44	359.19	9928.18	6079.29	6064.88	468.87	0.40	467519.21	710248.99	N 32 17 2.77 W 103 47 12.29	
	15919.00	90.57	359.53	9926.52	6268.01	6253.86	468.75	0.19	467708.18	710246.88	N 32 17 4.64 W 103 47 12.31	
	16014.00	90.61	358.97	9925.54	6362.86	6348.84	465.51	0.59	467803.16	710245.63	N 32 17 5.58 W 103 47 12.32	
	16108.00	90.61	359.15	9924.54	6456.70	6442.83	463.97	0.19	467897.14	710244.09	N 32 17 6.51 W 103 47 12.33	
	16203.00	90.51	358.89	9923.61	6551.52	6537.81	462.34	0.29	467992.11	710242.47	N 32 17 7.45 W 103 47 12.34	
	16392.00	90.57	359.05	9921.83	6740.17	6726.77	458.95	0.09	468181.06	710239.07	N 32 17 9.31 W 103 47 12.37	
	16486.00	90.84	359.34	9920.84	6834.02	6820.75	457.63	0.32	468275.04	710237.75	N 32 17 10.24 W 103 47 12.38	
	16580.00	90.54	359.18	9919.87	6927.87	6914.74	456.41	0.20	468369.02	710236.54	N 32 17 11.18 W 103 47 12.39	
	16675.00	90.68	358.35	9918.86	7022.67	7009.71	454.37	0.89	468463.99	710234.49	N 32 17 12.11 W 103 47 12.41	
	16864.00	90.51	359.27	9916.89	7211.28	7198.66	450.44	0.49	468652.99	710230.56	N 32 17 13.98 W 103 47 12.44	
	17053.00	90.37	1.47	9915.44	7400.14	7387.64						

Comments	MD (ft)	Incl (°)	Azim Grid (°)	TVD (ft)	VSEC (ft)	NS (ft)	EW (ft)	DLS (°/100ft)	Northing (ftUS)	Easting (ftUS)	Latitude (N/S ° ' ")	Longitude (E/W ° ' ")
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Survey Type: Def Survey

Survey Error Model: ISCWSA Rev 0 *** 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	NAL_NSG+MSHOT-Depth Only	Original Borehole / Oxy Iridium MDP1 28-21 Federal Com 2H Gyro+MWD 0-20481'MD
	1	30.000	30.000	Act Stns	30.000	30.000	NAL_NSG+MSHOT-Depth Only	Original Borehole / Oxy Iridium MDP1 28-21 Federal Com 2H Gyro+MWD 0-20481'MD
	1	30.000	678.000	Act Stns	30.000	30.000	NAL_NSG+MSHOT	Original Borehole / Oxy Iridium MDP1 28-21 Federal Com 2H
	1	678.000	5831.000	Act Stns	30.000	30.000	NAL_MWD_IFR1+MS	Original Borehole / Oxy Iridium MDP1 28-21 Federal Com 2H
	1	5831.000	6209.000	Act Stns	30.000	30.000	NAL_MWD_PLUS_0.5_DEG	Original Borehole / Oxy Iridium MDP1 28-21 Federal Com 2H
	1	6209.000	20481.000	Act Stns	30.000	30.000	NAL_MWD_IFR1+MS	Original Borehole / Oxy Iridium MDP1 28-21 Federal Com 2H



Iridium MDP1 28-21 Federal Com 2H Wellbore Diagram

Elevation: GL 3376'

API: 30-015-45243

17-1/2" hold – 13-3/8" 54.5# J-55 csg
Set @ 692'

12-1/4" hole – 9-5/8" 43.5# HCL-80 csg
Set @ 4307'

8-1/2" hole – 7-5/8" 26.4# HCL-80 cssg
Set @ 9378'

6-3/4" hole – 5-1/2" P-110 csg
Set @ 20470'

Frac'd 10297'-20495'
50 stages

*Note: Diagram not to scale

PBTD – 20428' MD

TD – 20470' MD/9912' TVD